

**A RESEARCH PAPER ON SOLID WASTE MANAGEMENT IN KENYA: AN
ANALYSIS OF LEGAL AND INSTITUTIONAL FRAMEWORKS.**

PRESENTED BY

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REG NO: G62/33820/2019.

**A RESEARCH PAPER SUBMITTED TO THE UNIVERSITY OF NAIROBI FOR A
PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF
MASTERS OF LAW [L.L.M]**

DECLARATION

I Muthama Rosalinda Wamaitha hereby declare that this is my original work that has not been presented for any other award in any university. Whereby works by other people have been used, references have been provided.

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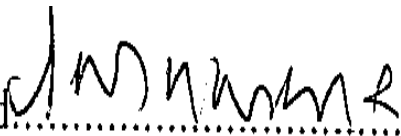
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APPROVAL

This thesis titled “Solid Waste Management in Kenya: An Analysis of Legal and Institutional Frameworks” has been under my supervision and has been submitted to the University of Nairobi, faculty of Law for examination with my approval as the candidate’s supervisor.

Signed  Date 1-12-2021

Supervisor: PROF ALBERT MUMMA.

DEDICATION.

I dedicate this research paper to the Almighty God who made it possible, to my daddy Mr.David Muthama who taught me the importance of education, to my mum Mrs.Muthama for her prayers and encouragement, to my brother Martin Muthama for his financial and emotional support and to all the other family members who has walked me through this post graduate journey.

ACKNOWLEDGEMENT.

I want to give my appreciation to my father Mr. David Muthama for his support both morally and spiritually and to my mother Madam Mary Patricia Muthama for her guidance. I am also grateful to all University of Nairobi lecturers in University of Nairobi Law School especially Prof Albert Mumma who has guided me all through the stages of my study with a lot of love and encouragement; may you live long.

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6. Kyoto Protocol 1998.
7. The Paris Agreement of 2016.

ABBREVIATIONS

CEC- County Environmental Committee.

CECM -County Executive Member.

COK –Constitution of Kenya.

CBO-Community Based Organization.

GHG-Green House Gases.

EMCA-Environment Management and Coordination Act.

KEBS-Kenya Bureau of Standards.

MEA-Multilateral Environmental Agreements.

MSWM-Municipal Solid Waste Management.

NEMA-National Environment Management Authority.

NGO-Non-governmental Institutions.

NET-National Environment Tribunal.

SWM-Solid Waste Management.

UNFCCC-United Nations Framework Convention on climate change.

WDR-Waste Disposition Report.

WHA-Waste Hierarchy Approach.

CHAPTER ONE: INTRODUCTION; A GENERAL OVERVIEW AND OUTLINE.

1.0 Introduction.

Most human activities generate waste. Recently, there have been an increase in activities that generate waste and due to this increase; there is rise in variety of waste.¹ Waste generally is the product of human activities and in its physical appearance contains similar substances that are usually available in useful products however, something that maybe regarded as waste to a person may be useful to another.²Historically, waste was buried in rubbish dumps and this brought a problem associated with buried mixed waste because this broke down and contaminated neighboring land produced toxic gases and brought about groundwater pollution.³The generation of solid waste globally has grown at a very high rate of an estimated value of 1.3 billion tons to around 2.2 billion tons from the year 2010 to the year 2025 and this is because of urbanization of the world's population.⁴ The urban third world countries face a staggering issue of poorly managed solid waste since almost two thirds of this waste generated in urban cities remains uncollected and this result to the same piling in the streets thus a major contributor of spreading diseases.⁵Kenya has uncontrolled waste because it generates different varieties of waste that can be classified as domestic waste, municipal waste industrial or hazardous waste. Recently, there are other categories of wastes that are emerging due to the growth of industries and technology for example the e-waste and waste tires nonetheless the

¹Ebikipande Amausomo\$ Jim Baird;[2016], 'Journal of Management and Sustainability';Vol.6 No.4; ISSN 1925-4725,E-ISSN 1925-4733,pg 88.

² White,P.R; Franke,M;\$Hindle,P.[1995] Intergrated Solid Waste Management: A Lifecycle Inventory:Berlin

³ Brenda Short, [2004] Nutshells:Environmental Law[published by Sweet and Maxwell] London.

⁴ Scheluter,Rachael, "Solid Waste Management in the Developing World:The Role of Local Government of Kisumu,Kenya"(2017).Independent Study Project(ISP) Collection.2654,Available at <https://digitalcollections.sit.edu/isp-collection/2654> (last accessed on 4th February 2021).

⁵ William L Andreen, 'Environmental Law and International Assistance: The Challenge of Strengthening Environmental Law in Developing World'(2000) 25 Colum J Envlt 17.

general waste varies between the residential premises, the commercial enterprises and industries.⁶In Kenya, the problem of MSWM mostly exists in the big cities which include: Mombasa, Nairobi and Kisumu.⁷This problem is seen in a number of ways for example there are no sufficient systems of collection of waste and disposal.⁸Kenya has no sanitary landfills and because of this, most waste is left on the streets uncollected and in the counties that have dumpsites, they tend to be insufficient also.⁹The counties that have dumpsites practice open dumping which is a dangerous way of disposing waste since most the waste is left to accumulate to the environment and this one of the causes of global warming because waste contributes to emissions of carbon dioxide.¹⁰

Managing of waste mainly refers to the methods or processes that manage the waste from the point when waste is generated to the point when it is disposed.¹¹Waste needs to be properly managed in order to prevent its effects when left exposed and comes into contact with either human beings or the environment they live in.¹²Therefore we can say that the main purpose of managing the solid waste is to make sure that it is not left exposed to the environment so that it cannot come into contact with either the human beings or the environment and this leads to a clean environment that promotes both individual and community health.¹³

1.1 Statement of the problem.

⁶ NEMA,National Solid Waste Management Strategy (NEMA 2015).

⁷ Tilahun Hageru,Blessing Mberu & Kanyiva Muidi;Solid Waste Management and Risks to Health in Urban Africa:A Case Study of Nairobi and Mombasa Cities in Kenya.Available at <https://www.urbanak.org/sites/default/files/resources/urban-ARK-Nairobi-Report.pdf>(last accessed on 22nd November 2021).

⁸ Ibid.

⁹ Ibid.

¹⁰ Ibid.

¹¹ An Introduction to the Principles and Concepts of Waste Management, available at <https://www.open.edu/oucontent/view> [last accessed on 4th February 2021]

¹² Ibid.

¹³ Ibid.

This research paper discusses the gaps in the law and the institutional challenges that have led to the state of poor MSWM in Kenya. It arises out of mismanagement of solid waste in Kenya. Despite that the Kenyan parliament has enacted laws and policies guiding on municipal solid waste management; nevertheless the laws have failed in terms of compliance. The law provides for clean and healthy environment as a right however this is not what happens in practice because existing situation right now in Nairobi is that municipal solid waste management system is very poor which includes poor garbage collection sites, poor sewerage systems and poor solid waste disposal. This situation has led to serious impacts to the environment and the society at large. This includes: loss of biodiversity, pollution of water, air pollution, new diseases, and damage passed down to future generations and increase in skin and eye disease due to depletion of ozone layer.

1.2 Hypothesis

Despite that the Kenyan Parliament has enacted laws and policies guiding on MSWM, nevertheless they have failed in compliance because of weak organizational capacities that include: inadequate financing, technical issues, management issues especially the personnel, lack of infrastructure, lack of recent technology on MSWM, poor public perceptions and attitudes towards MSWM, bad sanitation, political interference, corruption that has led to grabbing of public land allocated for construction of dumpsites, inadequate legal and regulatory framework and insufficient enforcement of legislation and the problem of multiplicity of laws that has caused lack of coordinated approach to policy making and persistent overlapping between various laws governing MSWM in the country.

1.3 Justification of the study.

The existing literature has failed to investigate why poor solid waste management still persists even after enactment of laws and policies both nationally and internationally. This means that there are some gaps and challenges that undermine the implementation of the law. The findings of this study will benefit the society in highlighting the ways in which it can use to curb poor MSWM within Nairobi City County. This study will also assist the government to get to know the importance of creating public awareness on good sanitary practices and also sufficient enforcement of legislation to deal with this problem of poor MSWM. This study will also highlight the importance of using technology to deal with MSWM issue.

1.4 Objectives of the study.

1. To assess the legal framework that governs MSWM in Kenya.
2. To examine the institutional framework that governs MSWM in Kenya.
3. To assess the gaps and capacity challenges that undermines the compliance of the law on MSWM in Kenya.

1.5 Research Questions.

2. What is the legal framework governing MSWM in Kenya?
3. What is the institutional framework governing MSWM in Kenya?
4. What are the gaps and capacity challenges that undermine the compliance of the law on MSWM in Kenya?

1.6. Theoretical framework.

This research will be premised on a theory known as life cycle analysis theory of waste management.

1.6.1 Life cycle analysis theory of waste management or “cradle-to-grave theory” analysis theory.

This theory was introduced in the mid-1990s and states that waste must be managed from the point production or generation to the point of disposal. This theory is basically used to trace a particular waste from the point of generation to the point when it is dispose.¹⁴ This should be done in stages with waste management principles at each stage.¹⁵ The aim of life cycle analysis is usually to prevent pollution and address all associated costs and possibly provide solutions to problems that may arise for example from a particular process or even waste.¹⁶ It comprises of waste generating, collecting, transporting, treating and disposing.¹⁷ Generating of waste mostly occurs at domestic level due to households, urban areas especially the big towns and cities in the market places.¹⁸ Under the waste generation stage, the waste management principles that exist include: reuse, recycle and reduce. This concept offers a waste hierarchy approach (WHA).¹⁹ This forms the simplest way of managing MSWM which is basically referred to as the 3Rs which are; reuse, recycle and reduce.²⁰ Their main objective is to reclaim waste materials which are the key

¹⁴ NEMA (2020), Kenya Waste Management Guidelines Developed for Petroleum Sector.

¹⁵ Ibid.

¹⁶ Ibid

¹⁷ NEMA, National Solid Waste Management Strategy (NEMA 2015).

¹⁸ Ibid.

¹⁹ Wambua Kituku and Collins Odote and Charles Okidi and Patricia Kameri-Mbote, 'Entrenching Waste Hierarchy for Sustainable Municipal Solid Waste Management in Kenya' (2020) 11 Sustainable Dev L& Pol'y 300.

²⁰ Purchasing Consortium Southern African Company (2013); Waste Management Cycle and Hierarchy; Available at [purcosa.co.za>category>services](http://purcosa.co.za/category/services) (last accessed on 14th March 2021).

in reduction of the amount of waste that is generated and thus, recycling process whereby materials from waste are processed into new similar products through chemical composition.²¹

The second stage is transportation and the waste management principles that exist include: separation, treatment and tracing. The process of waste collection and transportation is the second stage whereby waste especially in urban areas is largely collected. In Kenya for example, this is done by the county governments however waste in residential areas is collected by private operators at a fee.²²The waste is first separated to different types of wastes at the source of generation with the aim for example of separating recyclables from non-recyclables which may include recovery of recyclable items like plastic papers, metals and so on. The biomedical waste is also separated.²³Waste is then traced and finally treated. The waste management principle of tracing indicates that waste generators should be responsible for tracing their wastes from the point that they are generating their waste to the point where they dispose the same and be aware of the quantities of the wastes they generate, the handling of the waste and also the disposal.²⁴Thus all waste generators are required to maintain a tracing system however this type of system is their own choice.²⁵Waste generators are encouraged to develop a waste disposition report(WDR) that have a tracing system data that summarizes the types and quantities of waste, the generation methods and disposal methods and this should be maintained for a minimum of two years.²⁶ It is also proper and in order that a waste generator especially where the waste generator is an organization to maintain proper records that show the contents of its waste and

²¹ Ibid n-9

²² NEMA, National Solid Waste Management Strategy (NEMA 2015).

²³ Ibid.

²⁴ Ibid n-6

²⁵ Ibid.

²⁶ Ibid.

also it is advised to carry out procedures that show that it manages its waste properly.²⁷The other waste management principle in this stage is waste treatment which is done through incineration, neutralization and thermal treatment of waste where waste is combusted without any air supply and at a specified temperature.²⁸Waste incineration on the other hand is achieved through controlled burning of waste that exists in different states which maybe in solid, liquid or gaseous state. This approach is advantageous since it quickly reduces waste volumes and decreases greenhouse gas emissions.²⁹

The final stage is the disposition of waste. This majorly entails of disposing or burying of waste on land. Dumps and landfills are the methods that are commonly used in waste disposal.³⁰ A landfill is basically a pit that is designed to accommodate solid waste in layers and once it is filled up, it is then covered for final disposition of waste.³¹ The bottom of it is properly lined in order to prevent the underground water from getting inside therefore pollution cannot occur. It eliminated the open dumping and this has brought significant reduction of health hazards and infestations formerly associated with disposal sites.³² They are desired to eliminate the risk of environmental and public health hazards. Controlled dumps are the other methods of waste disposal and may have –well planned capacity for dumping wastes. The waste management principle in waste disposal is that waste must be disposed of in a sanitary way that cannot cause degradation.

1.7. Literature Review

²⁷NEMA (2020), Kenya Waste Management Guidelines Developed for Petroleum Sector

²⁸ Rick Leblanc, (2019), Waste Treatment and Disposal Methods; Available at [www.thebalancesmb.com>waste treatment>](http://www.thebalancesmb.com/waste-treatment/) (last accessed on 15th March 2021).

²⁹ Ibid.

³⁰ Ibid.

³¹ P.Michael Terlecy Jr (2000),Sanitary Landfill Technology 2nd ed Volume 2, published at Park Ridge New york.

³² Ibid.

1.7.1 Introduction.

Managing waste issue came about at early times because of the concept of duty of care towards human beings liability in relation to managing their waste and also the strict liability rule which states that if a person brings something on the land and it is likely to cause damage if it happens to escape he is supposed to keep it at his own risk and if does not do so, then he must be answerable for the damage caused if it escapes naturally and this may also include waste.³³The term duty of care first appeared in **Donoghue vs. Stevenson**,³⁴the plaintiff Mrs. Donoghue drank a bottle of beer that was bought for her by a friend in a restaurant. The same was in a translucent container. When the beer was put in a glass, a dead snail that had decomposed fell off. She claimed that she succumbed to trauma due to shock and she had the right to be compensated. The beer was manufactured by the defendant Stevenson. She could not claim in contract because there was no privity of contract between and the manufacturer. The plaintiff lost on the first attempt because of the above ground but appealed to the House of Lords. Lord Atkins introduced the neighbor principle. He stated that is someone who is directly affected by the acts of another person thus a duty of care should exist. She was awarded damages for the compensation of a personal injury thus; Waste is the discarded by-products of processes or products. Along with other industrialized societies, the UK produces a high level of waste.³⁵ However, there is no specifically agreed definition of what constitutes waste nonetheless, international legal regulation of wastes began in 1970 and this has caused legal difficulty even today in defining what waste is since only two treaties were adopted which completely did away with disposing certain categories of waste in the sea. The Cairo guidelines have attempted to

³³ See the Case of Rylands vs. Fletcher (1868) LR 3 H L 330, where the House of Lords introduced the strict liability rule.

³⁴ (1932) AC 562.

³⁵ Ibid n3.

define waste through reference of their national law but the challenge with this is that this approach is not widely followed however; there are other international accepted definitions. Under the 1972 London Convention, wastes or any other material include material and substance of any kind, form or description. The 1989 Basel Convention on the other hand, defines waste by reference to of its end disposition meaning that they are substances or objects that requires to be disposed of in accordance with the national law provisions.

Brenda Short³⁶ argues that nowadays, the main methods of waste disposal are deposit in a landfill site or incineration, of which both methods have drawbacks because incinerators cause air pollution; they are costly and also high costs of disposal of residues following incineration. This is poor solid waste management that is likely to cause environmental damage but she does not specifically define what constitutes waste. Sands Philips³⁷ defines only what municipal waste is and he states that it is waste may not be said to be hazardous because it is produced by households and other commercial entities. The two methods for disposal of MSWM are through landfilling and incinerating but according to him there are environmental problems related with that.

Both authors in this issue of defining waste do concur that waste is a by-product of products or processes or even materials of any kind or description and are capable of re-utilization. They also advocate for the same methods of waste disposal which are landfill and incineration. Their findings on the repercussions of the two methods are also similar and I agree that there is a gap in definition of the term waste and due to lack of a specific definition, this has led to lack of awareness to the general public has majorly contributed to MSWM since the word waste may

³⁶ Brenda Short, [2004] *Nutshells:Environmental Law*[published by Sweet and Maxwell] London

³⁷ Phillippe Sands,*Principles of International Environmental Law* 2nd ed (Cambridge: Cambridge University Press,2003),ISBN:9780521521062.

mean different things to different people. I also agree that the proposed methods of waste disposal may not be safe if waste is not disposed of in a sanitary way for example through sanitary landfills so as to prevent pollution to both the immediate environment and the people.

1.7.2 The problem of poor MSWM in Kenya.

Wambua Kituku, Collins Odote, Charles Okidi and Patricia Kameri-Mbote argue that Kenya being one of the developing countries is facing the problem of MSWM which is illustrated by high growth rates of waste generation and there are challenges that have arisen from the same which include insufficient collection and treatment systems and lack of waste disposal facilities to manage waste. Rotich Henry refers this to as MSWM³⁸ which includes the duties of collecting, transferring, resource recovering, recycling and treatment.³⁹ These authors continue to argue that Kenya has a growing population and due to increased urbanization, waste generation has increased. This trend has resulted from the growth of industries in the Kenyan economy. Nairobi City County for example, generating of waste is said to be accumulating and have a rise of 1530MT per day from the year 2002 to 2600MT in the year 2015.⁴⁰ Despite that the Kenyan parliament has enacted the law on MSWM, poor enforcement and bad behaviors have led the urban areas getting overworked by their waste and as a consequence this has affected the public health and the environment at large and this reason is that its approximated that only 40 per cent of urban area people are able to get access to waste collecting services offered by the county

³⁸ Wambua Kituku and Collins Odote and Charles Okidi and Patricia Kameri-Mbote, 'Sectoral Coordination In Kenya Municipal Solid Waste Management; A Horizontal Assessment', 161/1 Law, Environment and Development Journal(2020), p.55.

³⁹ Rotich K. Henry et al (2005), "Municipal Solid Waste Management Challenge in Developing Countries-Kenyan Study Case", Waste Management 26, no.1 (2006): Waste Management 2006, Vol 26(1).

⁴⁰ Wambua Kituku, Collins Odote, Charles Okidi & Patricia Kameri-Mbote, Sectoral Coordination In Kenya Municipal Solid Waste Management; A Horizontal Assessment, 161/1 Law, Environment and Development Journal(2020), p.55

government.⁴¹ They argue that the body mandated with the refusal and removal of dumps and solid waste disposal in Kenya is the county government.⁴² This function is devolved by The COK 2010. The County governments are mandated with the role of making laws and policies on MSWM.⁴³ The county environmental committee (CEC) who is tasked with managing the matters related to environment and the forming of the strategic plan needed by the counties and it is established under EMCA.⁴⁴ The department of environmental protection is the body mandated in dealing with solid waste management and it is headed by the County executive member (CECM) mandated with the responsibility of the environment.⁴⁵

They continue to argue that in Kenya, MSWM is governed by a rather comprehensive framework anchored on a constitutional regime that recognizes solid waste management as a devolved function.⁴⁶ They state that the COK 2010 recognizes the clean environment right and the principle of sustainable development which imposes measures of environmental protection and sustainability in MSWM.⁴⁷ They argue that the Kenyan legal framework on MSWM includes at least ten laws within EMCA which plays a central role in providing the norms and procedures on MSWM. At least now at the county level there are a number of legislations for example Nairobi City Solid Waste Management Act of 2015 which recognizes right to a clean environment as a justiciable entitlement which provides the basis for the right-based approach to MSWM in

⁴¹ Ibid.

⁴² Schedule 4, part 2, para 2 § 3 of the Constitution of Kenya 2010.

⁴³ Wambua Kituku, Collins Odote, Charles Okidi & Patricia Kameri-Mbote, 'Sectoral Coordination In Kenya Municipal Solid Waste Management: A Horizontal Assessment', 161/1 Law, Environment and Development Journal (2020), p. 55-75

⁴⁴ Section 29 § 30 of EMCA.

⁴⁵ Wambua Kituku and Collins Odote and Charles Okidi and Patricia Kameri-Mbote, 'Sectoral Coordination In Kenya Municipal Solid Waste Management'; A Horizontal Assessment, 161/1 Law, Environment and Development Journal (2020).

⁴⁶ Wambua Kituku and Collins Odote and Charles Okidi and Patricia Kameri-Mbote, 'Entrenching Waste Hierarchy for Sustainable Municipal Solid Waste Management in Kenya' (2020) 11 J Sustainable Dev L&POL'y 300.

⁴⁷ Ibid.

Kenya.⁴⁸They continue to argue that NEMA is the principal regulatory agency under EMCA and produced the National Solid Waste Management Strategy in 2015 to make sure that waste is managed in a sustainable way through enhanced of MSWM policy in the country whereby all these laws have been designed with a view of harmonizing the legislative frameworks on MSWM in Kenya however, they argue that despite this fact, the state of MSWM in Kenya is still ranked high among the environmental concerns facing the country and this is because the above legal framework has not evidently been translated into sustainable waste management.⁴⁹

They argue the above has not been achieved because of some challenges that face the MSWM which includes for example; weak organizational capacities that includes inadequate financing, personnel issues and technological challenges by institutions mandated with the responsibilities for the regulation and provision of services.⁵⁰They also argue that there is also the problem of inadequate clear decentralized guidance for MSWM that face the efficiency of county governments in exercising their mandate.⁵¹They continue to argue that politicization of institutions manning MSWM in Kenya and poor prioritization of MSWM in the county-budget making process is a major challenge.⁵²The other problem they highlight is the problem of regulatory fragmentation which occurs because different pieces of regulations are not put together into a larger framework for sufficient environment management.⁵³I totally agree with their positions because the issues they have highlighted as the challenges facing MSWM are the same as the ones anticipated at the end of this study.

⁴⁸ Ibid.

⁴⁹ Ibid.

⁵⁰ Wambua Kituku and Collins Odote and Charles Okidi and Patricia Kameri-Mbote, 'Sectoral Coordination In Kenya Municipal Solid Waste Management';A Horizontal Assessment,161/1 Law,Environment and Development Journal(2020).p 55-75

⁵¹ Ibid.

⁵² Ibid.

⁵³ Ibid.

Tilahun Hageru, Abdhalla Ziraba and Blessing Mberu argue that Kenya is like many developing countries and is looking forward to make sure that it speeds up with the pace of the rising development in industries however due to the following factors which includes: increase in urbanization, migration of rural to urban areas, high standards of living and rising population growth have led to the increasing MSW generation due to industries, domestic among other activities.⁵⁴ They state that other factors that have contributed to this problem of poor MSWM in the urban areas. They argue that the growth of industries in the Kenya have increased in the main cities for example Nairobi, Mombasa and Kisumu.⁵⁵

They argue that MSWM basically are the remains from residential buildings, non-hazardous materials from industries, commercial buildings, waste from the market, waste from the yard and waste that results from street sweeping. They continue to state that in many low-income countries, MSW is mostly mixed and managed by the methods of collecting, transferring, treating, recycling, resource recovering and the disposing of the MSW.⁵⁶ They state that key goal of SWM is to provide protection both health of the people and the environment and to try to solve the high risks brought by poor MSWM and due to this, Kenya has come up with several laws as well as coming up with institutions but at different levels of MSWM governing nonetheless the challenge that arises is that the order and continuance development of these laws have not been systematically closely looked into.⁵⁷

They continue to argue that even if there is a number of SMW laws enacted in the country for the last few years, there is a concern with SMW that has always being a bad challenge for example

⁵⁴ Tilahun Hageru, Abdhalla Ziraba and Blessing Mberu, 'Integration of Solid Waste Management Policies in Kenya: An Analysis of Coherence, Gaps and Overlaps, Working Paper 8, Urban Africa Risk Knowledge (2016).

⁵⁵ Ibid.

⁵⁶ Ibid.

⁵⁷ Ibid.

the Nairobi City County, the MSWM officials stated that only half of the estimated 3,000 tons of waste that is generated on daily basis is collected and the rest remains uncollected.⁵⁸ They also argue that the evolution of SMW policies is not aligned to the corresponding improvements in SMW practices and this is because the stress has been more on issues pertaining ecology such as cleaning of the environment rather than health outcomes of the same and thus this is a major challenge.⁵⁹ They also argue that the evolutions of SMW laws actually have not delivered usual collecting services to all people on different varieties of waste and thus there exists the gap between law and practice. I totally agree with this position since in this study among the expected outcomes, the challenge of implementation and enforcement of the law has been highlighted and this is one of the major gaps that exist in SWM.

They continue to argue that the other challenge is the devolving nature of SWM policy frameworks whereby the national-level policy framework is tandem to overall guidance of SWM in the county-level but the county governments face the problems of inadequate capacities, poor economic status because of high population and high urbanization in Kenya.⁶⁰ I agree with this position since one of the challenges that I highlight in this study is lack of capacities by the county governments in implementing their mandate.

They also argue that the other challenge facing the county governments in the implementation of the law is the issue of specific sectors and specific issues on segmentation problem in that the two categories of policies has left a question in the enforcement of the MSWM laws.⁶¹ The other challenge is that the laws little stress on solid waste as an able material and that the law

⁵⁸ Ibid.

⁵⁹ Ibid.

⁶⁰ Ibid.

⁶¹ Ibid.

intervenes are obliged towards collecting, transporting and disposing of waste but gives little emphasis to the 3Rs and thus solid waste is not sufficiently managed.⁶² They argue that the important duties of different stakeholders in SMW are stipulated clearly by MSWM laws but the same have not well been put in place and that coordinated measures are not well stipulated in the legal framework guidelines.

Finally they argue that institutions tasked with MSWM are often described in a way that have shown that the enforcement at the level that is national that is in tandem with the same legal frameworks on MSWM and these governing mechanisms at the county level can thus be mandated with enforcing some legal doings that arise from several entities at that level but there is a challenge that exists in that there is no clear example of policy implementation of the same by the county government authorities.⁶³

Nicholas O. Oguge argues that there are existing legal and institutional legislations guiding on SWM however some technicalities in the management arise and disposals of solid wastes in Kenya which include inadequate and poor modes of transporting wastes, lack of disposing facilities, bad utilizing of waste, bad recycling methods and poor waste recovery methods due to insufficient technology on the same.⁶⁴ He continues to argue that the SWM Strategy nationally provides manner of guidance SWM in the country to guarantee an appropriate safe and healthy living however he states that the strategy identifies difficulties associated with SWM in Kenya to

⁶² Ibid.

⁶³ Tilahun Hageru, Abdhalla Ziraba, Isabella Aboderin, Dickson Amugusi, Kanika Muindi & Blessing Mberu 'An assessment of the evolution of Kenya's solid waste management policies and their implementation in Nairobi and Mombasa: An analysis of policies and practices (2017) Environment and Urbanization 16-17.

⁶⁴ Nicholas O Oguge 'Circular Economy Measures: An Opportunity for Rethinking Plastic Waste Governance in Kenya' (2019) 15 Law Env't & Dev J 124.

include lack of knowhow, bad perceptions patronage in politics, technicality problems and inadequate resources problems.⁶⁵

The Ministry of Environment and Natural resources argue that the country has a legal and institutional framework guiding on SWM however there are a number of barriers that have hindered Kenya from accurately implementing an adequate MSWM system and disposing of solid waste.⁶⁶They include regulation and legal barriers, socio-economic barriers, financial and infrastructural barriers and technology and knowledge barriers.⁶⁷The ministry continues to argue that although there is an important system of laws on solid waste that exist, it is clear that big inconsistencies persists between the legislations with their implementations for example although the law prescribes how the waste should be collected and transported, the same is not adhered to and that waste is carried out in an informal way and also waste self -reliant system to trace waste generating, collecting, transporting and disposing is also lacking and even unreliable.⁶⁸I totally agree with this position since the study identifies the gap between the law and the implementation as one of the major challenges that have led the problem of SWM.

NEMA in National Solid Waste Management Strategy 2015 argues that most the urban areas have insufficient waste collection and disposal systems. Waste transportation in Kenya is done by Lorries, hand carts and others. They are unreliable waste transporting methods that have accelerated to more dumping of the materials from waste thus worsening the situation of poor SWM.⁶⁹ The disposal of the same is the biggest challenge today in Kenya especially with the

⁶⁵ Ibid.

⁶⁶ Ministry of Environment and Forestry 'National Sustainable Waste Management Policy-Revised Draft, 24th April 2019, Available at <https://www.environment.go.ke/wp-content/uploads/2019/04/Revised-National-Waste-Policy-2019.pdf> (last accessed on 23rd March 2021).

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ Waste Management in Kenya available at www.kenyacic.org [Last accessed on 4th February 2021.]

increased urbanization. Dandora dumpsite being the biggest dumpsite in Kenya is situated in the east of Nairobi however the current status of the dumpsite reflects the neglect that we as a country have reached due to the problem of poor MSWM. Rising tide of dumpsite is threatening a very fundamental right for every Kenyan to a clean and healthy environment.⁷⁰ Climate Innovation Change continues to state that a report by Japan International Cooperation Agency in 2015 shows that only 33% of the waste produced is collected and dumped at Dandora dumpsite. This shows that waste management is poor and this has contributed to emission of greenhouse gases globally and with this in notion, Kenya has failed in its role of ensuring that people live in an appropriate environment that is clean and healthy as commissioned through the COK 2010.⁷¹ This shows that there is still a very big gap in terms of finding a proper solution to the issue of poor waste management in Kenya. I agree that solid waste management is an issue that is yet to be addressed and Kenya as a country has not put in appropriate solutions to curb this problem and as much as there are gaps in the law and challenges as reviewed above nonetheless the Constitution of Kenya 2010 upholds the polluter pays principle which states that a person can seek redress where this fundamental right been violated for example through dumping of waste on one's property. A person who is making an application to the court on the same necessarily must not show that they have incurred loss or suffered injury.⁷² This was demonstrated in the case of **Paul Nzangu vs. Mbiti Ndilu**,⁷³ where the plaintiff filed a suit against the defendant to claim damages because the defendant had dumped rubbish on his land. Evidence was adduced that the defendant had destroyed a wall on his land and dumped the rubbish on the plaintiff's land in his absence. Though he had indeed disposed rubbish on the other party's land, however court refused to

⁷⁰ Ibid.

⁷¹ Ibid.

⁷² Article 70(3) of the Constitution 2010

⁷³ Machakos Civil Appeal No 8 of 1991.

award damages since it viewed the act of dumping as an act of an independent contractor. The plaintiff appealed and on appeal, the court held that he, his agents or his agents had disposed on the other party's land and the defendant therefore required to remove the rubbish. He was ordered to do so in a weeks' time and also to pay the costs.

1.7.3 Conclusion.

In conclusion we can say, that Kenya has a robust legal and institutional framework guiding on SWM but there are gaps and challenges associated with this legal and institutional frameworks. The study agrees with most of the authors in this Literature Review but the study also highlights that although gaps and challenges exist, the law provides for remedies in case there is infringement of this fundamental right of clean environment as stipulated by the Constitution of Kenya 2010.

1.8. Research methodology.

This research is a qualitative type of research. The researcher did not collect numerical data in relation to poor waste management in Kenya since this is almost a new area of environmental law in Kenya and not much has been recorded since the enactment of laws guiding on solid waste management.

This study, which is legal and non-experimental in nature, adopted the doctrinal legal research model. This type of research simply refers to a type of research that provides the law of a specific area.⁷⁴The researcher sought to collect and then analyze a body of case law together with a body of relevant legislation called the primary sources. The analysis aims at establishing the appropriate legal principles in a logical manner.

⁷⁴ Mike Mcconville, Wing Hong Chui; (2007) Research Methods for Law (Edinburgh University Press).

The researcher used library online sources and internet sources to gather data and information. The primary sources included international conventions, statutes and regulations. The secondary sources included text books, case laws, journals, articles and legal periodicals.

1.9 Limitations of the study

This research is limited to poor MSWM within Nairobi and therefore may not reflect an accurate picture of the entire country however; the results of the study in Nairobi will be a general representation of the country's awareness on the gaps that exist in law and also the institutional challenges that have led to poor MSWM. The researcher also resides in Nairobi and not elsewhere.

This area of the study is not widely explored in relation to Kenyan experience therefore most of secondary data to be relied upon in relation to studies carried out in other countries, however this information will be key in providing a comparative analysis with the Kenyan scenario.

1.10 Chapter Breakdown.

Chapter one has introduced the research area. It also outlines the statement of the research problem, justification of the research, theoretical framework within which the research is carried out, the literature review, the research questions and objectives, the methodology that will be used to carry out the research, the hypothesis and the expected limitations while doing the research, the scope of the study and the summary.

Chapter two focuses on the law guiding on MSWM in Kenya and from it, we get to identify the gaps in the law that hinders the compliance of the law on MSWM in Kenya.

Chapter three focuses on the institutions in Kenya mandated with MSWM for example NEMA and the county governments and the challenges they face during the implementation of their mandate their mandate.

Chapter four summarizes, outlines the findings and concludes the study. Additionally the chapter provides for recommendations and sums up this study.

CHAPTER TWO: LAW GUIDING ON MUNICIPAL SOLID WASTE MANAGEMENT IN KENYA.

2.0 Introduction.

This chapter will deal with the law guiding on MSWM in Kenya and it will try to answer the question as to what entails the national law on MSWM in Kenya and the relevant multilateral environmental agreements (MEAs) that Kenya has ratified in relation to MSWM in Kenya. It will also try to identify the gaps that exist in the law and the waste management cycle that undermines the implementation of the law leading to mismanagement of municipal solid waste in Kenya. Gaps in MSWM basically mean the key areas in SWM that the law seeks to address within the existing policy make up.⁷⁵

This paper argues that the legal framework is characterized by gaps and inconsistencies which include: lack of a clear definition of mandates for waste management and regulation, lack of definitions of waste hierarchy approach and its provisions, lack of clear enforcement mandate of the law, gaps due to the vagueness of the law, lack of coordinated approach to policy making and overlap between various laws that governs solid waste management. Other gaps that exist in the law regards to waste management cycle and this includes gaps on collection, tracking, treatment and disposal of SMW. These gaps may also arise from incompleteness of the existing regulations for instance where the regulations fail to provide details on how to comply with an existing

⁷⁵ Tilahun Hageru, Abdhalla Ziraba and Blessing Mberu, 'Integration of Solid Waste Management Policies in Kenya: An Analysis of Coherence, Gaps and Overlaps, Working Paper 8, Urban Africa Risk Knowledge (2016).

requirement as well as gaps that occur due to lack of complementary regulations on the same.⁷⁶Gaps may also arise if the legislation fails to regulate a specific issue.⁷⁷

2.1 The Constitutional mandate for MSWM in Kenya.

The COK 2010 provides for the right to a clean environment and states that every person in Kenya is entitled to a clean and healthy environment which includes the right to have the environment protected for the benefit of present and future generations through legislative and other measures and also to have obligations relating to the environment.⁷⁸The state has an obligation in ensuring reasonable exploitation, utilization and conservation of the environment and to ensure equality while sharing of the accrued benefits.⁷⁹It is also mandated to eliminate processes and activities that endanger the environment.⁸⁰Such processes and activities also include poor waste management since it endangers the environment. Any person that feels that their right to a clean and healthy environment has been tampered with then, they may seek remedies from court and the court has a duty to address the same.⁸¹

The County governments are mandated with the responsibility of removing refuse, manning refuse dumps and even managing the solid waste⁸²thus in **African Centre for Rights and Governance (ACRAG) & 3 others vs. Municipal Council of Naivasha**⁸³, the petitioners filed a suit against the respondent local authority claiming violation of the right to a clean environment due to harmful emissions and other forms of environmental pollution linked to poor

⁷⁶ National Environment Management Authority, Technical guidelines on the management of used oil and oil sludge in Kenya(2016).

⁷⁷ Ibid.

⁷⁸ Article 42(a) and (b) of the Constitution of Kenya 2010.

⁷⁹ Article 69(1) (a) of the Constitution of Kenya 2010.

⁸⁰ Article 69(g) of the Constitution of Kenya 2010.

⁸¹ Article 70(1) of the Constitution of Kenya 2010.

⁸² Part 2 para 2 of the 4th schedule of the Constitution of Kenya 2010.

⁸³ (2017)ekR (also cited as Petition No.5 of 2012).

management of a disposal site in Naivasha town, whereby the local authority was running without a permit from NEMA and in absence of an EIA license. The court agreed with the petitioners that the issues in the matter contributed to a violation of the article 42 right and ordered the county government of Nakuru to take the necessary compensation measures and to add on it, to seek a permit from NEMA to continue the operation the dumpsite. NEMA was ordered to commission an EIA study as a precondition before issuing of a permit. The court further ordered the Ministry of Environment and Forestry as well as the Council of Governors to bring up policy measures of ensuring compliance with EMCA and establishment of the relevant SMW systems. The court recognized the right to a clean environment as a justiciable entitlement. The constitutional framework generally provides for anchorage for all other MSWM legal frameworks while manning the waste management cycle.

2.2 The legal framework for MSWM and the waste management cycle in Kenya.

Apart from the constitutional framework, Kenya has a legal framework that provides for MSWM and this framework also provides for principles that are entrenched in the waste management cycle to try curbing the problem of poor solid waste management. This includes: statutes, regulations and also the relevant MEAs that have been ratified. The legal frameworks are divided into: national, sectorial and local frameworks. This may also be categorized into six different groups that includes: generic policies that provide broad provisions for example COK 2010, integrated policies that address many environmental issues for example EMCA Acts that deal with specific sectors for example Public Health Act, regulations that deal with specific issues for example Waste Management Regulations, solid waste stand-alone policies for example National Solid Waste Management Strategy and external policies that include both international

and national policies endorsed by a country.⁸⁴ Mostly these legal frameworks provides for the waste hierarchy approach that entrenches waste management cycle that tries to minimize the problem of poor municipal solid waste management.

2.2.1 The law on regulation of MSWM.

In Kenya, the Environment Management and coordination Act (EMCA) and the Public Health Act are mandated with the role regulation of MSWM.

a. Environment Management and Coordination Act 1999 (EMCA).

In Kenya, the policy that has addressed many environmental issues on MSWM and the waste management cycle is basically the Environmental Management and Coordination Act of 1999 and it states as follows that every person in Kenya is entitled to a clean and healthy environment and has a duty to make sure that the same has been achieved⁸⁵ however, any person that feels that their right to a clean and healthy environment has been tampered with then, they may seek remedies from court and the court has a duty to address the same. Any person that feels that their right to a clean and healthy environment has been tampered with then, they may seek remedies from court and the court has a duty to address the same. .⁸⁶ One of the directions that may fit in waste management processes may include for example, compelling the persons responsible for environmental degradation to restore the degraded environment as far as practicable to its immediate condition prior to damage.⁸⁷

⁸⁴ Tilahun Hageru, Abdhalla Ziraba and Blessing Mberu, 'Integration of Solid Waste Management Policies in Kenya: An Analysis of Coherence, Gaps and Overlaps, Working Paper 8, Urban Africa Risk Knowledge (2016).

⁸⁵ Section 3(1) of EMCA.

⁸⁶ Section 3(3) of EMCA.

⁸⁷ Section 3(3)(d) of EMCA.

In addition the law provides that no person is entitled to dispose wastes in a manner that does not meet the sanitary standards and this applies to both the waste generated locally and even the waste generated locally⁸⁸

b. The Public Health Act (2012 edition).

At the county level, the Public Health Act gives power to the department of public health to regulate waste because it is an example of nuisance under that Act.⁸⁹This will help to curb health problems. It does this through the health authorities by intervening in MSWM for example through controlling development especially while giving approvals to residential, commercial and industrial building while under construction.⁹⁰These health authorities are given the mandate to ensure compliance for example they are supposed to enforce actions against people who occupy buildings that may endanger their lives.⁹¹This includes issuance of notices in relation to the same and to bring prosecutions to those who fail to comply with these orders thus in **Peter K.Waweru vs.Republic**,⁹²The applicants and the interested parties were charged with two offences of discharging raw sewage into public water source contrary to section 118(e) of the Public Health Act and failing to comply with statutory notice from public health authority of the said Public Health Act.

The applicant was given a three months' notice to abate and prevent the nuisance from recurring arising from discharging water into an open drain and to remove the said pipes. When the notice expired the applicant and 22 other plot owners were charged with nuisance at the magistrates' court however were charged directly without serving them previously with summons to appear

⁸⁸ Section 87(1) of EMCA.

⁸⁹ Part 126;Rule under that part.

⁹⁰ Section 117 of the Public Health Act (2012)

⁹¹ Section 119 of the Public Health Act (2012)

⁹² Misc Civil Application No 118 of 2004 in Nairobi.

before the court of the magistrate thus, the applicant made a constitutional reference from subordinate court to High Court alleging that the applicant's fundamental rights and freedom of individual, protected by the Kenyan Constitution had been violated by the prosecution. The court held that failing to issue a notice before preferring charges is unlawful. The court also held that sustainable development has a cost issue which must be complied with by developers. The court further held that the right to a clean and healthy environment was equal the right of life which ought to be protected at whatever the cost. This case illustrates the step of proper disposal of waste in the waste management cycle which states that waste should be disposed in a sanitary way.

The local authority through the powers of the minister under the Act is mandated to enact bylaws that are relevant to MSWM to enhance proper sanitation of buildings.⁹³The minister is also empowered to order municipal authority to discharge health related duties which includes MSWM and has power to appoint another person to discharge the same duty at the expense of offending municipal authority.⁹⁴

2.2.2 The law on solid waste planning.

The county governments are mandated to carry out planning for SWM. The Kenyan legal framework provides for MSWM principles provided in the waste management cycle which basically includes several stages which are; generation, collection, transportation, tracking and segregation and disposal of the same. In Kenya the minimum requirement of these five stages in waste management cycle were developed through an involving process by five counties being Mombasa, Kisumu, Eldoret, Nakuru and Thika to help them move forward toward full

⁹³ Section 126 (A).Hg\g\

⁹⁴ Section 14 of Public Health Act (2012).

enforcement for example adapting use of sanitary landfills and other environment friendly MSWM practices.⁹⁵The law provides for waste management but the situation in practice is quite different since as per now there is waste mismanagement which includes indiscriminate dumping, uncollected waste that lacks waste separation across the country.⁹⁶The laws applicable on this include:

i. The County Government Act of 2017.

It provides for institutional foundation for county government functions which includes planning, coordination, decentralization and delivering services of MSWM for example at the county level, the Nairobi city county led the way of adopting the Nairobi City Solid Waste Management Act of 2015 reason being that Nairobi is the capital city of Kenya and leads in waste generation in the country.⁹⁷

ii. The Physical and Land Use Planning Act No.13 of (2019).

It grants the director of physical planning and county director for physical planning at both national and county levels, regulatory powers in respect to land use and development control approvals which are connected with MSWM. In addition, the director is also given other responsibilities which include developing land use plans and development permissions at their respective levels and therefore providing a basis for environmental conservation in MSWM and also protection.⁹⁸This includes steps and principles provided in the waste management cycle.

iii. The Climate Change Act 2016.

⁹⁵ NEMA, National Solid Waste Management Strategy (NEMA 2015).

⁹⁶ Ibid.

⁹⁷ Wambua Kituku and Collins Odote and Charles Okidi and Patricia Kameri-Mbote, 'Entrenching Waste Hierachy for Sustainable Municipal Solid Waste Management in Kenya'(2020) 11 J Sustainable Dev L&POL'y 300.

⁹⁸ Section 37 of Physical Land Use and Planning Act.

This Act is mandated with the regulation of climate change and it provides for ways and measures to achieve low carbon dioxide that leads to climate change⁹⁹ several factors have led to the contribution of climate change and GHGs is poor MSWM left exposed to the environment.

The Act provides for a regulatory framework for adaptation and mitigation. Adaptation is the adjustment in natural or human systems in response to actual or expected climatic stimuli or effects which moderate harm or exploits beneficial opportunities.¹⁰⁰ Mitigation on the other hand are efforts that seek to prevent or slow down the increase of atmospheric greenhouse gas concentrations by limiting current or future emissions.¹⁰¹

Operative provisions of the Act require the National and County Governments to mainstream climate change adaptation and mitigation. The guiding values of the Act are to provide a low carbon economy.¹⁰² The Act establishes a National Climate Control Council led by the President and a Directorate which serves as a Secretariat to the Council and acts as lead agency in government on climate change plans and actions to deliver operational coordination.¹⁰³

The Cabinet Secretary in charge of climate change is required to create a national climate change action plan. It is this plan that prescribes measures and mechanisms for mitigations and adaption to climate change.¹⁰⁴ The National Climate Control Council has the mandate to obligate duties relating to climate mitigation and adaption on any public entity or private entity.¹⁰⁵ NEMA has been empowered by the Act to monitor and enforce all measures put in place on any public or private entity with regard to climate change adaptation and mitigation. Anyone may apply

⁹⁹ The preamble of Climate Change Act 2016.

¹⁰⁰ Section 2 of Climate Change Act 2016.

¹⁰¹ Ibid sec 2.

¹⁰² Section 2(g) of Climate Change Act 2016.

¹⁰³ Section 5 of Climate Change Act 2016

¹⁰⁴ Section 8 (2)(a) of Climate Change Act 2016.

¹⁰⁵ Section 6 of Climate Change Act 2016.

under Article 70¹⁰⁶ of the Constitution to the Environment and Land Court alleging that a person has acted in a manner that has or it's likely to adversely affect efforts towards mitigation and adaption to the effects of climate change. The Court may thereafter order the prevention stopping or discontinuance an act or omission that harmful to the environment¹⁰⁷ including dumping of waste to the environment thus curbing with the problem of poor waste disposal as provided in the waste management cycle.

iv. The integrated Solid Waste Management plan (2010-2020).

It enshrines a healthy, safe, secure and sustainable MSWM system. The aim of this vision is to protect and improve the public health of Nairobi residents, to protect health and to maximize resource recovery from waste and this basically incorporates the waste hierarchy approach.

v. Sustainable Waste Management Bill (2019) and the National Sustainable Waste Management Policy.

They were drafted by the national government in 2018 with a view of bringing together and introducing the zero waste principle for circular economy of MSWM. This involved two hundred and seventeen countries and Kenya is among the one hundred and eighty seven countries in the world that adopted these developments for municipal solid waste MSWM.¹⁰⁸The Bill stipulates the duties of the national government and the counties, private sectors and citizens in relation to waste. It also provides for institutional mechanism for the implementation of the Act.¹⁰⁹This includes the cabinet secretary responsible for policy formulation and oversight, waste management council and the county government. It also includes the waste management council

¹⁰⁶ Article 70(1) of COK 2010.

¹⁰⁷ Article 70(2) of COK 2010.

¹⁰⁸ Wambua Kituku and Collins Odote and Charles Okidi and Patricia Kameri-Mbote, 'Entrenching Waste Hierachy for Sustainable Municipal Solid Waste Management in Kenya' (2020) 11 J Sustainable Dev L\$POL'y 300.

¹⁰⁹ Part II of the Sustainable Waste Management Bill (2019).

that is made in a way to incorporate inter-governmental structures that is represented by the non-state actors. The Bill also stipulates out the measures that should be undertaken by the cabinet secretary in marketing of waste protection of people¹¹⁰ and environmental health.¹¹¹ In terms of implementing the waste management cycle, it establishes a materials recovery facility before disposal through landfilling.¹¹²

2.3 The Waste Hierarchy Approach and the steps involved.

Waste hierarchy refers to an approach of managing wastes that prioritizes reduction, recycling and reuse of waste over treatment and disposal.¹¹³ It is derived from life cycle analysis or cradle to grave theory which comprises of five that is; generation, collection, transportation, treatment and disposal.¹¹⁴ However in Kenya, the concept of waste hierarchy approach is not defined in the existing MSWM legal framework and also there is lack of provisions of reuse, recycling and recovery of waste for example except for the requirements to license those who transport waste and also deal with disposing of the same. EMCA and EMCA waste Regulations lack specific provisions on reuse, recycling and resource recovery therefore the lack of specific legislation on waste hierarchy approach at both levels of governments demonstrates that waste management actors lack appropriate guidance on priority of actions to ensure sustainable MSWM.¹¹⁵

2.3.1 The law on control of generating waste.

¹¹⁰ Section 9(2)(c) of the Sustainable Management Bill (2019).

¹¹¹ Section 9(2)(a,b&d) of the Sustainable Management Bill (2019).

¹¹² Section 12 of the Sustainable Management Bill (2019).

¹¹³ Wambua Kituku and Collins Odote and Charles Okidi and Patricia Kameri-Mbote, 'Entrenching Waste Hierarchy for Sustainable Municipal Solid Waste Management in Kenya' (2020) 11 J Sustainable Dev L&POL'y 300.

¹¹⁴ NEMA, National Solid Waste Management Strategy (NEMA 2015).

¹¹⁵ Ibid.

Waste generation mostly occurs at domestic level due to households, urban areas especially the big towns and cities in the market places.¹¹⁶ Under the waste generation stage, the waste management principles that exist include: reuse, recycle and reduce. This concept offers a waste hierarchy approach (WHA).¹¹⁷This forms the simplest way of managing MSWM which is basically referred to as the 3Rs which are; reuse, recycle and reduce.¹¹⁸Their main objective is to reclaim waste materials which are the key in lowering the amount of waste that is generated thus, recycling is the process whereby materials from waste are processed into new similar products through chemical composition.¹¹⁹

2.3.1.1 Banning of certain types of waste during generation.

During the generation of waste stage, some waste is banned especially the waste that cannot be disposed easily for example plastic bags but the challenge that exists is that the law tends to be vague for example our laws have moved from plastic bags however there are other types of wastes that the law do not address. This was demonstrated in the banning of plastic bags in **Kenya Association of Manufacturers & 2 others vs. Cabinet Secretary, Ministry of Environment and Natural Resources & 3 others**¹²⁰ whereby the key issues in this consolidated cause revolved around the validity of a legal notice published by the cabinet secretary for environment and natural resources and the legal effect of the legal notice is that it banned the use, manufacture and importation of certain categories of plastic bags used for commercial packaging. The plaintiffs in this case claimed lack of public participation and their doom to

¹¹⁶ Ibid.

¹¹⁷ Wambua Kituku and Collins Odote and Charles Okidi and Patricia Kameri-Mbote, 'Entrenching Waste Hierarchy for Sustainable Municipal Solid Waste Management in Kenya' (2020) 11 Sustainable Dev L& Pol'y 300.

¹¹⁸ Purchasing Consortium Southern African Company (2013); Waste Management Cycle and Hierarchy; Available at [purcosa.co.za>category>services](http://purcosa.co.za/category/services) (last accessed on 14th March 2021).

¹¹⁹ Ibid n-9

¹²⁰ (2017) eKLR

suffer great economic losses but the ministry said that it had engaged various stakeholders through NEMA in twenty seven meetings since 2006. The ministry also told the court that the previously it had attempted to control the negative environmental impacts on plastic bags had been futile. The court held that the advantages of the ban outweighed the disadvantages caused by the ban and that the national government did not violate any rights in enforcing the ban.

2.3.1.2 The Occupational Safety and Health Act No.5 of 2007 (Revised Edition 2012).

The director under this Act¹²¹ is granted with power to enforce MSWM requirements in the work places that are registered. The Act also provides for the steps and principles of waste management cycle in that every workplace where chemicals and other toxic substances are manipulated, the employer shall develop a sustainable system for the safe collection, recycling and disposal of chemical wastes, obsolete chemicals and empty containers of chemicals to avoid the risks to safety health of employees and the environment.¹²² This is because a lot of waste is generated in the workplaces. The Act requires every workplace to be kept in a clean state and that waste should be removed daily using sustainable methods.¹²³ On the same the office of a Director of Occupational and Health Services is given the mandate on research, registration of workplaces and appointment of safety and health officers.¹²⁴ The law also provides for occupational Safety and Healthy fund to finance some of the most important aspects of the implementation and enforcement of the Act.

2.3.1.3 The gap in waste collection.

¹²¹ Act No.5 of 2007 (Revised Edition 2012).

¹²² Section 83(4) of the occupational Safety and Health Act No.5 of 2012.

¹²³ Section 41 of Occupational Safety and Health Act No.5 of 2012.

¹²⁴ Part II of Occupational Safety and Health Act No.5 of 2012.

Once the waste is generated, the next step is collection. The law provides that waste should be collected and disposed in a sanitary way but the gap that exists is that this is not done so for example most of the urban areas do not have sufficient waste collecting and disposing systems an example is a research study for Nairobi county shows almost 30-40% of waste produced is never taken away and only 50% and below of the population of this county is assisted.¹²⁵

Another example is Nakuru whereby it is argued that almost 45% of the waste produced is actually collected and dumped in Giotto disposal site while 18% is reclaimed through recycling while the remaining is left exposed to the environment.¹²⁶

2.3.2 Waste transportation.

The second stage is transportation and the waste management principles that exist include: separation, treatment and tracing. The process of waste collection and transportation is the second stage whereby waste especially in urban areas is largely collected. In Kenya for example, this is done by the county governments however waste in residential areas is collected by private operators at a fee.¹²⁷ The waste is first separated to different types of wastes at the source of generation with the aim for example of separating recyclables from non-recyclables which may include recovery of recyclable items like plastic papers, metals and so on. The biomedical waste is also separated.¹²⁸ Waste is then traced and finally treated. The waste management principle of tracing indicates that waste generators should be responsible for tracing their wastes from the point of producing to the point of disposing the same and be aware of the quantities of the wastes

¹²⁵ Ibid.

¹²⁶ Ibid.

¹²⁷ NEMA, National Solid Waste Management Strategy (NEMA 2015).

¹²⁸ Ibid.

they generate, the handling of the waste and also the disposal.¹²⁹ Thus all waste generators are required to maintain a tracing system however this type of system is their own choice.¹³⁰ Waste generators are encouraged to develop a waste disposition report(WDR) that have a tracing system data that summarizes the types and quantities of waste, the generation methods and disposal methods and this should be maintained for a minimum of two years.¹³¹ The organizations that generate waste also should maintain well-kept records that show the contents of the waste so that clear waste management procedures should be carried out.¹³² The other waste management principle in this stage is waste treatment which is done through incineration, neutralization and thermal treatment of waste where waste is burned to with or without air supply and at a high temperature.¹³³ Waste incineration on the other hand is achieved through controlled burning that exists in three different states that is: solid, liquid or gaseous state. This approach is advantageous since it quickly reduces waste volumes and decreases greenhouse gas emissions.¹³⁴

2.3.2.1 The law on waste transportation in Kenya.

The Environment Management and Coordination (Waste Management) Regulations 2006¹³⁵ state that generators of materials from waste are mandated to collect separate and dispose that waste in a way that is required by these regulations¹³⁶ and the generators of waste are supposed to separate the waste that is classified as hazardous from the one that is not hazardous and dispose that waste

¹²⁹ Ibid n-6

¹³⁰ Ibid.

¹³¹ Ibid.

¹³² NEMA (2020), Kenya Waste Management Guidelines Developed for Petroleum Sector

¹³³ Rick Leblanc, (2019), Waste Treatment and Disposal Methods; Available at [www.thebalancesmb.com>waste treatment>](http://www.thebalancesmb.com/waste-treatment/) (last accessed on 15th March 2021).

¹³⁴ Ibid.

¹³⁵ Legal Notice 121 of 2006.

¹³⁶ Regulation no 2, Part II of the EMCA(Waste Management) Regulations 2006.

in an organization that is provided by the relevant local authority.¹³⁷ They specifically state that generators of waste must do the collection, segregation and disposal or cause waste to be disposed in way that is provided by the waste management Regulations.¹³⁸ The Environment Management and Coordination (Waste Management) Regulations¹³⁹ state that the operators that foresee generation of hazardous waste to obtain the Environmental Impact Assessment license¹⁴⁰ and that the generators of hazardous waste are obligated to make sure that most methods of storing such waste are well sealed and labeled clearly with clear words written either in English or Kiswahili language.¹⁴¹

The Regulations also provide that NEMA has licensing powers in respect to those who operate and transport waste as well as ensuring that waste is transported in a way that is deemed to be friendly.¹⁴² The Regulations provide that waste generators must also transfer waste to persons licensed to transport and dispose waste and also tasked with installation of anti-pollution technology for the treatment of the waste in their premises.¹⁴³ The regulations also point that the owners cannot dispose industrial waste unless it has been treated using the methodology established by NEMA.¹⁴⁴

2.3.2.2 The gaps on waste tracing, sorting and segregation in Kenya.

¹³⁷ Regulation no 5(1), Part II of the EMCA(Waste Management) Regulations 2006.

¹³⁸ Regulation 4(2) of Waste Management Regulations.

¹³⁹ Legal Notice 121 of 2006.

¹⁴⁰ Regulation 17 of Waste Management Regulations 2006.

¹⁴¹ Regulation 18(1) of Waste Management Regulations 2006.

¹⁴² Regulations 8&9 of the EMCA(Waste Management)Regulations 2006.

¹⁴³ Regulation 14(1),(2) OF Waste Management Regulations 2006.

¹⁴⁴ Regulation 15 of Waste Management Regulations 2006.

In Kenya, we have insufficient waste sorting facilities in that this exercise of sorting that happens in a manner that is not reliable and systematic.¹⁴⁵ Kenya also lacks sufficient and proper sorting centers that lead to problems for example workers on lorries that collect normally remove waste recyclables on the way to waste disposal facility thus leading to poor quality sorting and the small waste materials they sort are sold to dealers that buy only small scale scrap metals and who don't have facilities to sort big volumes of materials in a systematic and a subscribed manner.¹⁴⁶ The other challenge with the sorting is that waste pickers hover for materials that seem to be recyclable on the dumpsite and since the waste disposal facility is contaminated and highly polluted up, the pickers of waste can only get a little portion of products that can be recycled and as a consequence they suffer from terrible health and sanitary conditions.¹⁴⁷

2.3.2.3 The gap on waste transportation in Kenya.

The law provides that waste should be transported in an environmental friendly way but this has remained a challenge in that waste transportation is not in line with international best practices. For example in Kenya waste is mostly done using open lorries, handcarts, donkey carts, hand carts and so on and generally they are bad methods of transport that have resulted to more dumping of materials that even look worse especially if the plastics are left on the environment.¹⁴⁸

2.3.3 Waste disposal.

¹⁴⁵ Ministry of Environment and Natural Resources & UNDP, Nationally Appropriate Mitigation Action on A Circular Economy Solid Waste Management Approach for Urban Areas in Kenya (Ministry of Environment and Natural Resources 2016).

¹⁴⁶ Ibid.

¹⁴⁷ Ibid.

¹⁴⁸ Ibid.

The final stage is the disposition of waste. This majorly entails of disposing or burying of waste on land. Dumps and landfills are the methods that are commonly used in waste disposal.¹⁴⁹ A landfill is basically a pit that is designed to accommodate solid waste in layers and once it is filled up, it is then covered for final disposition of waste.¹⁵⁰ The bottom of it is properly lined in order to prevent the underground water from getting inside therefore pollution cannot occur. It eliminated the open dumping and this has brought significant reduction of health hazards and infestations formerly associated with disposal sites.¹⁵¹ They are desired to eliminate the risk of environmental and public health hazards. Controlled dumps are the other methods of waste disposal and may have –well planned capacity for dumping wastes. The waste management principle in waste disposal is that waste must be disposed in a sanitary way not to curb environmental degradation. The Environmental Management and Coordination (Waste Management) Regulations stipulate that if a person wants to develop a dumpsite, then the regulations stipulate that an EIA license is required.¹⁵²

2.3.3.1 The external policies endorsed in Kenya to deal with MSWM.

There are also external policies which includes both global and regional policies endorsed by a country to deal with MSWM. Basically they deal with waste dumpsites because the dumpsites generated carbon dioxide which affect global warming. Dumpsites are a result of waste disposal. They include conventions and relevant multilateral environmental MSWM agreements ratified in Kenya. They include for example the Basel Convention ratified on June two thousand. It deals with the Trans boundary movement of hazardous waste and how they are supposed to be

¹⁴⁹ Ibid.

¹⁵⁰ P. Michael Terlecy Jr (2000), Sanitary Landfill Technology 2nd ed Volume 2, published at Park Ridge New York.

¹⁵¹ Ibid.

¹⁵² Section 36 of the Physical Planning Act (repealed).

disposed. It obligates party states to reduce and minimize the Trans boundary movement of hazardous waste. The Bamako Convention of 1998 on the other hand, bans the importation of hazardous waste to Africa and also controls the management the movement of hazardous waste. The Stockholm Convention on Persistent Organic Pollutants obligates all state parties to take steps to reduce the release of persistent organic pollutants that can lead to adverse health harm to humans. The UNFCCC was adopted in New York in May 1992 and its objective is to achieve in the stabilization of greenhouse gases (GHGs) concentrations in the atmosphere that would prevent dangerous anthropogenic interference with the climate system.¹⁵³ The UNFCCC adopts the principle of common but differentiated responsibilities, which provides that parties should act to protect the climate system on the basis of equality and in accordance with their common but differentiated responsibilities and respective capabilities. This ensures fairness to the developing and less developed states that contribute less to global warming due climate change.¹⁵⁴

To supplement the UNFCCC, parties adopted the Kyoto Protocol in 1998 but came in force in 2005. Currently, there are 192 Parties to the Kyoto Protocol. The Kyoto Protocol operationalized the United Nations Framework Convention on Climate Change (UNFCCC) whereby the industrialized countries committed to reduce greenhouse gases (GHGs) emissions but according to the agreed individual limits. The Convention obligates these countries to adopt laws and steps on mitigation and to report after a certain period. Later, state parties adopted the Paris Agreement which supplements the convention on climate change and for the first time brings all nations into the common goal of combatting the changing global climate with enhanced support to assist less developed countries to do so.

¹⁵³ Article 2 of the UNFCCC

¹⁵⁴ Article 3 of the UNFCCC.

This Agreement central has the key aim of keeping the global temperature rise in this century well below 2 degrees Celsius above the accepted pre-industrial levels and if possible, reduce the increase to 1.5%. This helps more developed countries to contribute more emission reductions than developing countries.¹⁵⁵

On top of this, the agreement aims to enable some of these countries to deal with the results of climate change. Other conventions and agreements on solid waste management includes: The Montreal Protocol on Substances that deplete the ozone layer, and The Basel Convention to include plastics amended on April the year 2019.

In addition to these international legal frameworks on SWM, the fourth United Nations General Assembly resolution on environmentally sound waste management called upon member states to promote integrated approaches to SWM and waste management cycle and proposed a number of ways which include: sustainable consumption and production, economic models, innovations, reducing of waste at the point of origin among other many other methods and also insisted on recycling, re-use and application of waste hierarchy for all waste.

2.3.3.2 The gap on waste disposal in Kenya.

The other vital gap that exists in Kenya is that disposal of waste remains a critical issue as most of the county governments have no disposal sites that are adequate and for those counties which own their dumping sites use open dumping method of waste disposing that lead to mixing of waste since they lack appropriate technologies and disposal facilities. Absence of adequate disposal sites is also a challenge. Kenya also lacks waste energy recovery facility which helps in

¹⁵⁵ Article 5 of the Paris Agreement.

diverting waste streams from disposals to landfills and the reason is because there are limited waste-to-energy technologies in Kenya.¹⁵⁶

2.4 Conclusions.

In Conclusion we can say that Kenya has a robust legal framework that consists of the Constitution, Statutes, Regulations and other local and sectorial laws that guide on solid waste management but despite the existence of these legal frameworks the problem of MSWM still exists and this is because of the reason that the legal framework has gaps that arise due to the existence of gaps in the waste management cycle and also gaps in the legal framework itself. If these gaps are well addressed, then these problems and incoherencies can be minimized and MSWM problem will be solved.

¹⁵⁶ Wambua Kituku and Collins Odote and Charles Okidi and Patricia Kameri-Mbote, 'Entrenching Waste Hierachy for Sustainable Municipal Solid Waste Management in Kenya' (2020) 11 J Sustainable Dev L&POL'y 300.

THE INSTITUTIONAL FRAMEWORK OF MSWM IN KENYA AND THE CHALLENGES THAT UNDERMINES THE IMPLEMENTATION OF ITS MANDATE.

3.0 Introduction.

In the previous chapter we found that Kenya has a robust legal framework that guides on municipal solid waste management. This chapter will address the institutional framework that guides on the same. Historically, waste was viewed as an unwanted matter or just unexploited resources but now the world has moved away from this notion.¹⁵⁷ Different institutions are tasked on solid waste management in Kenya. These institutions include: NEMA, County governments, private firms, informal sectors, community SWM initiatives, ministry of Environment, and Natural resources, the Environment and Land courts, the officers appointed by NEMA under EMCA and the citizens at large. These institutions are in line with vision 2030 and SWM is one of the major goals that Kenya wants to achieve by then and one way of doing this is improving SWM through the application of the right economic strategies.¹⁵⁸ This has been achieved in five flagship cities that are in line with the same and they include; Mombasa, Kisumu, Eldoret, Nakuru and Thika and so far they have achieved fully functional WM systems which they have used as a strategy towards achieving sustainable waste management.¹⁵⁹ This assists the public and institutions to engage in proper waste management through compliance of national regulations.¹⁶⁰

These institutions have the some key roles that include policy making, regulation and compliance of the law however, in the implementation of their mandate they face a lot of

R44¹⁵⁷ NEMA, Working Towards 'Zero Waste' by 2030 (July-September 2016).

¹⁵⁸ Kenya's Vision 2030, Available at <https://vision2030.go.ke/social-pillar/#67>.

¹⁵⁹ NEMA(2020), Waste Management Guidelines for Oil and Gas Sector.

¹⁶⁰ Ibid.

challenges that undermine their mandate and thus creating incoherencies that have led to poor waste management in Kenya today. The main challenge facing these institutions is weak organizational capacities that include inadequate financing, technical issues and management issues for example personnel issues. Other challenges include lack of infrastructure, lack of recent technology on MSWM, poor public perception and attitudes toward MSWM, bad sanitation practices and even grabbing of land where dumpsites are situated. The legal challenges they face include lack of clear definition of their mandate, lack of clear regulatory mandate, regulatory capacity, multiplicity of tasks between one institution and the other, and lack of clear enforcement mandate and lack of clear institutional responsibility on enforcement.

3.1 Regulatory agencies.

The institutions that are mandated with the role of regulation of MSWM includes: NEMA, county governments and the Kenya Bureau of standards.

3.1.1 National Environment Management Authority (NEMA).

It is anchored under EMCA whereby it is a national government agency while the county governments are established at the county level.¹⁶¹ EMCA recognizes the right to a clean and healthy environment and imposes it as an obligation to be safeguarded at all cost.¹⁶² This includes constitutional recognized activities for example waste management and noise regulation thus in **Pastor Jessie Gitahi & 202 others vs. Attorney General**,¹⁶³ the court refused the doing away of control noise regulation provided for under EMCA on the ground that their manifestation would deny the petitioners livelihood as pastors saying that the objectives of the same fell within a number of things that are relevant protecting and promoting a clean and healthy environment and

¹⁶¹ Schedule 4, part 2, para 2 § 3 of the Constitution of Kenya 2010.

¹⁶² Section 3(2) of EMCA.1999.

¹⁶³ (2013)eKLR also cited as Petition 683 of 2009.

they are thus found not to be constitutional. The Court basically stressed on the promoting the right to a clean and healthy environment that includes constitutionally recognized socio-economic activities and this may include for example managing of waste that may have dire effects to the environmental health.

NEMA being main national agency is mandated with the regulation of MSWM at the national level and has three key roles in relation to the same which are; supervising, coordinating, giving policy advise and implementing¹⁶⁴NEMA is mandated to coordinate various issues that are undertaken by main entities for the promoting integration in the environmental matters and concerns and are supposed to change them into development policies, plans and even projects and this results into proper management of environmental resources which improves the quality of life.¹⁶⁵It is also tasked with the duty of giving the way forward and mechanical support to agencies engaging with the management of natural resources and protecting the environment which ensures that these entities carry their responsibilities in a satisfactory manner.¹⁶⁶

3.1.2 The regulatory functions of NEMA in relation to MSWM in Kenya.

In relation to MSWM in Kenya, NEMA has one major regulatory mandate and that is licensing.

3.1.2.1 Licensing.

NEMA is mandated with the power of issuing of the licenses in relation to MSWM in Kenya.EMCA provides that waste operators and transporters must obtain licenses from NEMA in order to help them with manning of their work and they should do this by applying in writing

¹⁶⁴ Section 9(1) of EMCA. 1999.

¹⁶⁵ Section 9(2) (a) of EMCA 1999.

¹⁶⁶ Section 9(2)(o) of EMCA 1999.

to NEMA to acquire the appropriate license¹⁶⁷The law provides that those who fail to do so or contravenes NEMA licensing authority are liable for a two year imprisonment or in alternative pay a fine not exceeding one million.¹⁶⁸

3.1.2.3 Challenges that face NEMA as a regulatory agency.

a. Management issues.

The management issue is also a key challenge for NEMA since the Ministry of Environment and Forestry is prescribed legally as the main leading entity and gives oversight and policy support to NEMA as this is one of its roles stipulated in COK2010 however,NEMA does not have its own independence as a regulatory agency and therefore plays the smaller role to the ministry and automatically have no the to exercise its mandate over the ministry and this basically shows that the ministry manages NEMA in its implementation of its mandate and not the institution itself.¹⁶⁹

b. Lack of independence.

NEMA also faces the challenge of political interference since it is controlled by a selected cabinet secretary appointed by the president and this makes NEMA prone to factors such as interference by politics during decision making thus underpinning the implementation of mandate in performance of its role. The challenge of political interference and patronage has led to the grabbing of land that is set aside for dumpsites and even grabbing of disposal sites.¹⁷⁰ Land grabbing in Kenya is word commonly used to describe the irregular acquisition or even the selling of public land to some individuals to reward them for their political loyalty and this is

¹⁶⁷ Section 88(1) of EMCA 1999.

¹⁶⁸ Section 85(5) of EMCA 1999.

¹⁶⁹ Ibid.

¹⁷⁰ NEMA, National Solid Waste Management Strategy (NEMA 2015).

rising over time leading to mass evictions and deterioration of public spaces and this may include space set aside for dumpsites.¹⁷¹

3.1.2 The regulatory function of the county governments in relation to MSWM in Kenya.

The counties are mandated with the duties of removing waste, managing waste and disposing solid waste.¹⁷²The counties are given an overall duty for regulation and delivery services of solid waste management which may include controlling nuisance that may seem public also through promoting public health.¹⁷³ The reason is that the management of MSWM is a devolved issue under the Constitution 2010.¹⁷⁴The counties also do so through licensing of private entities and through provision of pricing policies and tariffs.

3.1.2.1 Regulation through licensing of private actors of MSWM.

The county governments are the entities that have the duty of making sure that all waste that is produced within their area of jurisdiction is taken away and disposed of or recycled at the particular dumpsites and they do this through licensing the private actors to take waste from the residential and business area and thereafter transported or recycled at designated dumpsites.¹⁷⁵Examples include: Nairobi city county (NCC), Kiambu County (KC), Machakos County (MC) and Kajiado County (KJC) that are legally responsible for providing waste management services to all residents in the county and also engage the private sector in the

¹⁷¹ Lawrence O. Apiyo "Land Grabbing" and Evictions in Kenya (2013); Available at <http://ww2.unhabitat.org/mdg/documents/africa/Vol.14-No-land-grabbing-and-evictions.doc> (last accessed on 23rd May 2021).

¹⁷² Ibid.

¹⁷³ Wambua Kituku, Collins Odote, Charles Okidi & Patricia Kameri-Mbote, Sectoral Coordination In Kenya Municipal Solid Waste Management; A Horizontal Assessment, 161/1 Law, Environment and Development Journal (2020), p.55-75

¹⁷⁴ Schedule 4, part 2, para 2 § 3 of the Constitution of Kenya 2010

¹⁷⁵ Ministry of Environment and Natural Resources & UNDP, Nationally Appropriate Mitigation Action on A Circular Economy Solid Waste Management Approach for Urban Areas in Kenya (Ministry of Environment and Natural Resources 2016).

collection and disposal of waste.¹⁷⁶ The challenge is that the role of the county governments as regulating agencies over waste management is found in the Public Health Act.¹⁷⁷ County governments license waste transporters but at the same time they have a role in collecting, transporting and disposing waste under the fourth schedule of the Constitution 2010 therefore there is a conflict of dual roles of the county government.

3.1.2.2 Regulation through provision of pricing policies and tariffs.

The counties or entities supposed to deliver services in the county are mandated to adapt and enforce tariffs especially the services meant for the public.¹⁷⁸ One of the guidelines under the County Government Act is to ensure that the 3Rs are achieved economically.

3.1.3 The Kenya Bureau of Standards (KEBS).

Apart from NEMA, the Kenya Bureau of Standard (KEBS) is also mandated to set standards by making sure that all products meant to be consumed in the country are fit and thus the products got out of reclamation of waste are required to meet the standards so that they can be released to the market thus regulating MSWM.

3.1.4 Challenges that face both NEMA and the County governments in their regulatory mandate over MSWM in Kenya.

a. Lack of clear definition of their regulatory mandates.

In implementing the regulation mandate, both NEMA and the county governments face a challenge of lack of clear regulatory responsibilities in that the COK 2010 establishes two levels

¹⁷⁶ Ibid.

¹⁷⁷ Section 118 (c)(d) &(h) of the Public Health Act (2012).

¹⁷⁸ Section 120 (1) of the County Government Act (2017).

of governance on MSWM and that is the national and county governments however a vertical inter-governmental relationship exists between the two levels of government in regard to MSWM.¹⁷⁹ However, but despite these two levels of government the regulatory function over MSWM still remains a critical issue whereby NEMA acts as a national agency and the county governments on the other hand claim exclusive jurisdiction over MSWM thus in **Waste and Environment Management Association of Kenya (WEMAK) vs. Nairobi City County and NEMA**,¹⁸⁰ in this case, the entities that operate waste with NEMA's support went to court to seek that of the Nairobi City County Solid Waste Management Act 2015 to be done away with on a number of facts one of them being that Act would give the sued county government the mandate for licensing incinerators and operators in a way that is not relevant sections of EMCA on licensing of MSWM. The court refused to do away with the Act stating that the interpretation of the fourth schedule of COK 2010 expressly states that waste management regulation is devolved mandate. Court stated also that this issue of devolving MSWM intentionally gives powers to institutions such as NEMA and not as they used to be pre-2010 constitution. This clearly showed that COK 2010 expressly shows a vertical governing relationship over SWM and this is the main objective of vertical environmental integration. The judge also pointed that waste management is a devolved function. NEMA is established under EMCA and it is a national government entity but the counties have the main jurisdiction to deal with MSWM issues.¹⁸¹

b. Lack of clear division of their regulatory responsibilities.

The other challenge so far in regard to regulation is the challenge of lack of clear definition of regulation duties between the national government and counties and this has restrained the

¹⁷⁹ Part 1&2 of 4th Schedule of COK 2010.

¹⁸⁰ (2016)eKLR also cited as Petition 118 of 2016.

¹⁸¹ Section 7 of EMCA 1999.

powers of the counties to exercise full mandate over MWSM.¹⁸² There is no clear division of tasks of the counties and those of NEMA and this has led to ambiguity and because of this challenge county authorities are not able to put much power over the operators of waste who have been issued licenses by NEMA, thus pointing fingers to the agency for not giving out licensing details to the counties to bring about efficient oversight and compliance of the operators while performing their roles.¹⁸³ This has brought inconsistency over the division of regulation powers between NEMA and the counties and this shows that both institutions will keep fighting for power of whom to license entities that manage waste at the level of the county and this may promote overlaps and regulatory confusions.¹⁸⁴

c. Financial or budgetary constraints facing waste management.

NEMA has been facing challenges recently especially due to funding constraints since the National government has greatly reduced fees paid for environment impact assessment (EIA) licenses and this is evidenced by the financial audited reports by NEMA that shows that in the financial years 2014/5 and 2016/7 the money that was levied from EIA licenses on average was about 71% of the institution's total revenue and in the financial year 2015/6 NEMA earned ksh 524,803,000/= from EIA licenses and this subsequently dropped to ksh 269,829,000/= in the financial year 2016/7.¹⁸⁵ This represents 38% drop in the overall revenue and this basically demonstrates funding constraints that has led to a technical challenge on personnel since NEMA is facing a technical challenge of insufficient staff and personnel to perform its mandate as an

¹⁸² See the case of Waste and Environment Management Association of Kenya (WEMAK) vs. Nairobi City Council & NEMA (2016) eKLR also cited as Petition No.118 of 2016.

¹⁸³ Ibid n-76.

¹⁸⁴ Ibid.

¹⁸⁵ Wambua Kituku, Collins Odote, Charles Okidi & Patricia Kameri-Mbote, Sectoral Coordination In Kenya Municipal Solid Waste Management; A Horizontal Assessment, 161/1 Law, Environment and Development Journal(2020), p.55

institution.¹⁸⁶The financial challenges have led to NEMA depending on donor funding for its programming which has also led to the weakening of its freedom and thus the challenge of regulation capacity.¹⁸⁷

The county governments on the other hand, do not get allocated enough money to fund MSWM for example in integrated development plan for 2014-2017, the Nairobi city county was estimated to use at least 5 billion on MSWM however it only spent 2.9 billion on the same and due to this financial difficulty the county cannot be able to procure enough tools, payment of waste collection contracts and also mismanagement of dumpsites and thus MSWM cannot be prioritized during budget-making process of the county governments.¹⁸⁸

d. Lack of independence in the counties.

The county governments' faces are the challenge of corruption that undermines their efficacy for example in Nairobi city county cartelization of MSWM processes especially during the management of the only one authorized dumping site which is Dandora.¹⁸⁹

e. The challenge of multiplicity of tasks between one institution and the other.

One of the reasons that cause this challenge is by the overlapping of obligations imposed on different institutions by different laws and this has led to inaction of the law.¹⁹⁰For example after the enactment of EMCA, a few thematic specified regulations were created and put in place however all of them emerged from EMCA were formed with the main objective of environmental protection mainly from pollution caused by different varieties of wastes and

¹⁸⁶ Ibid.

¹⁸⁷ Ibid.

¹⁸⁸ Wambua Kituku, Collins Odote, Charles Okidi & Patricia Kameri-Mbote, Sectoral Coordination In Kenya Municipal Solid Waste Management; A Horizontal Assessment, 161/1 Law, Environment and Development Journal (2020), p.55.

¹⁸⁹ Ibid.

¹⁹⁰ Ibid.

provision of proper disposal on the same but does not focus on the promotion of health and disease prevention in these regulations.¹⁹¹ EMCA provides for the integration of the law but most of the sectorial laws and policies provided only promote the health agenda rather than the main agenda of the environmental protection.¹⁹²

The other cause of this challenge is the problem of inadequate laws regarding MSWM for example the regulation of medical and industrial wastes falls out EMCA pollution control remit and this means that it operates in a policy context not guided by EMCA.¹⁹³ This is because the regulations have not provided for several types of other wastes which include both industrial and medical waste and thus this means that the overall balance between horizontal segmentation of SWM is not clear.¹⁹⁴

The other cause is that MSWM legal framework has a number of mechanisms that facilitate different stakeholders in the coordination of policy matters whereby NEMA has an important role to play. Some of these stakeholders include: Cabinet secretary for environment, the county environmental committees, and physical planning liaison committees under Physical Planning Act among others however the multiplicity of these structures may lead to confusion rather than the reinforcement of coordinated efforts unless NEMA presents itself in these structures effectively.¹⁹⁵

¹⁹¹ Ibid.

¹⁹² Wambua Kituku and Collins Odote and Charles Okidi and Patricia Kameri-Mbote, 'Entrenching Waste Hierarchy for Sustainable Municipal Solid Waste Management in Kenya' (2020) 11 J Sustainable Dev L&POL'y 300.

¹⁹³ Ibid.

¹⁹⁴ Tilahun Hageru, Abdhalla Ziraba and Blessing Mberu, 'Integration of Solid Waste Management Policies in Kenya: An Analysis of Coherence, Gaps and Overlaps, Working Paper 8, Urban Africa Risk Knowledge (2016).

¹⁹⁵ Wambua Kituku, 'Quest for Environmental Integration in Kenya's Municipal Solid Waste Regulatory Framework: Unmet Expectation?' (Doctor of Law Thesis, University of Nairobi, 2020).

In relation to Public Health Act, the regulation mandates of the officials of the public health surpass with the ones of NEMA especially on the issue of who is to take on the waste management functions that have been neglected by offending county officials¹⁹⁶The incoherence comes in that both the public health authorities and NEMA have the mandate to punish the offending individuals with different punishments but the two do not refer to each other.¹⁹⁷The County Government Act on the other hand exhibits confusion in terms of planning efforts in that it does not provide any link between spatial and environmental sector plans and therefore enabling county planners to go ahead with the formation of land-use plans that affect stating of MSWM improvements without referring to county environmental strategic action plans.¹⁹⁸

3.2 Institution mandated with the role of policy making of MSWM laws and policies in Kenya.

Policy making is the obligation of the national government through Ministry of Environment. The Ministry through the national entities and organs is given the responsibility of implementing the National Waste Management Bill and the National Sustainable Waste Management Policy. They were drafted by the national government in 2018 with a view of harmonizing and introducing the zero waste principle for circular economy of municipal solid waste management. This involved two hundred and seventeen countries and Kenya is among the one hundred and eighty seven countries in the world that adopted these developments for MSWM.¹⁹⁹The Bill stipulates that it is the duty of both the national and county governments, private sectors and citizens in relation to waste. There is provision for institutional framework for the enforcement

¹⁹⁶ Ibid.

¹⁹⁷ Ibid.

¹⁹⁸ Ibid.

¹⁹⁹ Wambua Kituku and Collins Odote and Charles Okidi and Patricia Kameri-Mbote, 'Entrenching Waste Hierachy for Sustainable Municipal Solid Waste Management in Kenya'(2020) 11 J Sustainable Dev L\$POL'y 300.

of the Act.²⁰⁰ This includes the cabinet secretary responsible for policy formulation and oversight, waste management council and the county government. It also includes the waste management council that is designed to incorporate inter-governmental structures that is represented by the non-party actors. The Bill stipulates out the steps that should be undertaken by the cabinet secretary in marketization of waste protection of humans²⁰¹ and environmental health.²⁰² In terms of implementing the waste management cycle, it establishes a materials recovery facility before disposal through landfilling.²⁰³ They are mandated to take steps that will seek to reduce the quantity of waste production and where the waste is produced, it has a duty to make sure that the waste hierarchy is achieved.²⁰⁴

In order to achieve for the ministry to achieve this, the national government is mandated to create regulations and specified timelines on MSWM, develop a national sustainable waste management strategy and it is also mandated to consult with the county governments on the publishing of model waste management Acts and regulations.²⁰⁵

3.3 Institutions mandated with ensuring the compliance of MSWM laws and policies in Kenya.

These are some of the institutions that are charged with the enforcement of the waste management Regulations. They include the courts, NEMA through its appointed officers under EMCA and the National Environment Tribunal.

3.3.1 The courts.

²⁰⁰ Part II of the Sustainable Waste Management Bill (2019).

²⁰¹ Section 9(2)(c) of the Sustainable Management Bill (2019).

²⁰² Section 9(2)(a,b&d) of the Sustainable Management Bill (2019).

²⁰³ Section 12 of the Sustainable Management Bill (2019).

²⁰⁴ Section 13(1) of National Waste Management Bill (2019).

²⁰⁵ Section 13(3)(a),(c) &(b) of National Waste Management Bill (2019).

The law establishes the Environment and Land Court that is the status of the High court and has exclusive jurisdiction all over the country.²⁰⁶ The court is presided by a judge that is elected in accordance with the constitution of Kenya 2010.²⁰⁷ The court has is mandated basically to hear and determine disputes issues on planning of environment and protection of the same and this basically includes the issues on solid waste management.²⁰⁸ In **Malindi Law Society vs. Attorney General & 4 others**,²⁰⁹ the High court sitting in Malindi declared section 2 of the Statute Law (Miscellaneous Amendment) Act 2015 redundant since they termed it as inconsistent with the Constitution of Kenya 2010 for the reason that not all appointed High Court judges should determine matters relating to the environment, land and employment and the same should apply to the subordinate courts on the concern pertaining jurisdiction on the same. The court also stated that solid waste management is an issue to be determined exclusively by ELC. On appeal, the court of appeal still upheld the previous position that High court judges lack power to hear and determine environment and land matters and employment and labor relations however, the magistrates court have power to hear and determine criminal matters that relates to waste management for example offences like nuisance under the Public Health Act and offences under EMCA for example transporting of waste without a license and operating a dumpsite without the same.²¹⁰

3.3.2 The officers appointed by NEMA under EMCA.

Another relevant institution that deals with the issue of SWM in terms of enforcement is the officers appointed by NEMA under EMCA. NEMA has the mandate to appoint officers or staff

²⁰⁶ Section 4(1), (2) & (3) ELC Act (2012).

²⁰⁷ Section 6 of ELC Act (2012) as read with Article 165(2) of COK (2010).

²⁰⁸ Section 13(2) (a) of ELC Act (2012).

²⁰⁹ (2016) eKLR.

²¹⁰ See Section 87(2) & (3) of EMCA (1999).

of its own since they are needed for discharging of the functions stipulated under EMCA and this may include the obligations of solid waste management.²¹¹

3.3.3 The National Environment Tribunal.

Finally another relevant institution is the National Environment Tribunal that is established under EMCA that hear exclusive jurisdiction on appeals especially on refusal to grant or transfer a license, confirmation and setting aside decisions made by the Director-General, NEMA and committees constituted under NEMA and finally make orders as to costs and stay of execution and this basically includes appeals on SWM.²¹² This means that the tribunal has the same mandate as to that of the courts in terms of enforcement of MSWM laws and policies.

3.3.4 Enforcement challenges.

i. The challenge of lack of coordinated approach towards sector- specific Acts leading to incoherencies during the implementation.

The specific Acts and SWM policies that have been formulated and adopted have not achieved coherence since there is no proof of national coordinating way for their enforcement.²¹³ On the same point, there is no coordination during SWM policy making process in that they are formulated and adopted at different timelines and there is no evidence that has been documented to show the impacts of previous policies that have been replaced by new ones and this is a major weakness between evolvement and devolvement lines.²¹⁴

ii. Lack of alignment of cross-cutting issues in MSWM during the implementation.

²¹¹ Section 16 of EMCA (1999).

²¹² Section 129(1)(b) as read with Section 129(3) of EMCA (1999).

²¹³ Ibid n42.

²¹⁴ Ibid.

The other challenge is that while implementing solid waste stand-alone policies that are supposed to coordinate the issues cutting across SWM and across various sectors the same has not been aligned and the environmental coordination agencies do not collaborate to the end and this may lead to some of these policies affecting other related policies for example manufacturing, infrastructure, financial and urban development policies in that some of these policies address SWM in a substantive manner for example the Physical Planning Act and the Building Code however the same has not been mainstreamed to other many policy frameworks.²¹⁵

iii. Lack of capacity, specialized training and knowledge for some officers appointed by NEMA.

The other challenge that arises is that the officers appointed by NEMA under EMCA are very few compared to the number needed by EMCA and this basically undermines their enforcement mandate in the implementation of their role especially on issues of MSWM.²¹⁶ The other challenge faced by these officers is some of them lack capacity since they may lack specialized training and knowledge while manning their duties thus in **Republic vs. National Environment Management Authority & another exparte Phillip Kisia & City Council of Nairobi**,²¹⁷ Mr. Phillip Kisia the town clerk of the city of Nairobi was charged with two counts of offences. In the first count he was charged with the offence of failing to exercise due diligence and efficiency to ensure compliance contrary to section 145(1) as read with section 144 of EMCA and in the second account he was charged with the offence of failure to comply with the lawful order of an environmental inspector contrary to section 137(b) of EMCA.

²¹⁵ Ibid.

²¹⁶ Ibid.

²¹⁷ (2013)eKLR, Unreported.

He instituted Judicial Review proceedings on the grounds that the trial resident magistrate court was unlawful, unreasonable, illogical and also actuated by malice. The proceedings were stayed and the order of certiorari sought by the applicant allowed since the judge noted not only the proceedings sought under the wrong section of the law but also the correct procedure was not followed. Interestingly the criminal proceedings were brought by an environmental inspector who brought them under the wrong section of the law and he ought to have known this and even be conversant with EMCA. This case illustrates that the officers appointed by NEMA under EMCA need to acquire specialized training in order to operate effectively.

iv. Other challenges that hinder the enforcement of MSWM laws in Kenya.

Finally there are other challenges that hinder the enforcement of MSWM laws in Kenya and they include: delays in courts system, lack of capacity to bring prosecutions and costly legal procedures.

3.4 Private actors in waste management in Kenya.

Apart from the multiple governmental organizations that are tasked with the duty of curbing the problem of poor MSWM, both academic institutions and private sectors play important roles in this sector of solid waste management. These include: the private firms and private waste collectors, the informal sectors, the private citizens, waste pickers and recyclers and the non-governmental organizations.

The privatization of MSWM in the city of Nairobi started in 1906 whereby a company that was private was given a contract to clean the city however, this company did not succeed effectively in doing these duties because this role of waste management was reverted back to the city council that had initially performed this role abt well but due to increased waste in 1988 this

problem attracted organized commercial private sector companies for example Bins in Nairobi and Limited and Domestic Refuse Disposal Service Limited to register in order to manage, collect and dispose waste at Dandora dumpsite.²¹⁸This waste mostly came from industries, institutions and high-income-residential areas nonetheless in 1997,the national city council with the support of the Japanese government opted to privatize garbage collection and street sweeping as a major scheme that managed waste on contract basis.²¹⁹Today, these private actors in MSWM are licensed by the counties to deal with MSWM however they impose small charges for the services they offer.²²⁰County governments supply bins, liners and even collection bags to the private entities in order to perform their roles efficiently.

1) **The work of the informal sector in MSWM in Kenya.**

These sectors are basically waste collectors that take waste from residential buildings and deliver it to designated dumping sites and either work individually or as groupings.²²¹The examples include informal youth groups, (CBOs), cooperatives among others.²²²On the other hand, individual waste collectors are often referred to as “scavengers” who may be street dwellers, youths or families.²²³These groups and individuals are often business-oriented with an aim of making profit however, there are others who collect waste with non-profit making intentions in order to promote environmental awareness, promote cleaner environment or even

²¹⁸ HABITAT; Privatization of Municipal Services in East Africa-A Governance Approach to Human Settlements Management (1998) Available at <https://www.nzdl.org>gsdlmod> (last accessed on 10th May 2021).

²¹⁹ Ibid.

²²⁰ Ministry of Environment and Natural Resources &UNDP,Nationally Appropriate Mitigation Action on A Circular Economy Solid Waste Management Approach for Urban Areas in Kenya(Ministry of Environment and Natural Resources 2016).

²²¹ Anssi Hiltunen,Waste, Livelihood and Governance in Nairobi,Kenya –A Case Study in Kibera Informal Settlement(2010),Available at <http://www.diva portal.org>pdf> (last accessed on 13th May 2021).

²²² Ibid.

²²³ Ibid.

work with an aim of empowering the local community.²²⁴ These informal groups and individuals get in to fill the gaps left by the county operators and are mostly found in informal settlements for example the slum areas.²²⁵ They also operate in the city center of which apart from collecting waste also engage in selling of valuable reusable or recyclable materials and products.²²⁶ They deliver waste to smaller dumpsites that are managed by contractors who are normally given contracts by the counties to collect solid waste from the said dumpsites and dispose it to Dandora dumping site nonetheless, they charge as little as fifty Kenya shillings per household since they use handcarts to transport the waste.

2) The role of private citizens in MSWM in Kenya.

The citizens also have a role in waste management and they are termed as key players in this sector since they are the consumers of goods and services that generate waste however the societal culture, accountability, attitudes and behavioral change is key in adopting and implementing a reliable waste management system in Kenya.²²⁷ In the past waste management responsibility was perceived to be the sole responsibility of the government however, Kenyan's today have demonstrated that the citizens can keep up good MSWM practices for example the accepting the ban on plastic bags and thus continuing supporting environmental interventions and this includes general cleaning.²²⁸ The citizens have also adopted the slogan of “my waste, my

²²⁴ Ibid.

²²⁵ Ministry of Environment and Natural Resources & UNDP, Nationally Appropriate Mitigation Action on A Circular Economy Solid Waste Management Approach for Urban Areas in Kenya (Ministry of Environment and Natural Resources 2016).

²²⁶ Ibid.

²²⁷ Phyllis Wakiaga; Waste Management Is a Shared Responsibility-Kenya Association of Manufacturers (2017), Available at <http://kam.co.ke/waste-management> (last accessed on 15th May 2021).

²²⁸ Ibid.

responsibility” that have led citizens in compliance of ensuring that neighborhoods are kept clean and making sure that illegal dumping within the residential areas is reported.²²⁹

3) The role of waste pickers and recyclers in MSWM in Kenya.

Other parties that are also engage in waste management in Kenya are the waste pickers and recyclers and the non-governmental institutions.²³⁰ The waste pickers and recyclers mainly are people who pick recyclable waste from the waste disposal sites and sell it to recyclers and entities that buy waste and do waste recovery and sell the products for economic benefits respectively.²³¹

4) The role of non-governmental institutions in MSWM in Kenya.

Finally the NGOs on the other hand are mandated to improve the MSWM and in some countries for example India, they are mainly involved in collection of wastes from different generation sources for example houses, restaurants and hotels and dispose the same to the nearest dumpsites.²³²

All these private entities are trying to curb the problem of poor MSWM in Kenya however, the challenge that they face is that there is confusion that arises in that they have not been formally recognized in decision-making in relation to SWM management at both government levels and t explaining the dragged reaction of the sector in taking responsibility in MSWM.²³³ This shows

²²⁹ Ibid.

²³⁰ Ministry of Environment and Forestry ‘National Sustainable Waste Management Policy-Revised Draft, 24th April 2019, Available at <https://www.environment.go.ke/wp-content/uploads/2019/04/Revised-National-Waste-Policy-2019.pdf> (last accessed on 13th May 2021).

²³¹ Ibid.

²³² A Ahsan, M Alamgir and R Islam; Role of NGOs And CBOs in Waste Management(2012), Available at <https://www.ncbi.nlm.gov/pmc> (last accessed on 15th May 2021).

²³³ Ibid.

that county governments are not engaging them fully and also since these private actors levy taxes to waste generators simply means that the system is for those who can afford it only and not those who cannot afford meaning that this system is not universal. They are very important in the waste management cycle but they also face the problem with getting license from several agencies and thus non recognition.

3.5 The other general challenges that hinder MSWM institutions in their implementation of their mandate on MSWM.

The other challenges that hinder MSWM institutions in the implementation of their mandate also include poor public perceptions and attitudes toward issues concerning MSWM in Kenya and one of the main reason is the intolerance due to community in hostilities that this may include activities like vandalism of security fences and equipment on the dumpsite, civil strife damaging waste management structures, inadequate maintenance of machinery and equipment and also insecurity of dumpsites due to existence of illegal gangs.²³⁴ The other challenge is poor infrastructure and poor technology in that poor infrastructure in informal settlements hinders waste collection and poor technology for example the technology on MSWM facility has been recent.²³⁵

²³⁴ NEMA, National Solid Waste Management Strategy (NEMA 2015).

²³⁵ Ibid.

3.6 Conclusion.

In conclusion we can comfortably say that Kenya has a number of institutions that are mandated with the responsibilities of MSWM and some of them are legal institutions that basically interpret, implement and enforce the law however these institutions are not perfect since they are faced with numerous challenges in the implementation of their mandate. These challenges over the years have slowed the process of MSWM in Kenya and thus MSWM remains a problem up to date and even not well looked into this problem might accelerate in the near future unless necessary mechanisms are implemented by the solid waste management institutions

CHAPTER FOUR
CONCLUSIONS AND RECOMMENDATIONS

4.0 Introduction.

The problem of solid waste management has brought many dire consequences especially to most of the developing countries including Kenya for example; low living standards, bad working conditions and even a bad environment.²³⁶ In Kenya for example the yearly SWM that was generated in the year 2017 was estimated to be around 9.7 million tones being a rise at a rate of 3.7% and this is due to the problem of inefficient collection methods and centers in the country.²³⁷ In the previous chapters we saw that Kenya has a robust legal and institutional framework governing SWM however the same is coupled with many gaps that has hindered the implementation of this mandate. In terms of the law governing SWM in Kenya, the Constitution 2010 is regarded as the grund norm that guides on SWM. Apart from the constitutional framework, there are other laws in the regulatory framework that deal with the issue of MSWM but this is nationally. At the international level, there are relevant multilateral environmental agreements (MEAs) that Kenya has ratified in relation to MSWM nonetheless, the legal framework is not perfect since it has some gaps that still hinder the implementation of the law. Majorly the gaps in regard to the waste management cycle exists thus hindering implementation of waste hierarchy approach.

In the previous chapters, we also noted that Kenya has a number of institutions that are tasked with MSWM and they perform a number of legal roles which includes: the role of policy making, regulation, interpretation, implementation and enforcement. These institutions include

²³⁶ Nicholas O Oguge, 'Circular Economy Measures: An Opportunity of Rethinking Plastic Governance in Kenya (2019) 15 Law Env't & Dev J 124.

²³⁷ Ibid.

both the governmental and the private sector however; they face a number of challenges that undermine them in implementing their mandate and these challenges may be both legal and non-legal in nature. They also face other general challenges that cut across. The government has tried to put measures to deal with this situation; however MSWM is still a challenge.

4.1 Conclusions.

Waste management is a challenge and it is for this issue that SWM was identified as one of the major goals to be achieved under Kenya's vision 2030 and because of this NEMA developed a National SWM strategy which is supposed to move the country towards sustainable SWM.²³⁸ The purpose of this strategy basically is to guide on SWM in the country and to make sure that a clean and healthy environment for all is achieved.²³⁹ It provides for the interpretations and classes of solid waste, the contextualization and recent situation of SWM, common MSWM practices in the country, the challenges facing SWM in Kenya, the concept of integrated SWM and the life cycle analysis with the appropriate approaches that are applied in Kenya.²⁴⁰ It has a number of guiding principles that address the current situation and that is; the current situation and that is where we are now as a country in relation to SWM, the preferred state which basically means where we want to go on the same and the implementation strategy that will show the country how to get there.²⁴¹

While trying to address poor SWM, NEMA has developed the lowest requirements as a threshold for the county governments to implement and this includes designation securing and management of the disposal sites and to promote effective collecting and transporting of waste

²³⁸ NEMA Working towards 'Zero Waste' by 2030 (July-September 2016.)

²³⁹ NEMA, National Solid Waste Management Strategy (NEMA 2015).

²⁴⁰ Mombasa County Draft Solid Waste Management Policy (June 2019), Mombasa County Sessional Paper No.1 of 2019 Available at <https://www.Momabsa.go.ke>pdf (last accessed on 7th May 2021).

²⁴¹ Ibid.

and this thresholds are key in ensuring the continuous promotion of efficient SWM and thus ensure a clean and healthy environment.²⁴²The strategy is expected to exist for a period of fifteen years in the vision 2030 layout which will get renewed in a period of five year time according to medium term plans and if the country embraces this strategy the goal of environmentally sound waste technology and best practices will be achieved.²⁴³

On the other hand counties are required to provide sufficient MSWM systems that will increase recycling and reduced minimal waste.²⁴⁴They have achieved this through zoning of a number of areas designated for waste operations but they are not fully fenced and they have also created disposal sites which are to be watched daytime however, no waste separation during generation since most county governments collects garbage from unidentified dumpsites that are mostly located in informal settlements.²⁴⁵According to National the National Waste Management Bill 2019, the county governments are mandated with the responsibility of enforcing the devolved function of MSWM but this should be in accordance with the relevant national law that guides on MSWM and also establishing the financial support to effectively carry out this mandate.²⁴⁶On the other hand, looking at the benefits of economies of scales, county governments are encouraged to bring resources together for more stable MSWM and if possible set aside a minimum of twenty acres of land that will be gazetted as waste disposal sites.²⁴⁷They are also mandated to build central collection centers that are managed well for the waste that can be

²⁴² Ibid.

²⁴³ Ibid.

²⁴⁴ Ministry of Environment and Forestry 'National Sustainable Waste Management Policy-Revised Draft, 24th April 2019, Available at <https://www.environment.go.ke/wp-content/uploads/2019/04/Revised-National-Waste-Policy-2019.pdf> (last accessed on 6th May 2021).

²⁴⁵ Ibid.

²⁴⁶ Section 8(1) of National Waste Management Bill (2019).

²⁴⁷ Section 8(4) of National Waste Management Bill (2019).

recycled.²⁴⁸ On top of these, the county governments are mandated to establish and improve the infrastructure so as to improve the waste management cycle.²⁴⁹ Finally they are mandated to include waste management in county planning and budgeting and keep data on MSWM activities and share the information with NEMA.²⁵⁰

All these will be achieved through the establishment of county waste funds, allocating at least twenty acres of land for putting up waste recovery industry for sanitary landfill for disposing safely waste that cannot be recovered and the enhancement of sustainable waste management especially in waste management cycle.²⁵¹

To add on these, On 24th April 2019, the Ministry of Environment and Forestry developed a draft on National Waste Management Policy that was revised which aims towards a making Kenya a zero-waste economy country and will take Kenya towards realizing the zero waste concept that advocates that production of waste should be prevented or reduced.²⁵² It also aims to ensure that the waste management cycle is implemented nonetheless the policy advocates that proper law and incentives are essential for such a circular economy system to build a long-term foundation.²⁵³

The policy advocates that sustainable MSWM will improve quality for the waste through the enhanced for 3Rs thus making official for the sector of waste pickers in order to improve their standards of living, improve waste disposal operations and management that includes trapping

²⁴⁸ Section 8(5) of National Waste Management Bill (2019).

²⁴⁹ Section 8(6) of National Waste Management Bill (2019).

²⁵⁰ Section (7) &(8) of National Waste Management Bill (2019).

²⁵¹ Section 10 (2)(a),(b) and (c) of National Waste Management Bill (2019).

²⁵² Ministry of Environment and Forestry 'National Sustainable Waste Management Policy-Revised Draft, 24th April 2019, Available at <https://www.environment.go.ke/wp-content/uploads/2019/04/Revised-National-Waste-Policy-2019.pdf> (last accessed on 8th May 2021).

²⁵³ Ibid.

and reusing gases like methane that is emitted from the landfills.²⁵⁴ Other benefits will include closing of dumpsites that are left open, completely covering of the landfills, curbing the pollution that has been caused by plastics in the seas, initiating job opportunities in the sector mostly for the young people and women among many other benefits.²⁵⁵ However, despite of all these measures that the government is trying to put in place, the problem of poor MSWM still exists and this means that more has to be done.

4.2 Recommendations.

In order to address the gaps and challenges that this research has identified, I recommend the following measures to be put up and enforced to deal with the problem of poor MSWM in Kenya.

4.2.1 Adoption of waste hierarchy approach so as to realize a circular economy.

Waste hierarchy approach includes prioritizing the 3Rs. The integrated SWM plan hierarchy provides for a number of concepts from the top to the bottom. On the top of this hierarchy is the concept of reduction which promotes cleaner production, sustainable consumption and also prevention. Following reduction is the concept of reuse that entails reusing waste in its current form then recycling and compositing which basically entails processing of waste to recover commercial viable products then next is the concept of waste to energy which provides for the step of recovering energy before finally disposing the of waste and later the treatment follows which helps in reducing the volume of waste and finally the concept of landfilling to ensure safe disposal of waste to landfills. Kenya has not adequately incorporated the concept of waste hierarchy approach in our current legal framework and therefore the national government should

²⁵⁴ Ibid.

²⁵⁵ Ibid.

develop a MSWM legal framework that prioritizes the waste hierarchy approach across the country. On the other hand, the county governments should ensure that MSWM laws and strategies at the county level are aligned to the concept of waste hierarchy approach.

4.2.2 Recommendations on waste generation and collection.

In the waste generation and collection stage, the waste management principles applicable are reuse, recycle and reduce thus the (3Rs). Most waste generated remains uncollected and thus the county governments should promote waste separation at the point of waste generation through provision colored bags that have codes or containers for collecting waste for different varieties of produced waste. This will enable the waste collectors to easily identify the waste during collection. It will also ensure that no waste will remain uncollected. The county governments should also organize and formalize informal waste collectors or groups who will help them in activities of waste collection and therefore making sure that no waste remains uncollected and also ensure that most of the citizens have easy access to waste collection services. The national government should also develop central collection systems for easy sorting of recyclable waste materials. It should also ensure that these central collection centers are well managed.

4.2.3 Recommendations on waste transportation.

In Kenya, waste transportation is done using old pick up vehicles, donkey carts and hand carts. These are poor methods of transporting waste since they lead to more littering that leaves the environment worse off. This means that they are not fit for that purpose of transporting waste to the designated dumpsites. The national government should develop segregated waste transport designs for transportation of waste. The waste transportation trucks should be labeled in order to identify waste provider services. It should also develop adequate waste transportation for

separation of different waste categories for example have committed trucks that carry waste from various collection centers to landfills. It should also ensure that all waste transportation is licensed by NEMA. The county governments on the other hand should harmonize waste transport charges and also develop regulations for waste transportation that is in tandem to national law on MSWM.

4.2.4 Recommendations on waste tracing, sorting and treatment (material recovery).

The national government should provide for proper waste sorting centers to ensure that much waste from the dumpsite is sorted as much as possible in order to maximize the waste or establish a central station for separating all the waste before taking it to the final disposal sites. It should also make sure that all waste is treated before to remove the main recyclable materials and this provides a second opportunity to recover recyclables that had been missed in the segregation stage. The national government should also promote recycling and recovery of waste by promoting small scale and medium scale waste compositing. It should also improve the technology to facilitate material recovering methods such as jua kali sectors. Finally it should also set aside land required for the establishment of material recovery facilities. The county governments on the other hand should provide for domestic waste treatment in the county municipal solid waste management laws.

4.2.5 Recommendations on waste disposal.

The national government should set up more sanitary landfills in the country and also increase waste disposal sites. This will ensure that no waste will be left out during dumping and also these sites will be sufficient to accommodate all the waste generated in the country. The national government should also advocate for incineration as a method of heating solid materials

especially the industrial waste streams. It should also promote waste-to-energy technologies to make sure that there is less waste disposed. The county government on the other hand should domesticate regulations on landfills and also establish landfills in each county to make sure that waste is disposed of well in each county.

4.3 Recommendations on the challenges that face MSWM institutions in Kenya.

- a) The national government should implement funding mechanisms and plans over MSWM for both the county governments, NEMA and the private sectors that are trying to deal with the problem of poor MSWM. This will eliminate the problem of regulatory capacity. This will also make sure that the waste management cycle will be fully monitored hence curbing the problem of poor MSWM in Kenya.
- b) The national government should deal with the challenge of management issues by making NEMA an independent regulatory agent and not being subordinate to the Ministry of Environment and Forestry and this will ensure that NEMA will have its own muscle of regulatory powers during the implementation its powers over MSWM thus promoting efficiency in terms of full regulation of MSWM roles. This will help in curbing poor MSWM in Kenya however this independence may be achieved by virtue of Article 15 of COK 2010.
- c) Both the national and the county governments should ensure that there should be national coordinating mechanisms for the implementation of MSWM by different institutions. They should also harmonize the MSWM laws during their implementation to ensure that there is a coordinated approach of these laws while the institutions implement them. This will ensure that there is a clear coordination between the institutions that are mandated

with MSWM while manning their responsibilities towards solving the problem of poor MSWM.

- d) The challenge of multiplicity of tasks between one institution and the other has caused the challenge of obligations imposed by different institutions by different laws and this has led to inaction of the law. This challenge can be solved through clarity while drafting of MSWM laws. This means that the national government should ensure that while drafting the MSWM laws, the parliament should be clear on which institution is tasked with which role and through this there will be clear implementation of MSWM laws and this will help in curbing the problem of poor MSWM in Kenya.
- e) The national government should ensure that the personnel and staffs that are appointed by NEMA under EMCA have attained specialized training and knowledge in order to implement their mandate well. This will curb the challenge of capacity issues that undermines institutions while performing their roles on MSWM.
- f) The courts in Kenya should try as much as possible to deal with the issue of corruption, political interference and political patronage. This will ensure that cases of land grabbing especially lands allocated for dumpsites are dealt with to the core. This will make sure that these lands are properly manned and used for the specific purposes they are meant for. The courts should ensure that heavy punishments and fines are imposed on the offenders of land grabbing. This will ensure proper MSWM in Kenya.
- g) The private sectors and actors that help in curbing the problem of poor MSWM should be given a formal recognition by the government. They should also be allocated some funds for MSWM during the budget allocation in order to perform their roles well. If this

happens, then much waste will be minimized since these private sectors and actors will have financial muscle thus efficiency in MSWM in Kenya.

- h) The national government should improve infrastructure for example in terms of roads, the national government should develop motorable roads inside the dumpsites to ensure that the means of transport to the dumpsite do not get stuck in the dumpsites especially during the tipping phase. This will ensure efficiency during the transportation of waste into the dumpsites especially during rainy seasons which has generally been a challenge for MSWM in Kenya.
- i) The national government should enhance security at the disposal sites to prevent illegal gangs getting into the dumpsites, vandalism and even control other illegal activities such as civil strife that damage MSWM. It also provide safety devices at the disposal sites for example fire extinguishers in case of fires that may arise inside the disposal sites.
- j) Both the national and county governments should provide public awareness to the members of the public to make them aware of poor sanitization that includes proper management of MSWM. On the same, the national government should enforce laws on the members of the public on illegal dumping sites and instigate clean-ups of these sites periodically by the members of the public who violate the same.

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