



**GARBAGE (WASTE) CONTROL AND  
MANAGEMENT**  
[Type the document subtitle]

**Lumano G C  
6/17/2013  
R113062H**

## TABLE OF CONTENTS

## PAGES

<b>STATUTES:</b> .....	<b>IV</b>
<b>POLICIES</b> .....	<b>IV</b>
<b>REGIONAL AND INTERNATIONAL FRAMEWORK ON WASTE MANAGEMENT</b> .....	<b>IV</b>
1.1 INTRODUCTION .....	1
1.2 BACKGROUND OF STUDY .....	1
1.3 JUSTIFICATION OF RESEARCH.....	2
1.4 STATEMENT OF PROBLEM .....	2
1.5 OBJECTIVES OF THE RESEARCH.....	3
1.6 RESEARCH ASSUMPTIONS .....	3
1.7 RESEARCH QUESTIONS .....	3
1.8 DELIMITATION OF THE AREA OF STUDY .....	4
<b>CHAPTER TWO</b> .....	<b>5</b>
<b>2.1.0 LITERATURE REVIEW</b> .....	<b>5</b>
2.1.1 INTRODUCTION .....	5
2.1.2 POLICIES: .....	5
2.1.3 STATUTES:.....	5
<b>2.1.4 STATUTES:</b> .....	<b>6</b>
2.1.4.1 THE CONSTITUTION OF REPUBLIC OF ZIMBABWE.....	6
2.1.4.2 THE ENVIRONMENTAL MANAGEMENT ACT: 20:27.....	6
2.1.4.3 THE PUBLIC HEALTH ACT: 15:09.....	7
2.1.4.4 THE URBAN COUNCIL ACT 29: 15.....	7
2.1.4.5 <i>Solid Waste</i> .....	8
2.1.4.6 <i>Forms of Solid waste</i> .....	8
2.1.5 THE REGIONAL, TOWN AND COUNTRY PLANNING ACT 29:12 .....	8
2.1.5.1 <i>Solid Waste Management</i> .....	8
2.1.6 THE WATER ACT 20:24 .....	10
<b>2.1.7 POLICIES</b> .....	<b>10</b>
2.1.7.1 ENVIRONMENTAL IMPACT ASSESSMENT POLICY (1994).....	10
2.1.7.2 NATIONAL SUSTAINABLE DEVELOPMENT STRATEGY (2004).....	10
2.1.7.3 DRAFT WASTE MANAGEMENT STRATEGY (2006) .....	10
2.1.7.4 SCIENCE AND TECHNOLOGY POLICY (2002).....	10
2.1.7.5 DRAFT NATIONAL ENVIRONMENTAL POLICY (2003) .....	10
<b>2.1.8 KADOMA MUNICIPAL BY-LAWS AND REGULATIONS</b> .....	<b>11</b>
2.1.8.1 STATUTORY INSTRUMENT 6/2007 ENVIRONMENTAL MANAGEMENT (EFFLUENT AND SOLID WASTE DISPOSAL) REGULATION .....	11
2.1.8.2 STATUTORY INSTRUMENT 208/ 1984 KADOMA (PUBLIC HEALTH) BYE – LAWS .....	12
2.1.8.3 STATUTORY INSTRUMENT 230 / 1994 KADOMA (ANTI – LITTER) BYE – LAWS CAP. 214 .....	12
<b>2.2.0 INTERNATIONAL FRAMEWORK ON WASTE MANAGEMENT</b> .....	<b>12</b>
2.2.1 RIO DECLARATION .....	12
2.2.2 STOCKHOLM DECLARATION .....	13
2.2.3 AARHUS CONVENTION .....	13
2.2.4 JOINT REPORT (OHCHR AND UNEP) ON HUMAN RIGHTS AND THE ENVIRONMENT.....	13
<b>2.3.0 HISTORICAL BACKGROUND OF SOLID WASTE IN KADOMA</b> .....	<b>14</b>

2.3.1	LOCAL AUTHORITY INTERVENTION IN WASTE.....	14
<b>2.3.2</b>	<b>FEMINIST PERSPECTIVE- ECOFEMINISM.....</b>	<b>14</b>
<b>CHAPTER THREE</b>	<b>.....</b>	<b>16</b>
3.0	RESEARCH METHODOLOGY AND METHODS.....	16
3.1	METHODOLOGICAL FRAMEWORK: HOW WAS THE RESEARCH CONDUCTED?.....	16
3.1.1	INTRODUCTION .....	16
3.1.2	THE WOMEN’S LAW APPROACH.....	16
3.1.3	GROUNDING THEORY .....	18
3.1.4	ACTORS AND STRUCTURES.....	18
3.1.5	HUMAN RIGHTS APPROACH.....	19
3.2	RESEARCH METHODS.....	20
3.2.1	KEY INFORMANTS .....	20
3.2.2	INDIVIDUALS INTERVIEWS .....	20
3.2.3	DESK RESEARCH.....	20
3.2.4	OBSERVATION .....	21
3.3	EMERGING ISSUES .....	21
3.4	LIMITATION OF STUDY .....	21
<b>CHAPTER FOUR</b>	<b>.....</b>	<b>23</b>
4.1.0	INTRODUCTION.....	23
4.1.1	FINDINGS AND DISCUSSIONS .....	23
4.1.2	LAWS AND POLICIES RELATING TO ENVIRONMENTAL HEALTH .....	23
4.1.3	UNPROTECTED WASTE DISPOSAL SITE .....	24
4.1.4	DISSEMINATION OF INFORMATION ON ENVIRONMENTAL HEALTH ISSUES .....	27
4.1.5	INADEQUATE BUDGETARY ALLOCATION TO PURCHASE EQUIPMENT TO COLLECT AND PROCESS WASTE .....	28
4.1.6	LACK OF HOUSEHOLD RESOURCES TO PURCHASE WASTE DISPOSAL BINS .....	29
4.1.7	PARTICIPATION OF WOMEN IN DECISION MAKING PROCESS IN ENVIRONMENTAL HEALTH .....	30
<b>CHAPTER FIVE</b>	<b>.....</b>	<b>33</b>
<b>5.1.0</b>	<b>CONCLUSIONS AND RECOMMENDATIONS. ....</b>	<b>33</b>
5.1.1	INTRODUCTION.....	33
5.1.2	CONCLUSION. ....	33
5.1.3	RECOMMENDATIONS .....	34
<b>BIBLIOGRAPHY</b>	<b>.....</b>	<b>37</b>

## **ACRONYMS**

OHCHR - Office of High the Commissioner for Human Rights

ACHPR – African Charter on Human and Peoples Rights

UNEP – United Nations Environmental Programme

UN – United Nations

ACHPR – African (Banjul) Charter on Human and People’s Rights

### **Statutes:**

1. The Constitution of Zimbabwe;
2. The Environmental Management Act 20:27
3. The Public Health Act 15:09;
4. The Urban Council Act 29: 15
5. The Regional, Town and Country Planning Act 29 :12;
6. The Water Act 20 :24

### **Policies**

1. Environmental Impact Assessment Policy (1994);
2. National Sustainable Development Strategy (2004)
3. Draft Waste Management Strategy (2006);
4. Science and Technology Policy (2002);
5. Draft National Environmental Policy (2003)

### **Regional and International Framework on Waste Management**

1. Rio declaration
2. Stockholm declaration
3. AARHUS Convention

4. Joint Report (OHCHR) on Human Rights and the Environment
5. African (Banjul) Charter on the Human and Peoples' Rights
6. Protocol to the African Charter on Human and Peoples' Rights of Women.
7. The Beijing Platform for Action: Chapter

## EXECUTIVE SUMMARY

Waste generation and disposal are grave environmental challenges in the Urban Municipal council of Kadoma City. The current life styles and activities in Kadoma are producing vast quantities of waste (UNEP International Technology Centre 2003). Thus, the collection, transfer and disposal of that waste have been generally assumed by Kadoma Municipal council. The city of Kadoma is now grappling with problems of high volumes of waste in its management and its impact on humans and the environment.

The purpose of the study was to investigate the environmental health problems, causes, impact in the Waste (garbage) control and its management in Kadoma City especially in terms of women involvement. The study analyses New Rimuka and Old Rimuka which **is commonly known** as SQ, New Ngezi and Old Ngezi as areas where Garbage would be found which I will constantly refer to as Solid waste. Hence, it is essential to analyse areas which are likely to be found with uncollected Solid waste to the dumping site. The study also analyses the requirements of Women regarding Solid Waste collection in Rimuka and Ngezi Townships.

The study implored various methodologies to tackle the research assumptions such as the Women's Law Approach' which is an inter-disciplinary methodology integrating the law based on women's lived experiences and realities, grounded theory to analyse assumptions on the environmental health issues in Kadoma City and Human Rights Approach provide a standard set of measures on the rights that women. It is a requirement of the International women's rights to see to it that women participate in planning of collection, transportation, and storage of waste, hence the preservation of the sustainable environment. Research Methods used include an interview of key informant interview, individual interviews, desk research and observation. Information gathering involved the review of National Policies and legislation governing the Solid Waste Management in Zimbabwe such as statutes, policies, and the United Nations Environmental Programme in conjunction with Agenda 21 chapter 21.

The research findings in Kadoma were based on the laws and Policies relating to environmental health; unprotected Waste Disposal Site; dissemination of information on environmental health issues; inadequate budgetary allocation to

purchase equipment to collect and process waste; lack of household resources to purchase waste disposal bins; and participation of women in decision making process in environmental health.

In conclusion, waste management is a complex system that involves waste generation, waste storage, collection, treatment, transportation and disposal. Waste management is the responsibility of the Kadoma Municipal city council. Therefore, there is a need for sustainable waste management through community participation and concomitant attitude change in environmental health issues by the resident of Kadoma.

## **Chapter One**

### **1.1 Introduction**

Waste generation and disposal are grave environmental challenges in the Urban Municipal council of Kadoma City. The current life styles and activities in Kadoma are producing vast quantities of waste (UNEP International Technology Centre 2003). Growing environmental awareness, restricted finances and declining abundance of natural resources are demanding a change in waste management practices. Thus, the collection, transfer and disposal of that waste have been assumed by Kadoma Municipal council. The city of Kadoma is now grappling with problems of high volumes of waste in its management and its impact on humans and the environment.

The reason why I under took this study was to investigate how the city of Kadoma is coping with the waste and how the residents are managing with garbage. However, in order to investigate how the city and the residents are managing with the waste, I will show through the following arrangements of Chapters.

Chapter One of this dissertation deals with the background of the area under study, the reason for taking the study, the research objectives , research assumptions, research questions together with delimitations of the study. Chapter Two discusses the various methodologies used in tackling the research assumptions such as the women's law approach, the grounded theory approach, human rights approach and other research methods. Chapter Three of the dissertation deals the review of literature governing the Solid waste management being the National laws, by- laws, policies and some international instruments. Chapter Four deal with the findings of research and discussions based on the findings in detail. Chapter Five focus on the conclusions based on the findings and recommendations.

### **1.2 Background of study**

The purpose of the study was to investigate the environmental health problems, causes, impact in the Waste (garbage) control and its management in Kadoma City in terms of women's involvement. The study analyses New Rimuka and Old Rimuka known as SQ, New Ngezi and Old Ngezi as areas where Garbage would be found which I will constantly refer to as Solid waste. Hence, it is essential to analyse areas



which are likely to be found with uncollected Solid waste to the dumping site. The study also analyses the requirements of Women regarding Solid Waste collection in Rimuka and Ngezi Townships. Rimuka and Ngezi are the areas that were affected by cholera and dysentery outbreak in the year 2008. Accumulation of solid waste if not collected to the required places cause to human health hazards. It is essential to analyse situations and behaviours which may predispose women in the area of study with the effects of uncollected waste (garbage) in relation to environmental household and surroundings. Therefore, the solid wastes, when improperly disposed off can be an environmental health hazard and further cause diseases to human beings such as dysentery and cholera. In agreement with Agunwamba (1998), the accumulation of waste in cities threatens health, damages the environment, and detracts from the quality of urban life.

### **1.3 Justification of Research**

The research will produce information on waste management in the city of Kadoma, and it will contribute in the establishment of a sustainable city. The information shall be used by both the Local Authority whom I shall call 'City Fathers' and the Community at large in bringing up and maintaining a sustainable environment in the city. Sustainability is to continue a defined behaviour indefinitely (Hawker 2012). The importance of this information is embedded in the modern-day Solid waste management issues of sustainability in Kadoma City. The failure of the local authority to live up to the dictates of a sustainable environment will result in the degeneration of fertile grounds of breeding diseases and catastrophe for human life.

### **1.4 Statement of problem**

Solid waste collection in Kadoma is inconsistent with some areas going up for three days or four days without offered collection service especially Rimuka SQ Suburb. Kadoma City council like any other city in Zimbabwe is faced with the problem of waste management. The frequency of collecting waste and the level of consistency leave a lot to be desired in Kadoma having some areas with uncollected garbage. This uncollected waste may cause a threat of disease outbreak especially during the onset of rains. Sule (1997), has drawn attention to the fact that even Nigerian cities experience the problem of refuse collection and people end up dumping waste which pose a health hazard to the community.

## **1.5 Objectives of the research**

The objectives of this study were:

1. To establish policies and laws relating to environmental health in Kadoma.
2. To establish whether the Waste disposal site is unprotected.
3. To establish that the dissemination of information on environmental health is adequate.
4. To establish whether budgetary allocation to purchase equipment is adequate.
5. To establish whether household resources to purchase waste disposal bins are adequate.
6. To establish whether there is participation of women in decision making process in environment health.
7. To recommend possible areas of intervention by stake holders, private bodies and Non Government Organisations.

## **1.6 Research assumptions**

The research was guided by the following assumptions:

1. Inadequate laws and policies relating to environmental health problems
2. Poor infrastructure planning impedes collection of garbage
3. Lack of conscious raising policies in environmental health issues
4. Lack of prioritization in resource allocation on environmental health concerns leading to unhealthy households
5. Lack of household resources to purchase garbage disposal bins lead to dirt surroundings
6. Non participation of women in decision making process in environmental health issues lead to gender insensitive policies and laws.

## **1.7 Research Questions**

The research was guided by the following research questions:

1. Do inadequate laws and policies lead to environmental health problems?
2. Does poor infrastructure planning impede the collection of garbage?
3. Does lack of conscious raising policies in environmental health issues lead to problems?

4. Do lack of prioritization in resource allocation on environmental health lead to unhealthy households problems?
5. Do lack of household resources to purchase garbage disposal bins lead to dirt surroundings?
6. Is non participation of women in decision making process in environmental health lead to gender insensitive policies and laws?

### **1.8 Delimitation of the area of study**

I conducted my research in Kadoma District particularly in Town centre, Rimuka and Ngezi Townships. Rimuka Township is comprised of two main suburbs. Namely: New Stands (New Rimuka) and Old Rimuka. The New Stands is an area where the citizens built their own houses with the approval of the local authority. The Old Rimuka is council built area where the residents pay house rentals to the local authority. This place is known as SQ buildings. 'S' stands for Single and 'Q' stands for Quarters.

The other area where I visited was Ngezi Township. Ngezi comprises of two suburbs namely: New Ngezi which is well built and the Old Ngezi which used to be a prison in the Second World War. I also visited Kadoma town centre and its surroundings.

## **Chapter Two**

### **2.1.0 Literature Review**

#### **2.1.1 Introduction**

Information gathering involved the review of National Policies and legislation governing the Solid Waste Management in Zimbabwe. The second stage in information gathering involved the local authority By-laws and regulations as well as the International instruments on Solid Waste Management on Environment perspective.

According to Makuku and Masiye (2002) the term 'Policy' is: "a plan of action outlining the aims and ideals of a government, political party or business company or a corporate body. " The term denotes a frame work of guidelines that have been put together in the form of a document in order to give guidance on how waste management can best be done. The term 'legislation' denotes laws or set of applicable in the country in the form of Acts passed by parliament and endorsed by the President before becoming law.

It is essential to note that Policies are not legally binding whereas Acts of parliament carry legal force and have to be complied with.

In summary, information gathering involved the review of Statutes, Policies, and the United Nations Environmental Programme.

#### **2.1.2 Policies:**

- Environmental Impact Assessment Policy (1994);
- National Sustainable Development Strategy (2004)
- Draft Waste Management Strategy (2006);
- Science and Technology Policy (2002);
- Draft National Environmental Policy (2003)

#### **2.1.3 Statutes:**

- The Constitution of Zimbabwe;
- The Environmental Management Act 20:27
- The Public Health Act 15:09;

- The Urban Council Act 29: 15
- The Regional, Town and Country Planning Act 29 :12;
- The Water Act 20 :24

#### **2.1.4 STATUTES:**

##### **2.1.4.1 The Constitution of Republic of Zimbabwe.**

The supreme law of the land (Constitution) under Article 73 captures the right to a safe environment as it states: Every person has the right to an environment that is not harmful to their health or well-being, and to have the environment protected for the benefit of present and future generations, through reasonable legislative and other measures that prevent pollution and ecological degradation; promote conservation; and secure ecologically sustainable development and use of natural resources while promoting economic and social development.

As seen from above, the constitution of the land bestows the obligation on the state to take reasonable legislative measures for the realisation of the above right. However, the measures must be within the state's capability. This calls for implementation, enacting or putting sound policies to manage the solid waste management where women are involved.

##### **2.1.4.2 The Environmental Management Act: 20:27**

Section 4 sets out environment rights and principles of environmental management. It confers every person the right to clean environment that is not harmful to health, access to environmental information, environmental education, and environmental awareness. It further proscribes persons from discharging or disposing of any wastes that will cause ill health to any person. Section 83 prohibits the discarding, dumping any litter on any land or water surface, street, roadside or site in or at any place which is not designated.

In pursuant to section 83 of the Environmental Management Act<sup>1</sup>, Litter can refer to anything from crisp packet or sweet wrapper to large bags of rubbish or even where many items of rubbish can be found. Section 83 forbids careless discarding of litter. In other words, littering causes the problematic environmental issues in Kadoma.

---

<sup>1</sup>. Chapter 20:27

Littering cause harm to people and animals, it also damages water ways, it costs money. Litter consists of solid waste products such as wrappers, unfinished cigarettes, tissue, containers, and papers which have been discarded or disposed of without consent.

**Drawback:**

The Act has a drawback in enforcement with regard to waste management (garbage). It does not mention sustainable waste management practices.

#### **2.1.4.3 The Public Health Act: 15:09**

The Act under section 10 empowers Medical officers of health to oversee environmental issues. Under section 83, the Act requires the Local authorities to maintain cleanliness and prevent nuisances. This means that the local authorities have a duty to take all lawful necessary and reasonably practical measures for maintaining the district at all times in a clean and sanitary conditions in order to prevent environmental diseases.

The Act addresses the issue of waste coming from livestock and ensures it is taken care. Section 85 explains what a nuisance is, and it further state that nuisance includes: “any accumulation or deposit of refuse, offal, manure or other matter which is injurious to health.”

**Drawback:**

The Act is weak because it does not prohibit people from causing nuisances on land which they have no control. The Act only prohibits nuisances on the land which one has control of. Hence, people can cause nuisances on open spaces (land) which they have no control and get away with it.

#### **2.1.4.4 The Urban Council Act 29: 15**

The Act regulates Waste management activities in centres designated as urban. Section 80 prohibits the accumulating, dumping, depositing, abandoning or dropping on or in any road, street, sidewalk, drain, land or place of rubbish or waste. Section 277 (1) mandates councils to make by-laws in the following areas: sewerage, sanitary, effluent and refuse removal, rubbish and waste materials. Under section 218 (b) the Act creates a proviso for the Council to charge for the removal of refuse

where this service has been provided. It is essential to mention that urban councils are under other ministries (Ministry of Local Government, Public Works and Urban development) who may not approve of their budgets if they are too heavy to a burden on rate payers.

#### **2.1.4.5 Solid Waste**

According to Jackson and Jackson (1998) ‘the term Waste ‘has been defined as “any movable substance or material that is perceived to be of no use and therefore should be discarded. In other words, waste can be regarded because it has saved its purpose or is no longer useful. Waste is generally hazardous and toxic to biological environment and human life styles. Not all waste should be discarded as some can be transformed into useful products through recycling (Miller, 1998).

#### **2.1.4.6 Forms of Solid waste**

Garbage and dirt accumulate in residential, commercial, industrial and institutional areas of Kadoma as forms of waste. Solid waste is unwanted, useless and discarded as non liquid waste material arising from domestic, commercial, manufacturing and trade industries as well as a public service. Waste is considered hazardous and toxic to the environment. Hence, the need to manage waste as it poses a danger to ecosystem and human health alike (Mapira, 2012).

#### **Drawback:**

The Act under section 218 (b) does not mention how the money collected will be put use towards the improvement of waste management delivery service.

#### **2.1.5 The Regional, Town and Country Planning Act 29:12**

Surprisingly enough, the Act is silent on the issue of waste management (garbage). It does not mention the issue of design and selecting of waste sites despite the fact that the planning stages of selecting and designing waste disposal facilities determine the impact that will have on the environment and on public health.

##### **2.1.5.1 Solid Waste Management**

According to Booth et al, (2001), solid waste management refers to ‘a range of activities in the handling of waste and should be understood to mean activities such as generation, storage, collection, transportation, processing, treatment and disposal

of waste.’ Waste should be transported in closed vehicles to avoid loss of some waste along the way and to prevent the spread of unpleasant Odours from the waste being transported (Jackson and Jackson 1998). Waste disposal should be done in accordance with the best principles of public health, economics, engineering conservation and other environmental considerations.

According to Chiwandamira (2000), the goal of waste management is to ensure that its disposal does not lead to environmental pollution or degradation. Waste management should be done in the umbrella of administrative, financial, legal, planning and engineering functions. This means that waste management should be undertaken in such a manner that garbage handlers, the public and the environment are not endangered in any way (Makwara, 2011).

Waste management sites should be located reasonably far way from human habitation to prevent the migration of vermin and Odours to people’s homes (Jackson and Jackson, 1998). Booth et al (2001) contends that the disposed waste should be covered with soil or be sprayed so that disease vectors will not breed and spread diseases.





Houses constructed near the Blue Range Waste Disposal Facility Site

#### **2.1.6 The Water Act 20:24**

The Act addresses the issue of waste management in section 68 (1) where it prohibits the discharge or disposal of any organic or inorganic matter into any surface or ground water. Local authorities are required to construct and manage waste disposal sites so as to avoid causing pollution and any environmental health problems.

#### **2.1.7 POLICIES**

##### **2.1.7.1 Environmental Impact Assessment Policy (1994)**

The environmental impact assessment mechanisms have been enshrined in the Environment Management Act where projects are supposed to undergo a process in which their merits and demerits impacts are scrutinized and evaluated to enable appropriate mitigation put accordingly.

##### **2.1.7.2 National Sustainable Development Strategy (2004)**

This strategy consists of a National Action programme containing actions to be undertaken under sustainable development in order to address poor waste management. It calls for the promotion of safe disposal wastes.

##### **2.1.7.3 Draft Waste Management Strategy (2006)**

The strategy aims to improve the cleanliness and promote sustainable waste management practices. This can be achieved by identifying all problems that make environment such as litter, illegal dumping, improper dumping, and disposal of waste.

##### **2.1.7.4 Science and Technology Policy (2002)**

The policy singles out industrial waste as having an adverse effect on the environment.

##### **2.1.7.5 Draft National Environmental Policy (2003)**

It calls for the development of integrated waste management strategy to address the growing problem of waste management.

## **Drawbacks:**

The above policies fall short of coming up with practical steps needed in achieving the desired goals:

- Policy implementers are often faced with problems related to funding to fuel activities stated in policies.
- Policies fail to consider communities as a resource, thus, ignoring communities' potential role in waste (garbage) management sector.
- Policies do not take on board the interests of small community enterprises; hence, bias is more towards industrial development.
- Policies do not communicate effectively to local authorities, thus, no programmes aimed at raising public awareness on the existence of the policies themselves.
- There is no obligation on the part of local authorities to implement provisions of the policies.

### **2.1.8 Kadoma Municipal By-Laws and Regulations**

Statutory Instrument (S.I.) 208/ 1984 Kadoma (Public Health) By – Laws CAP.214

Statutory Instrument (S.I.) 6/2007 Environmental Management (Effluent and Solid Waste Disposal) Regulation

Statutory Instrument (S.I.) 230 / 1994 Kadoma (Anti – Litter) By – Laws CAP. 214

#### **2.1.8.1 Statutory Instrument 6/2007 Environmental Management (Effluent and Solid Waste Disposal) Regulation**

Section 2 defines litter as “any rubbish that is not disposed of in the rubbish bins or areas designated to disposing rubbish. “ It defines ‘Waste or Effluent ‘as waste or effluent comprising or organic or inorganic matter, including water containing such matter, consisting of waste water. Section 3 lays the functions of the Environmental Management Agency as: controlling and regulation the disposal of waste and effluent which may affect the quality of environmental, and to advise the public and private sector of environmental pollution. It prohibits the disposal of waste or effluent into a public stream or into any other surface water or ground water, whether directly or through drainage or sewage. Section 23 makes it an offence for anyone to

throw litter on any land or water, surface, street, road or site in or any place except in the container provided for that purpose of at a place specifically designated for that purpose.

#### **2.1.8.2 Statutory Instrument 208/ 1984 Kadoma (Public Health) Bye – Laws**

Regulation 30 makes a clarification of refuse as Class A and Class B. Class A refuse is all domestic refuse and Class B includes sand, stones, bricks, brick rubbish, slag, metal, wooden boxes, pieces of Timber, steel shavings, garden rubbish, hedges, trees, hedges or fences or any like articles.

#### **2.1.8.3 Statutory Instrument 230 / 1994 Kadoma (Anti – Litter) Bye – Laws CAP. 214**

Section 3 defines litter as including containers, wrappings, cartons cigarette packets, paper vegetables matter, garden waste, hedge clippings, dead animals, ash, tins, or rubble, soil and another matter or substance which is unwholesome, offence or untidy.

Section 4 creates an offence for a person to deposit, abandon or cause to or permit to deposit or abandoned any litter in a public place.

### **2.2.0 International Framework on Waste Management**

1. Rio declaration
2. Stockholm declaration
3. AARHUS Convention
4. Joint Report (OHCHR) on Human Rights and the Environment
5. Agenda 21

#### **2.2.1 Rio declaration**

The declaration is concerned with the environmental issues and access to information by the individual. Principle 10 stipulates: “Environmental issues are best handled with participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to

participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.”

### **2.2.2 Stockholm declaration**

The convention is concerned with health and environment from persistent organic pollutants. Principle 1 stipulates: “Mindful of the precautionary approach as set forth in Principle 15 of Rio Declaration on the environment and development, the objective of this convention is to protect human health and the environment from persistent organic pollutants.”

### **2.2.3 AARHUS Convention**

The Convention is concerned with the State Party guaranteeing the rights of access to information, public participation in decision making, and access to justice in environmental matters. Article one stipulates: “In order to contribute to the protection of the right of everyone person of present and future generations to live in an environment adequate to his or her health and well being, each party shall guarantee the rights of access to information, public participation in decision making, and access to justice in environmental matters in accordance with the provisions of this Convention.”

### **2.2.4 Joint Report (OHCHR and UNEP) on Human Rights and the Environment**

The report examines the development and status of norms and standards as well as current trends in respect of linkages between Human rights and Protection of the environment. The report discusses the links between human rights, environmental protection, and economic benefits derived from them, as they relate to the three pillars of sustainable development: environmental, economic, and social.

### **2.2.5 United Nations Environmental Programme**

The programme has been established in order to achieve the following objectives:

- To strengthen and increase national waste reuse and recycling systems;

- To create a model internal waste reuse and recycling programme for waste streams, including paper within the United Nations and the country involved.
- To make available information, techniques and appropriate policy instruments to encourage and make operational waste reuse and recycling schemes.

### **2.3.0 Historical background of Solid Waste in Kadoma**

Historically, the city of Kadoma was filth to the extent that litter was found everywhere. The state of environmental degradation reached a high level that one of the National tabloids (General National News- News Day online) reported on 10<sup>th</sup> December, 2012 that: “ Kadoma filth drives away Investor.“ The cause of the filth was litter caused by residents who indiscriminately dropped and dumped litter at undesignated sites. The residents went unpunished for the culture of no change.

#### **2.3.1 Local Authority Intervention in Waste.**

The local authority has a weekly schedule of cleaning toilets in Rimuka Township, has a three to two refuse collection schedule, and council workers picking litter on the ground every day. This is compounded with street sweepers. However, the enforcement of the following Statutory Instruments Numbers 6 of 2007 on Environment, 208/1984 on Public health, and 230/ 1994 on Litter has no effect at all due to the preferential education of the resident to have a change of mind set. The contractual engagement of Odendaale Company collecting waste from the townships is a step ahead.

#### **2.3.2 Feminist Perspective- Ecofeminism**

I have chosen ‘Ecofeminism ‘because it explains the interrelatedness of women’s oppression in solid waste collection and strategies and that of nature. The term ‘Ecofeminism ‘was firstly used by the French writer Françoise d’Eaubonne in 1974 to represent women’s potential for bringing about an ecological revolution to ensure human survival on the planet (Merchant, 1990). Accordingly, Ecofeminism brings about an ecological revolution that would entail new gender relations between men and women and between human and nature. Ecofeminists are concerned with improving human nature relationship considering that both women and nature have been mutually associated and devalued and can both be liberated through direct

political will. The male designed development models in solid waste, neglect the effects of insufficient waste to the environment protection, and women's capabilities in the development and their working lives.

(Spretnak, 1990: 5) argue that: "Ecofeminism has philosophical, political activism and spirituality aspects. In her view, Ecofeminists can use all these to question the male bias in environmental movements and development models of solid waste management and campaign for women's rights waste management technologies." This view of arguments that oppression of women and the oppression of nature have occurred simultaneously, and thus, women have the responsibility to stop male domination in waste management. Women in households are forced to resort to coping mechanisms which have consequences related to environmental degradation and are blamed for those consequences. Therefore, there is a need for women to be at the fore front of environment protection as they are enabled to raise consciousness of their marginalization in Solid waste management.

### **Conclusion'**

The review of national policies and legislation in garbage (waste) control and Management involves information gathering through the perusal of statutes, policies and United Nations instruments on environment health issues in relation to women's involvement in Kadoma city. The review involves the integration of women's perspective (Ecofeminism) potential for bringing about an ecological revolution that entail gender relations between men , women, human and nature. The chapter below will discuss methodologies used to conduct research in totality.

## **Chapter Three**

### **3.0 Research Methodology and Methods**

#### **3.1 Methodological Framework: How was the research conducted?**

##### **3.1.1 Introduction**

In this chapter, I will discuss the various methodologies that I used to tackle my research assumptions. The chapter also contains a discussion of methods that I have used to conduct research. I now discuss the methodologies.

##### **3.1.2 The Women's Law Approach**

The study implored the 'Women's Law Approach' which is an inter-disciplinary methodology integrating the law based on women's lived experiences and realities. Dahl, (1987) observes that:

'the methodology of women's law is cross disciplinary and pluralist and calls for a rather free use of available material wherever it can be found.'

Using this approach, I was able to appreciate the issues of waste and its management and how women were involved in Kadoma. I chose this approach as it provided a holistic analysis of the lived realities of women in terms of solid waste management around their households in Kadoma town city.

Interacting with this approach, I interviewed respondents on how policies relating to environmental health were being implemented. I was able to interact with various workers such as Shop Assistants, drivers of private companies in Kadoma Town Centre, residents of townships, people at waste disposal site and council workers who were cooperative during my interactive interviewing.

Using the above approach through the interactive discussions, I learnt that laws on solid management were available. The approach also opened up a window of my assumptions in relation to infrastructure pertaining to the collection and disposal at the waste disposal site, the type of vehicles used to transport the solid waste from the townships and house hold.

In capturing the women's lived realities on environmental health issues information, using the approach, which calls for a cross cut through different legal, social, political, customary and economic disciplines, it was revealed that residents in Kadoma received no information from the local authorities.

Due to the elasticity of the approach, I was able to interact with language as a tool to elicit information from the people I interacted with the communities. Language is a tool that has an impact on communication and information collection. Socially, I moved around the area greeting those I found on the way and at their houses whom I sought would give me information upon asking them if they were interested in being interviewed on the issues of garbage and environment laws and policies in relation to the council's delivery, so trying to bridge the gap between law, council and women involvement. Hence, the approach opened and gave me opportunity to know that the households were not satisfied with the council in terms of payments and tariffs charged on them.

As a diverse approach that actually inspect the consultative ways in society and community, I came to appreciate that women were people who are supposed to be involved in decision making especially in issues involving the environment around their households, surroundings, streets, galleys and government institutions. I came realize that the Women's law approach once well used bridges the gap between the society and women. It is through the approach that categories I was following were identified. I have come appreciate that the approach calls for women's recognition in terms of participation, consultation, and trust in order to bridge the gap between the community and women in order to solve the local authority's ills so that the local authority may deliver effectively and efficiently.

Finally, the approach (Women's Law Approach) is also not only a tool to understanding the position of women and girls and their troubles, it also allows me to develop multiple strategies to improve the environmental health issues affecting women for the betterment of the society at large. Critically, the women's issue in terms of environment calls for the research to explore the categories emerging from the interviews which I call discussions.



### **3.1.3 Grounded Theory**

This theory or approach can be compared to activities of a ‘dung beetle’ constantly compiling balls of animal dung for purposes of laying its eggs into the dung. The dung beetle approach as a ground research process helped me to collect data, sift it and analyse it by considering the implications of findings, thereafter determine what next to collect in order to meet the women’s needs and continue with the collection and analysis cycle (Bentzon et, al., 1998)

The approach helped me to analyse my assumptions on the environmental health issues in Kadoma City. I was able to analyse the failure of the council to deliver to the community as it had an obligation to do so and the refusal of the residents in honouring what it owed to the council, thus, causing the environmental degradation. With the approach, I saw the need for women to be involved in creating the empowerment schemes for them to be partners in Waste management and collectors either on concessions or involved in contractual matters in order to wedge the activities of the local authorities.

With the use of this approach, I was able to realize that there is a need for an environmental policy formulation for the district in order to allow proper plans take place and shape and improve on the face and livelihood of women in the area in terms of environmental health issues as concerned with solid waste from the streets and households.

### **3.1.4 Actors and Structures**

The Actors in this approach are the Local authority, the Environmental Management Agency and Non Governmental Organisation as well as private bodies. The Women are the non Actors and structures include other bodies involved in waste management collection, transportation, and disposal of the waste.

The use of this systematic approach was so critical in establishing the perception of society’s institutions such as the Local authority, and Non Governmental Organisations in their view of women pertaining to waste (garbage) management and their households in terms of environmental health. It is from unearthing these perceptions that I came to appreciate the force behind the women in their role of controlling the solid waste in their household for the attaining a sustainable

environmental health in the Rimuka suburbs and Ngezi suburbs as well as the town centre. I realized the force behind the women in town cleaning through street sweeping and toilet cleaning.

The local authority which is only actor in Kadoma is responsible for sweeping streets and public places, collecting the waste and disposing domestic waste, and supervising the collection, transportation and disposal of solid waste. It is expected for the council to engage the civil society's organisations who are interested in the cleaning and garbage collection.

The failure of the local authority in waste collection system in its jurisdiction is a sad situation for the effective management of solid waste. This poses a significant challenge in Kadoma as it is a mining town where population is considered to increase due to people for seeking for employing in the gold mining industry thus, increasing the rate of waste in the town and the surrounding area. Thus, it is essential to encourage the participation of the private sector in the door to door waste collection, street sweeping, transportation and the hiring of vehicles for collection of Municipal solid waste collection.

### **3.1.5 Human Rights Approach**

The International women's human rights provide a standard set of measures that keep us informed on the rights that women are entitled to and specifies state obligations as the guarantor and bearer of women's rights. Protocol to the African charter stipulates that women shall have the right to live in a healthy and sustainable environment (art.18. (1)2. Hence, the women's the right approach requires that women should regulate the management of solid waste, processing the waste starting from the collection, storage and disposal to the waste disposal site. It is a right for women to ensure that the solid waste and toxic waste standards are followed up, stored and disposed off at designated places in order to secure a health environment for man (art.18 (d) (e). It is a requirement of the International women's rights to see to it that women participate in planning of collection, transportation, and storage of waste, hence the preservation of the sustainable environment.

The human rights approach is unquestionably critical in bringing out the vital role of non- state actor under the human rights instruments in advancing the rights of

women.<sup>2</sup> In order to assess the complicity of the local authority in the subordination of women in Rimuka and Ngezi through the local laws and policies I used the approach and Am able to say that there is a denial of the women in the households pertaining to their rights to a sustainable environment precisely.

Based on the minimum international standards, the approach helped me to have a sound approach and understanding to the rights of women in terms of solid waste management environmental health issues. The approach has shown me how human rights integrate with the environment and that the two are indivisible and play a role achieving a sustainable development in which women are the key players.

## **3.2 Research Methods**

### **3.2.1 Key informants**

The research methods were categorized into areas of the key informants where I expected to get more information in terms of women's participation in the households. These were the local authorities. It was later known that they local council had no gender policy for the women; however, it was starting the mainstreaming of women.

In conducting my research, I conducted a survey in Rimuka, Ngezi and Town centre where I interviewed some respondents in the areas mentioned above. The sampling was purposive one.

### **3.2.2 Individuals Interviews**

The other method in getting information involved was individuals in the suburbs in Rimuka and Ngezi who were the main source of information through the interviews I conducted with them.

### **3.2.3 Desk research**

The third method used was desk research where I did research through the books, journals, Newspapers and Internet from where useful information was gotten.

---

<sup>2</sup> . Millennium Development Goal 7, Target 9, Target 10 : Indicator 31

### **3.2.4 Observation**

Observation is the art of noticing things, movements and statements. I used this tool method during my interviews in the suburbs of Rimuka and Ngezi as well as in the town centre. Through this method I was able see some areas within town and outside the town as well as the surrounding ones where waste in form of litter was left uncollected by the local authority of Kadoma.

### **3.3 Emerging Issues**

During the research in Kadoma, the following were the issues that emerged from the residents as well as local authorities officials:

- The refusal by the residents to pay bills owed to the council due to the failure of the council to deliver the intended services;
- The admittance by the local authority of having no Environment policy on Waste and its management;
- The resident's encroachment of the Waste Disposal Facility (Dump Site) without intervention by the local authority.
- The emerging issues will be addressed when recommendations are made.

### **3.4 Limitation of study**

Due to the Socio, political, economic environment in which the research was conducted, I faced some challenges in terms of assessing information from call boys at the Combi stations who were aggressive, and from governmental institutions who wanted direct authority from the Heads of departments.

The cash crisis that fell on me on transport payments also was a hitch for me to visit some other townships that make Kadoma such as Eiffel flats and others.

The inadequate number of interpreters where we shared one interpreter to two was another limitation in addition to the language barrier. This also made movement extremely limited.

### **Conclusion**

The topic above has discussed the background of the area under research giving main reason of why the study has been undertaken where the objectives, assumptions and questions of the research were outlined in detail in line with the requirements of

the research. The next chapter will deal with findings of the research I conducted in Kadoma which will be discussed in detail.

## **Chapter Four.**

### **4.1.0 Introduction**

#### **4.1.1 Findings and Discussions**

In this chapter, I will discuss the findings of the research I conducted in Kadoma. During the discussion, I shall dwell on the following:

1. Laws and Policies relating to environmental health;
2. Unprotected Waste Disposal Site;
3. Dissemination of information on environmental health issues;
4. Inadequate budgetary allocation to purchase equipment to collect and process waste;
5. Lack of household resources to purchase waste disposal bins; and
6. Participation of women in decision making process in environmental health.

#### **4.1.2 Laws and Policies relating to environmental health**

One of the duties of the Environmental Management Agency is to control and regulate the disposal waste or affluent which may affect the quality of the environment. Therefore, the Agency is mandated to punish all those breaching the mother Act. The agency control all generators of waste, the city council and other stakeholders and individuals involved in solid or waste management.

The cardinal issue to consider is whether the controlling bodies are monitoring to measure compliance of environmental laws. The Council being the law making body in the district of Kadoma does not comply with the laws it has enacted especially on the enforcement part and compliance. There are no statistics at the council to show who has been charged, fined or taken to court for breaches of environmental laws. One of the council officials confirmed the lack of enforcement when he said:

“We do not take those people who violate the council regulations in terms of garbage and litter court. However, if we were to take them they were supposed to be charged and pay to the council. Court is the last resort and truly speaking we have not charged or taken someone to court. For all the wrongs they do, our main issue is education because we want to change the culture and mind set of our people to having a clean environment.”

From the findings on monitoring and enforcement by the controlling and regulating body, there is a laissez faire type of administration towards environmental matters. For example section 33 of Statutory Instrument number 208 of 1984 of the Public Health Act stipulates: “No person shall, except with written permission of the council, given under the hand of a duly authorized official, take away or interfere with any refuse which has been removed from any premises by the council.” With this law in place, the local authority is expected to implement and enforce it within the spirit of the statute so that there are no people who frequent the Waste disposal site for their own purposes. Anyone visiting the area should have authority for taking anything or cause to interfere with the state of affairs. It simply means a person with authority must remit some finances as a levy to the council. Hence, there is the need to vigorously monitor, implement and enforce the law in order to see the effectiveness of the system. The laws and policies are generally addressing all residents or members of the community with the usage of the phrase “everyone person shall.” The general wording is gender insensitive as it does not actually look into the plight of women on specific issues in relation to garbage control and management.

#### **4.1.3 Unprotected Waste Disposal Site**

According to my findings Kadoma has a Waste dumping facility situated 3 km away from the city. The Waste disposal site known as ‘Blue Ranges Waste dumping site is the only one. The site is not protected, and open to all people of all ages including people of unsound mind. In order to prove that I took a site spot check. I confirmed that the place is unprotected.

The use of unprotected dumpsite is a health hazard to those who frequent it is from such unprotected site that cholera, dysentery comes out. It is a breeding ground for diseases. Using the unprotected dump site is an environmental hazard to all as it causes injuries and some items collected are contaminated. As noted by one of respondent:

“The Blue range is not protected; it is open to all sorts of people who come bare foot. During the rainy season, the place is full of flies and filth and unpleasant odour. It is a health hazard. The mental unsound and others collect pieces of bread and discarded

food that looks appetizing. The situation needs to be checked and the area fenced.



**The picture above is known as the Blue Range Waste Disposal facility Kadoma City.**

The entry to such areas must be with permission in order to restrict and stop the risk of contamination. Those who enter the place must wear protective clothing which is not the case at all to those who visit the area. In order for council to enforce the laws, it is supposed to invoke section 33 of statutory instrument 208/1984 upon those who are interfere the dumpsite and taking away some discarded items.

The environmental management agency has failed to enforce that regulation in order to have compliance from the council and members of the public so that they speedup the construction of a new dump site which is already on the plan. It is of interest to note that one council employee stated that:

“The old Waste disposal facility (Blue Range dumping site) should have been closed by January, 2012 respectively; however, the Environmental agency has given a blind eye to that hence the continuance of us using the old site.”



Regulation 22 (3) of Statutory Instrument 6 of 2007 of the Environmental management Act states: “ No person shall continue to use an old unlimited sold waste site for more than five years from the date of publication of the regulation. By the spirit of the regulation, there should have been a new dump site in operation. The failure to comply with the laid down rules by the council is something to be desired.



Part of the Waste disposal part

### **Implication of Unprotected Waste Dumping Sites (Blue Range)**

Unprotected waste disposal sites are a health hazard in that they are breeding areas of germs and other vectors, sources of diseases and contamination especially to the age groups that frequent the area for their livelihood. In this case women are mostly hit because they are the caregivers to all those who fall sick due to the contamination of diseases gotten from the area after the visiting the unprotected waste dumping facility.

#### **4.1.4 Dissemination of information on environmental health issues**

My findings are that the council raise environmental awareness whenever there is an outbreak of cholera and dysentery. Women are not consulted to give their version in terms of the waste management and the environment information. One of the respondents during the interview said:

“The council does not disseminate information on environmental health and how to secure our self made sacks for garbage. We only see them announcing when there is an outbreak of Cholera and other diseases such as typhoid and dysentery. They are also seen during the rainy season”

Women should be consulted in matters concerning environment health issues because they contribute to environment sustainability through participation in decision making and are hard workers during outbreaks of diseases.

Information dissemination is a cardinal tool for local authority in order to incorporate residents in decision making so that they can be part of the system. It is the duty of the council to disseminate information to the residents that fall within its jurisdiction. This should be done as it is an obligation on it. Article 9 of the Charter<sup>3</sup> (ACHPR) requires every individual to receive information. The failure to inform the residents amount to the failure to deliver on the part of the council. In order to cement the importance of dissemination of information to the residents to achieve a sustainable environment, Article 18 (1) of the Protocol to the African charter sounds the call saying the: “Women shall have the right to live in a healthy and sustainable environment.”

It is essential to note that section 4 of the Environment Management Act<sup>4</sup> guarantees to everyone a right to clean environment that is not harmful and especially the right to access to environmental information which is right of the women of Kadoma at large. From the research, it was found that women were not part of decision making in matters relating to environment hence, lack of input from them. It was found that economically they were hardly hit in that they had no money to purchase waste

---

<sup>3</sup> . African (Banjul) Charter on the Human and Peoples’ Rights

<sup>4</sup> . Environmental Management Act Chapter 20:27

storage bins. In terms of health matters they affected as they were the only caregivers during times of outbreaks of diseases.

#### **4.1.5 Inadequate budgetary allocation to purchase equipment to collect and process waste**

The issue of the budget is something to be desired into. Budget allocation to the council is the responsibility of the central government to allocate some funds to councils throughout the country for developmental purposes. However, this is not the case in Kadoma as one respondent notes on budget:

“Plans and allocation of funds are not done by the Central government. Cash is not present. The council through the Director of Finances budgets and allocates money to various bodies within the council. Actual money is a problem”

The figure below shows how the budget of Kadoma Municipal City council was distributed in the year 2013 respectively. It shows that amount allocated to refuse collection is inadequate for the District.

<b>YEAR</b>	<b>BUDGET</b>	<b>DISTRIBUTION AMOUNT</b>	<b>AREA ALLOCATED TO</b>
<b>2013</b>	<b>854,000.US.D</b>	<b>40,000.00</b>	<b>REFUSE COLLECTION</b>
		<b>80,000.00</b>	<b>CAPITAL EXPENDITURE</b>
		<b>10,000.00</b>	<b>GENERAL EXPENDITURE</b>
		<b>620,000.00</b>	<b>ROAD MENTAINANCE</b>
		<b>104,000.00</b>	<b>LIBRARY SERVICES</b>
<b>TOTAL</b>		<b>854,000.00</b>	

Budgetary allocation for the 2013

The findings reveal that the situation in Kadoma City council is not conducive for a smooth full operation in that there is less funding to accomplish all the projects without the subsidy from the Central government. Therefore, for the council to generate funds it must have enough areas where it can raise the funds.

The areas for generation of funds come from internal funding of water charges, refuse collection charges, sewer charges, public lighting, property rates and rentals. In order for the council to meet some requirements it need loans and work on other

ways of generating revenue and seek donor injection in order to manage the obsolete waste collection equipments.



A composite receipt showing where the City council generates revenue

#### 4.1.6 Lack of household resources to purchase waste disposal bins

Due to closure of companies and industries, economically, it has been difficult for Kadoma women in the areas where the research was conducted to purchase waste bins or sacks. This is because women are finding it had to cope up with life. This has been confirmed by one respondent from Ngezi who stated:

“The council is imposing a lot of bills to us including buying bins for putting garbage when they know that there is a disaster of the closure of companies where we used to work.”



A woman in Rimuka SQ housing pointing a Sack f used a Bin

It is the duty of the council to supply the residents with litter bins as contained by Statutory instrument<sup>5</sup> number 208 of 1984 on section 36 (c) which states that: “ No person shall use a receptacle provided by the council for any purpose other than the storage of refuse.” It is not the sole responsibility of households to buy or provide their own receptacles for use in the collection and storage of waste (refuse). The shifting of such an obligation to the households is a breach on the part of the council and adding more hardship on the residents economically. In addition to the buying of litter bins by the households, the bills for waste collection are high as 21 dollars per month.

#### **4.1.7 Participation of women in decision making process in environmental health**

Public participation in decision making in environmental management is a vital component of environmental policies, and the involvement of women is a challenge to many organisations. There is the need to recognise that women need to need to be involved in decision making so that they can be the catalyst for change. As lamented by one respondent in Rimuka saying:

---

<sup>5</sup> . Kadoma ( Public Health) By – Law : S.I. 208 / 1984

“The council does not consult us when discussing matters concerning refuse in our areas. They only come and tell us what they have decided and impose it on us.”

To deny women a voice in planning and implementing environmental issues amounts to an abrogation of individual rights of women. Protocol to the African Charter<sup>6</sup> state that: “State parties shall take all measures to ensure participation of women at all levels in the conceptualisation, decision making, implementation and evaluation of development policies and programmes.”

Article of Access to Information in Environmental<sup>7</sup> matters stipulates that: “in order to contribute to the protection of the right to every person present and future generations to live in an environment adequate to his or her health and well being, each party shall guarantee the right of access to information, public participation in decision making, and access to justice in environmental matters.”

The issue of women left out in decision making in environmental issues in Kadoma is something to be worth in view of for development to forge ahead so that there is no discrimination. The little participation of women in decision making is something to be reconsidering as confirmed by one senior council official when he said:

“Women are not fully incorporated in decision making. We have only two women in decision making capacity in leadership levels. We are trying to do gender mainstreaming.”

The Fourth World Conference on Women Platform for Action<sup>8</sup> recommended the strengthening of women’s participation as part of a holistic approach to sound environmental management. It further called for a concentrated participation of women in environmental decision making at all levels in order to facilitate and increase women’s access to information and education, thus, enhancing their knowledge, skills, and opportunities for participation in environmental decision. Therefore, the councils should take all appropriate measures in their planning to

---

<sup>6</sup> . Article 19 (b) of Protocol to the African Charter on Human and Peoples’ Rights on the Rights of Women.

<sup>7</sup> . Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters (Aarhus Convention).

<sup>8</sup> . The Beijing Platform for Action: Chapter 4

ensure greater participation in decision making of women in management and preservation of environmental health matters.

### Conclusion

It has been shown that the laws and policies are gender insensitive to women in relation to environmental health issues and also it has been shown that the use of unprotected waste dumping site has health implications in that women who come out to be health care givers will suffer more because when people are infected by the diseases from the site only the women will get to them as first aiders. The research has shown that the budget allocated to refuse collection is inadequate for the exercise. The chapter has shown that there is a need to engage women in the matters in relation to garbage control and management because they hold a key to a sustainable environment. In the coming chapter conclusions and recommendations drawn from the study will be dealt with.

## **Chapter Five**

### **5.1.0 Conclusions and Recommendations.**

#### **5.1.1 Introduction**

The study establishes that waste generation and disposal are grave environmental challenges which affect both men and women in general. However, women are mostly affected during the outbreaks of highly infectious diseases such as cholera and dysentery. The chapter contains the conclusions drawn from the study and the recommendations made for the betterment of environmental health issues.

#### **5.1.2 Conclusion.**

Effective management of solid waste is an immense challenge to cities both in developed and developing countries because of increasing quantities and changing composition (Bartone et.al. 1993). Waste Management is a complex system that involves waste generation, waste storage, collection, treatment, transportation and disposal. Waste management is the responsibility of the Kadoma Municipal city council. Thus, the council is the regulating body in terms of environmental health issues for the whole jurisdiction. It means that the council in order to contain and manage waste or litter must be equipped with tools used in the field. They are supposed to know places where litter accumulates, who is involved in indiscriminately dumping litter. In other words, the local authority should know the culture prevailing in terms of waste management by the residents and environmental hazard posed. Due to financial constraints, the council is unable to live to its obligations of delivering to its people. Due to accumulation of litter in the households, women are at the suffering end as they are the ones mostly affected together with the children. However, given the chance to participate in decision making, women can have a positive impact on the environmental health management and waste management.

The other pertinent cardinal issue in waste collection, storage, transportation and disposal is the issue of compliance by the residents and enforcement by those controlling and regulating the laws pertaining to waste management and environmental sustainability. The research has revealed that residents are the chief



violators of the environmental laws; next to them is the council which does not met out sanctions against the violators of the law.

To conclude, there is a need for sustainable waste management chiefly through community participation and concomitant attitude change to adopt a ‘trash is to treasure, waste is to wealth and refuse is resource one.’

### **5.1.3 Recommendations**

The following are the suggested approaches to reducing or downright doing away with waste or garbage in Kadoma

#### **5.1.3.1 Formulation of Waste Management Policy – short term**

There is a need for the Municipal city council to come up with a Waste Management (Environmental) Policy that will guide and add to the other legal frame works on environmental health issues.

#### **5.1.3.2 Taking an integrated approach to waste Management – long term**

Management will reduce the volume of waste that has to be collected and transported, thus cost savings measure. The management should encourage composting, recycling industries to invest in waste in order to reduce the quantity of waste that has to be collected and disposed of. This will result in savings in operational labour costs.

#### **5.1.3.3 Public Awareness Campaigns - short term**

Management should engage in public awareness programmes aimed at educating the public about waste minimisation techniques such as composting, reuse and recycling, and classification of waste from homes with a token of appreciation. Public awareness campaign should enlighten the general public about the options and economic opportunities that present themselves in a material recovery as to encourage composting and recycling. Drama competitions, public meetings and gathering, the print and electronic media can be used to convey the message. Therefore, a well informed and sensitised public will pressurise the authorities and campaign for a better service, desist from illegal dumping, offer suggestions and will generally be supportive of efforts to improve the quality of service.

#### **5.1.3.4 Community Participation in waste management - long term**

The community should be encouraged to play a leading role in the management of waste. Community participation in the form of pre – collection, composting and recycling programmes can help in reducing the volumes of waste for collection and disposal and thereby reduce the operating costs for waste management. Separation of waste at the source will not only reduce waste management expenditure but will improve the quality of the recycled content.

#### **5.1.3.5 NGO's and Educational Institutions to be encouraged to design Programmes- long term**

The Nongovernmental organisations and educational institutions should be used to design programmes to train the teams and residential committees on ways of treating and separating waste and recycling. Donors should be encouraged to financially support such activities

#### **5.1.3.6 Transfer System - long term**

This should be started from the generation points, and the unloaded at the transfer point before haulage to the waste disposal site can be implemented in the city. The Neighbourhood pre – collection teams can do primary collection of waste to the transfer point, using non motorised vehicles or wheel burrows or pushcarts.

#### **5.1.3.7 Optimising crew and vehicle productivity- Long term**

Collection is a significant element of solid waste. A recurrent cost provides an incentive to improve the productivity of both vehicles and collection crews. Collection routes and zones must be planned so as to minimise transport distances and thus the operating costs.

#### **5.1.3.8 Capacity building -long Term**

There is a need to strengthen the capacity of authority to analyse and project costs of service as well as in record keeping and development cost recovery mechanisms. This includes private sector supervision, tendering and equipment procurement, record keeping and stores control.

#### **5.1.3.9 Increased Private Sector participation - long term**

There is a need to reduce the size of the city council collection's area and increase that of private companies which have more collection vehicles or serviceability of their vehicles.

## **BIBLIOGRAPHY**

Agunwamba, J.C. (1998). "Solid Waste Management in Nigeria: Problems and Issues". *Environmental Management*, 25 (2), 849 – 856.)

Bartone, C.R. and Bernstein, J.D. (1993) "Improving Municipal Solid Waste Material in Third World Countries ", *Resources, Conservation and Recycling*, Vol.8.PP 43 – 54

Bentzon, A.W. (1998) *Pursuing Grounded Theory in Law: South North Experiences in Developing Women's Law*, Tano – Oslo, Mond Books, and Harare.)

Booth, Martin, K. and Lankester, T. (2001) *Urban Health and Development: A practical Manual for Use in Developing Countries*, Oxford, Macmillan Education.

Hawker, S (2012) *Little Oxford English Dictionary*, (9<sup>th</sup> Ed.), Oxford: University Press, P. 706)

Jackson, A.R.W. and Jackson J.M. (1998) *Environmental Science: The Natural Environment and Human Impact*, London, Longman.

Makuku and Masiye, G (2002) "*Urban Solid Waste Management in Zambia*" in Conyers, D. Matovu, G and Tevera, D (Ed.) 20002. *The Challenges and New Innovations in Urban Solid Waste management: Issues and Policy options*, Municipal Development Programme, Harare.

Makuku, L and Masiye, G (2002) "Urban Solid Waste Management in Zambia" in Conyers, D. Matovu, G. and Tevera, D, (Ed.) (2002). *The Challenges and New Innovations in Urban Solid Waste Management: Issues and Policy Options*, Municipal Development Programmes, Harare.

Makwara, E. C. (2011) *Work Related Environmental Health Risks: the case of garbage handlers in city of Masvingo*, Lambert Academic publishing, Saarbrucken.

Mapira, J (2012) "Challenges of Solid waste disposal and management in the city of Masvingo" *Journal of Social development in Africa*, Vol.26.No. 2 2011 PP 67 – 91

Merchant, (1990) *Ecofeminsm and Feminist Theory*, in Diamond, I. and Orenstein, G. F., *Reweaving the world: The emergence of Ecofeminsm*. Sierra Club Books, San Francisco. CA

Miller, T. (1994) *Living in the Environment: Principles, Connections and Solutions*, California, Wadsworth Publishing Company.

Spretnak, C. (1990) "Ecofeminism Our Roots and Flowering" In Diamond I., Et.al (Eds), *reweaving the world: The emergence of Ecofeminism*, Sierra Club Books, C A

Sule, O.R.A, (1981) "Management of *Solid Waste in Nideris towards a Sanitary urban Environment*," *Quarterly Journal of Administration*. Vol. 15. Lagos, Nigeria.