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QUEST FOR ENVIRONMENTAL INTEGRATION IN KENYA'S MUNICIPAL SOLID WASTE MANAGEMENT REGULATORY FRAMEWORK:

UNMET EXPECTATION?

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DECLARATION

I, EMMANUEL WAMBUA KITUKU do hereby declare that this is my original work and that it has neither been submitted nor is it currently being submitted for a doctorate degree in any other University.

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DEDICATION

I dedicate this thesis to my late parents, John Kituku Wambua & Justina Munyiva Wambua and my late brother, Angelo Muasya Wambua. Their passion for knowledge is my proud heritage. I also dedicate this thesis to all the activists who struggle daily and pay dearly to protect the environment

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Lastly, I give thanks and praise to The Most High!

ABSTRACT

This study provides an assessment of the incorporation and implementation of the concept of environmental integration in the municipal solid waste management (MSWM) framework in Kenya. Kenya is grappling with serious challenges in ensuring environmentally- sound and sustainable management of ever-growing volumes of municipal solid wastes with adverse consequences for environmental sustainability. Environmental integration which is derived from Principle 13 of Stockholm Declaration as well as Principle 4 of Rio Declarations respectively, seeks to ensure environmental considerations are incorporated in the development process through harmonized policy and legal frameworks. Thus, the concept provides a good foundation for regulation of integrated and sustainable MSWM systems. In 1999, Kenya enacted the Environmental Management and Coordination Act, Cap 387 (EMCA), as a framework legislation to ensure environmental integration and provide the preeminent MSMW framework. Therefore an expectation arose that EMCA would facilitate environmental integration, leading to enhanced environmental sustainability.

Using Wintgen's theory of coherence of law as the analytical framework, this study embarks on an inquiry into why efforts to promote environmental integration in Kenya's MSWM framework have not realized sustainability, despite two decades of implementing EMCA. The study was designed using both quantitative and qualitative approaches targeting Nairobi metropolitan area. Samples of 292 and 27 respondents were achieved for the surveys and key informant interviews respectively. The study also entailed analysis of environmental integration in MSWM in the jurisdictions of Sweden and South Africa, from which appropriate lessons for Kenya were drawn accordingly.

The study established that Kenya has strong normative framework for environmental integration, evidenced by adoption of norms of sustainability and environmental protection at the constitutional realm, despite key shortcomings including weak adoption of waste hierarchy approach and lack of political will. Whereas EMCA provides a framework for sectoral coordination in MSWM regulation which is necessary for realizing horizontal environmental integration, particularly gaps in NEMA's regulatory capacity fragmented stakeholder coordination mechanisms, limited capacity within county-level sectoral coordination mechanisms. The constitutional framework vests in County governments enhanced responsibilities in environmental management and MSWM, thus establishing basis for intergovernmental coordination necessary for vertical environmental integration. However, integration is constrained inadequate capacity of county governments; poor inter-governmental relations and inadequate structures among others.

To strengthen environmental integration in MSWM, the study proposes a conceptual model of MSWM regulatory framework underpinned by:1) entrenched of norms of sustainability, environmental protection and waste hierarchy approach; 2) prevalent normative factors of political will, environmental rule of law, co-regulation and administrative culture supportive of cooperation; 3) enhanced sectoral coordination role of NEMA along with promotion of voluntary coordination mechanisms and; 4) improvement in inter-governmental structures for enhanced coordination along with strengthening of capacities of counties. Overall, the quest for environmental integration in MSWM under the EMCA framework continues despite the highlighted challenges. However, the expectation that the foregoing would usher sustainability remains unmet for now.

LIST OF ACRONYMS

CAB	County Administrative Board
CADP	County Annual Development Plan
CECM	County Executive Committee Member
CEnC	County Environment Committee
CGA	County Government Act
CoEC	Committee for Environmental Coordination
CoK	Constitution of Kenya (2010)
DEA	Department for Environmental Affairs
DEAT	Department of Environment and Tourism
DEC	District Environmental Committee
DOSH	Department for Occupations Safety and Health
ECtHR	European Court of Human Rights
EMCA	Environmental Management & Coordination Act
EPI	Environmental Policy Integration
FGD	Focus Group Discussion
GDP	Gross Domestic Product
HRBA	Human Rights-Based Approach to Development
KAM	Kenya Association of Manufacturers
KIIs	Key informant interviews
MSW	Municipal Solid Waste
MSWM	Municipal solid waste management
MT	Metric Tonnes
MTP	Medium Term Plan
NCCPPA	Nairobi City County Public Participation Act
NCCSWMA	Nairobi City County Solid Waste Management Act
NEAP	National Environmental Action Plan

NEEMA	National Environment Enhancement and Management Bill
NEMA	National Environment Management Authority
NES	National Environmental Secretariat
NET	National Environment Tribunal
NMA	Nairobi Metropolitan Area
OAG	Office of Auditor General
OSHA	Occupational Safety and Health Act
PEC	Provincial Environmental Committee
PLUPA	Physical and Land Use Planning Act
PPA	Physical Planning Act
PPD	Public Procurement and Disposals Act
PPDA	Public Procurement and Disposal Act
SEPA	Swedish Environmental Protection Agency
SRC	Swedish Regulatory Council
SWM	Solid Waste Management
UACA	Urban Areas and Cities Act
UACA	Urban Areas and Cities Act
UN	United Nations
UNEP	United Nations Environment Programme
WEMAK	Waste Management Association of Kenya

LIST OF STATUTES

1. Climate Change Act, Act No 11 of 2016
2. Constitution of Kenya 2010
3. County Government Act, Act No 17 of 2012 (Revised edition 2017)
4. Energy Act No 12 of 2006
5. Environmental Management and Coordination (Waste Management) Regulations of 2006
6. Environmental Management and Coordination Act, Cap 387
7. Forest Act No 7 of 2005
8. Machakos County e-Waste Management Act, Act No 8 of 2014
9. Nairobi City County Neighbourhood Associations Act, No 4 of 2016
10. Nairobi City County Public Participation Act, Act No.5 of 2015
11. Nairobi City County Solid Waste Management Act, Act No 5 of 2015
12. Occupational Safety and Health Act, Act No 5 of 2007 (Revised Edition 2012)
13. Physical Planning Act, Cap 286 (Revised Edition 2012)
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18. The Sustainable Waste Management Bill (2019)
19. Urban Areas and Cities Act, Act No.13 of 2011 (Revised Edition 2016)
20. Water Act No 43 of 2016
21. Water Act, Cap 372

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2. National Solid Waste Management Policy (2018) Draft

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1. The African Convention on the Conservation of Nature and Natural Resources, (adopted 17 January 1969, entered into force 16 June 1969; last revised 07 March 2017) 1001 UNTS 14689
2. Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement of Hazardous Wastes within Africa (Adopted 30 January 1991, entered into force 22 April 1998) 2101 UNTS 177
3. Consolidated versions of the Treaty on the Functioning of the European Union [2012] OJ C326/49
4. Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean, (adopted 21 June 1985, entered into force 30 May 1996 and last amended on 31 March 2010), UNEP (DEPI) EAF/CPP.6/8a/Suppl
5. Minamata Convention on Mercury (adopted 10 October 2013, entered into force 16 August 2017)
6. Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (adopted in 10 September 1998, entered into force on 24 February 2004) 2244 UNTS 337
7. Stockholm Convention on Persistent Organic Pollutants, (adopted 22 May 2001, entered into force 17 May 2004) 2256 UNTS 119
8. The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal (adopted in 22 March 1989 and entered into force 5 May 1992) 1673 UNTS 5
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11. United Nations Framework Convention on Climate Change (UNFCCC), (adopted 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107

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3. *African Centre for Rights and Governance (ACRAG) & 3 Others v Municipal Council of Naivasha* (2017) eKLR
4. *British American Tobacco Ltd v Cabinet Secretary for the Ministry of Health & 2 others* (2015) eKLR
5. *Center Trust & Others v the AG* Petition No 243 of 2011
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7. *Gathoni v R*, Criminal Appeal No. 297 of 2004
8. *Kiriinya M Mwendia v Nairobi City County and 2 others* (2018) eKLR
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14. *Park View Arcade Ltd v Kangethe & others* (2004) eKLR
15. *Peter K Waweru v R*, Misc Civil Application No. 118 of 2004
16. *R v NEMA & another ex parte Philip Kisia & City Council of Nairobi*, (2013) eKLR
17. *Robert Gakuru & Others v Governor of Kiambu County & 3 Others (*2014) eKLR
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3. *Djurgården-Lilla Värtans Miljöskyddsförening vs Stockholms kommun genom dess marknämnd* (2009) ECR I-09967
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5. *Social and Economic Rights Action Center and the Center for Economic and Social Rights v Nigeria,* ACHPR, Communications No155/1996

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CHAPTER ONE:
INTRODUCTION

> "Environment and development are not separate challenges; they are inextricably linked. Development cannot subsist upon a deteriorating environmental resources base; the environment cannot be protected when growth leaves out of account the cost of environmental destruction. These problems cannot be treated separately by fragmented institutions and policies"[1]

1.1.Background to the Problem

Africa is faced with a waste management challenge, characterized by growing volumes of waste generation linked to rapid population growth, urbanization, growing middle-class with changing consumption habits and expansion in global trade.[2] Improvements in the infrastructure for waste management however have not matched the growing significance and complexity of the waste problem, resulting in adverse environmental and social impacts.[3] Similar trends of burgeoning waste problem are discernible in Kenya's municipal solid waste management (MSWM) sector.

Studies conducted in 2002 indicated that out of the 1530 metric tonnes (MT) of municipal solid waste generated per day in Nairobi city, 614MT of the same was left uncollected, hence disposed-of using environmentally- unsound methods.[4] By 2015, volume of wastes generated in Nairobi was estimated to have risen to 2600 tonnes per day, yet about 1300MT of the waste remained uncollected.[5] The significant amounts of unaccounted-for wastes are

[1] The United Nations, 'Report of the World Commission on Environment and Development: our common future*'* (UN, 1987) at Chapter 12, para11 <www.un-documents.net/our-common-future.pdf > accessed 29th June 2016

[2] UNEP, *Africa waste management outlook* (UNEP, 2018) 6-8; the report estimates that waste generation will grow from 0.78Kg to 1.0kg per per capita per day from 2014 to 2025; Africa's population is set to grow from 17% to 40% of global population from 2014 to 2100; urban growth is estimated at 3.55% per year

[3] Silpa Kaza, Lisa Yao, P Bhada-Tat & Frank Woerden *What a waste 2.0: a global snapshot of solid waste management to 2050* (World Bank, 2018) 81-82

[4] UNEP, *Kenya: atlas of our changing environment*, (UNEP, 2009)156

[5] NEMA, *National Solid Waste Management Strategy*, (NEMA, February 2015)

therefore disposed through unsanitary methods or dumped in numerous illegal disposal sites in neighbourhoods and streets causing further pollution.[6]

It should be noted that municipal solid waste refers to waste generated from households and wastes of a similar nature generated from commercial and industrial premises, institutions and public spaces.[7] This definition of wastes excludes those categorized as hazardous, industrial, medical, semi-solid and waste-water/sewerage.[8] Waste management on the other hand refers to collection, transfer, treatment, recycling, resource recovery and disposal of solid waste, particularly in urban areas.[9] Poor waste management in Kenya ranks high among the environmental challenges facing the country, leading to worsening pollution and poor human health.[10]

From colonial times, MSWM has been the responsibility of local governments, which until 2010, operated under delegated authority from the central government.[11] Local authorities suffered from poor technical and institutional capacities coupled with inadequate financing which combined to undermine their performance resulting in the recurrent waste management problem.[12] Besides, the local authorities regulated MSWM through various national laws and local bylaws sanctioned by the central government thus evincing a fragmented legal framework.[13]

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[6] Alexander Soezer, *Nationally appropriate mitigation action on a circular economy solid waste management approach for urban areas in Kenya*, (Ministry of Environment & Natural Resources & UNDP, 2017) 26-27

[7] UNHABITAT, *Solid waste management in the world's cities: water and sanitation in the world cities 2010* (Earthscan 2010) 6

[8] Peter Schubeler, Karl Wehrle & Jurg Christen 'Conceptual framework for municipal solid waste management in low income countries' (SKAT (UNDP/UNCHS/World Bank, Working Paper 9/1996, 1996) 18; also see Tanmoy Karak, R.M. Bhagat R.M. & Pradip Bhattacharyya 'Municipal solid waste generation, composition and management: the world scenario*'* (2012) 42 Critical Reviews in Environmental Science and Technology, 1511

[9] Ibid

[10] Republic of Kenya, *National environment policy, 2013* (Ministry of Environment, Water and Natural Resources, 2013) 5

[11] N Bubba & D Lamba, 'Urban management in Kenya' (1991) 3 Environment and Urbanization, 37-59;

[12] NEMA *National waste management strategy*, (NEMA, 2015)19

[13] T Haregu, A Ziraba, I Aboderin, D Amugsi, K Muindi & B Mberu, 'An assessment of the evolution of Kenya's solid waste management policies and their implementation in Nairobi and Mombasa: analysis of policies and practices,' Environment and Urbanization, (2017) 1-18

In 1999, the Kenyan parliament enacted the Environmental Management and Coordination Act[14] (EMCA) as the framework law which established the institutional and legal machinery for management of the environment and created basis for coordination of sectoral environmental laws and initiatives. EMCA contained substantive provisions on waste management and vested waste regulatory mandate on the National Environment Management Authority (NEMA).[15] With the adoption of a new constitution in 2010, responsibility for operating MSWM was vested in County governments which comprise the second tier of the devolved system of government.[16] In 2015, the NEMA published the National Waste Management Strategy as a 15-year framework to guide county governments achieve sustainable and zero-waste management by 2030.[17] Efforts to reform the MSWM legal framework culminated in the publication of the Sustainable Waste Management Bill, 2019 and National Waste Management Policy, 2018[18] which both seek to elaborate on the roles of the national and county governments under the current constitutional dispensation.[19]

To effectively address the challenge posed by the growing MSW problem, it has been argued that countries should embrace integrated sustainable waste management systems.[20] Such systems embrace the waste hierarchy approach, which prioritises the prevention or minimisation of waste generation, optimisation of waste collection, treatment and recovery of energy and other forms of value from wastes before disposal through sanitary landfills.[21] Besides, these systems endeavor to integrate environmental, economic and social dimensions of sustainability in MSWM, by promoting inclusive stakeholder participation underpinned by sound operational financial and institutional frameworks.[22]

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[14] Cap 387 of Laws of Kenya
[15] Ibid, Part VIII
[16] Constitution of Kenya, 2010, Fourth Schedule, Part 2, s 2 (g)
[17] NEMA *National waste management strategy*
[18]<http://www.environment.go.ke/wp-content/uploads/2019/01/Waste-Policy-DISCUSSION-DRAFT-10-2-18.pdf> accessed on 7 July 2019
[19] < http://www.environment.go.ke/wp-content/uploads/2019/05/04-05-2019-NATIONAL-WASTE-MANAGEMENT-BILL-2019.pdf> accessed on 22 September 2019
[20] UNHABITAT (n7)26-27
[21] Daniel Hoornweg & Pernaz Bhada-Tata, 'What a waste: a global review of solid waste management' (World Bank, 2012) 25.
[22] Ibid 26

The need for integrated MSWM frameworks is further motivated by the historical patterns of how waste has been framed as a problem by different levels and divisions of government, resulting in unclear division of responsibilities, problematic coordination and institutional fragmentation.[23] Institutional fragmentation encourages uncoordinated approach to decision-making and actions, wherein social and economic impacts of development on the environment and vice-versa are therefore not sufficiently appreciated and addressed, leading to environmental degradation and adverse impacts on society.[24] To address the problem of institutional fragmentation in environmental regulation and management regimes, the concept of environmental integration has been suggested as a paradigm for integrating human thinking and actions that adversely impact on the environment while ensuring coherence and consistency between these efforts.[25]

The concept of environmental integration has been defined by Buhrs to mean the incorporation of environmental considerations into cognitive systems, policies and institutions with the aim of resolving and preventing environmental problems.[26] In implementing environmental integration, principled priority should be accorded to environmental protection objectives or considerations, in the process of balancing socio-economic and environmental concerns.[27] A holistic view of the principle of integration includes what is known as "reverse integration", which is the consideration of sectoral concerns into environmental policy.[28]

[23] Harriet Bulkeley, Matt Watson, Ray Hudson, & Paul Weaver, 'Governing municipal waste :towards a new analytical framework' (2005) 7 Journal of Environmental Policy and Planning, 9
[24] Marie-claire Segger. & Ashfaq Khalfan *Sustainable development law: principles, practices & prospects* (Oxford University Press, 2004), 19
[25] Ton Burhs, *Environmental Integration, our common challenge* (SUNY Press, 2009) 9
[26] Ton Buhrs, 'Challenging contexts- addressing obstacles to environmental integration' (NZPSA Conference, Massey University, November- December 2015) <https://www.researchgate.net/publication/298305299> accessed 18 March 2019
[27] William Lafferty & Eivind Hovden, 'Environmental policy integration: towards an analytical framework' (2003) 12 Environmental Politics 9
[28] Ingmar Homeyer & Doris Knoblauch, 'Environmental policy integration and multi-level governance- a state-of-the-art report' (Ecological Institute for International and European Environmental Policy, Berlin June 2008)

Environmental integration is seen to occur in two dimensions. First is what is known as vertical environmental integration (VEI) referring to the extent to which environmental objectives are decentralized between various levels of government (in the present case, between national and county).[29] There is emphasis on ensuring consistency in policy at all levels, resulting in an imperative of intergovernmental coordination in order to achieve VEI.[30] Second is horizontal environmental integration (HEI), which refers to achieving integration across different ministries or sectors at a particular level of governance.[31] HEI entails balancing sectoral and environmental interests through sectoral coordination in order to minimize trade-offs and maximize on synergies.[32]

Waste management entails horizontal interactions across sectors of governing and society as well as vertical interactions across levels of governing (local to international) and this necessarily creates imperatives for pursuing both vertical and environmental integration in order to address coordination problems that impede attainment of sustainability.[33] Analysing the challenges facing Kenya's MSWM sector using environmental integration lenses is therefore necessitates this study.

Normatively, the concept of environmental integration is anchored on the principle of integration,[34] which found legal expressions for the first time in the Principle 13 of the Stockholm Declaration which stated thus:

> "*In order to achieve a more rational management of resources and thus to improve the environment, States should adopt an integrated and co-ordinated*

[29] Andrew Jordan & Andrea Lenschow, 'Environmental policy integration: a state of the art review' (2010) 20 Environmental Policy and Governance, 151; Lafferty & Holden, (n27) 11-13; also argue that VEI refers to the extent in which particular government sectors or ministries implement environmental objectives as central to their portfolios

[30] Helen Briassoulis, 'Policy integration for complex policy problems: what, why and how' (Berlin Conference on Greeening of Policies: Interlinkages and Policy Integration, Berlin December 2004) 11

[31] Lafferty & Hovden (n26) 14-17

[32] Reinhard Steurer & Gerald Berger, 'Horizontal policy integration: concepts, administrative barriers and selected practices' (Institute of Forest, Environmental and Natural Resource Policy, Discussion Paper 4/2010, 2010) < https://boku.ac.at/wiso/infer/publikationen/diskussionspapiere > accessed 23 August 2019

[33] Man Nilsson, Mats Eklund & Sara Tyskeng, 'Environment integration & policy implementation: competing governance modes in waste management decision-making' (2009) 27 Environment and Planning C: Government and Policy 2-3

[34] Phillipe Sands, *Principles of international environmental law*, (5th edn, Cambridge University Press, 2007) 39

approach to their development planning so as to ensure that development is compatible with the need to protect and improve environment for the benefit of their population".[35]

The principle of integration was reaffirmed in the text of Principle 4 of the Rio Declaration adopted in 1992 at United Nations Conference on Environment & Development, which states thus, " *in order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it*".[36] The Rio Conference prioritized the adoption of domestic policy frameworks to facilitate decision-making processes which integrated environment and other development issues, as well as ways and means to ensure coherence of environmental, social and economic policies, plans and instruments at all levels and with involvement of stakeholders broadly.[37] Efforts by national governments to have in place framework environmental laws therefore should be understood in light of the priority afforded to the incorporation of the principle of integration as the domestic level in the post-Stockholm and post-Rio eras.[38]

In the post-Stockholm period, Kenya for the first time dedicated a section on environment and its conservation in the 1974-8 National Development Plan and subsequently in 1981 formulated the National Environment Enhancement and Management Bill (NEEMA) in mould of a framework law.[39] Even though the Bill highlighted the need for policy coordination and provided for environmental impact assessment as a tool for reconciling environmental and development concerns in projects, it never went far enough to require

[35] United Nations, "*The report of the United Nations Conference on the Human Environment, held in Stockholm 5-16th June 1972*" (1972) UN Doc A/CONF.48/14/Rev.1
[36] United Nations, 'Rio Declaration on the Environment and Development', 31 ILM 874 (1992)
[37] Agenda 21, Report of the UNCED,I (1992) UN Doc A/CONF.15/26/Rev 1, (1992) 31 ILM 874, para 8.4
[38] Marjan Peeters, 'Elaborating on integration of environmental legislation: the case of Indonesia', in Michael Faure & Nicole Niessen (eds), *Environmental law in Development: Lessons from the Indonesian experience*, (Edward Elgar 2006) 93
[39] Charles Okidi, 'Background to Kenya's framework environmental law', in Okidi, Patricia Kameri-Mbote & Migai Akech (eds) *Environmental Governance in Kenya: Implementing the framework law*, (East African Educational Publishers, 2008) 129;

harmonization of sectoral laws and policies.[40] The NEEMA Bill however was never tabled in parliament and therefore lapsed.[41]

In the post-Rio period, efforts to enact a framework law gathered fresh impetus and series of stakeholder consultations eventually culminated in the publication of the draft Environment Management and Coordination Bill of 1995.[42] It was this Bill that was subjected to further stakeholder consultations before enactment by parliament as EMCA. In doing so, Kenya joined, at the time, a growing league of African countries that had in place framework environmental laws, notably Libya (1982), Nigeria (1988), South Africa (1989) Zambia (1990), Ghana (1994), Uganda (1995) and Malawi (1996).[43] Outside Africa, Indonesia also followed a similar historical path towards the enactment of its framework environmental law in 1982, a journey that started from the Stockholm Conference.[44]

Typically, an environmental framework law lays down the basic principles and key environmental goals, articulates roles and duties of government and stakeholders while also creating processes through which these roles are to be pursued in integration of environmental concerns in the development process and thus realization of sustainable development.[45] Prior to enactment of EMCA, the environmental sector legal framework was characterized by incoherent and disjointed meshwork of at least 77 sectoral laws of colonial origin. [46] These laws were more designed to facilitate appropriation and extraction of resources to support the colonial economy than ameliorating adverse environmental

[40] George Okoth-Obbo 'A conceptual analysis of environmental impact assessment as a legal mechanism for the protection and management of the environment: the case of Kenya', (LL.M dissertation, University of Nairobi 1985)
[41] Okidi, *Background to Kenya's framework environmental law* (n39) 130
[42] Ibid 130-136; The consultations were spearheaded by the Kenyan Mission to United Nations Environment Programme (UNEP), the Office of the Attorney General and the Kenya Law Reform Commission supported by the UNEP
[43] Charles Okidi, 'Concept, function and structure of environmental law' in Okidi et al (eds) *(*n39*)* 9;
[44] See Takdir Rahmadi 'Towards integrated environmental law: Indonesian experiences so far and the expectation of a future Environmental Management Act' in Faure & Niessen (eds) (n16) 128-130
[45] John Nolon 'Fusing economic and environmental policy: the need for framework laws in the United States and Argentina' (1995-1996) 13 PACE Environmental Law Review 687-744
[46] Anne Angwenyi, 'An overview of the Environmental Management and Coordination Act', in Okidi *et al* (n39) 142

impacts.[47] Moreover, these colonial sectoral laws like their British antecedents were limited in their compartmentalized focus on particular environmental media which invariably led to shifting, rather than minimization of pollution across such environmental media.[48]

EMCA's status as a framework law has a constitutional basis due to recognition of sustainable development as right[49], duty[50] and a guiding principle in development and implementation of law and policy.[51] EMCA is the primary legislation that is meant to operationalize the principle of sustainable development, which is taken to mean "*development that meets the needs of the present generation without compromising the ability of future generations to meet their needs by maintain the carrying capacity of the supporting ecosystems*".[52] EMCA creates the National Environment Management Authority (NEMA) as the primary enforcement agency with the mandate to coordinate sectoral lead agencies and to promote integration of environmental considerations in policymaking and implementation.[53]. The law further provided for structures to facilitate stakeholder participation in environment management within its initial institutional design.[54]

[47] Ibid, see also Alison Field-Juma, 'Governance and sustainable development' in Calestous Juma & Jackton Ojwang *In land we trust: Environment, private property and constitutional change*, (Initiative Publishers/Zed Books, 1996) 18-20

[48] For brief historical development of British environmental law, see John Gibson, 'Integration of pollution control' (1991) 18 Journal of Law and Society 18-19

[49] Constitution of Kenya, 2010 art 42 (b) which grants the right to enforce obligations relating to ensuring ecological sustainable development

[50] Ibid art. 62 (2) which imposes duty of state and non-state actors in ensuring ecologically sustainable development

[51] Ibid art 10 (2) (d) which proclaims sustainable development as among the national values and principle of governance binding all public authorities in application, interpretation and implementation of laws and policies.

[52] EMCA s 2; a similar definition was adopted by the High Court in *Waweru v R*, (2006) 1KLR (E&L) at p692

[53] EMCA s 9

[54] EMCA (No 8 of 1999) s 4, 29 and 70 which created the Standards Review and Enforcement Committee, National Environment Council as well as Provincial and District Environmental Committees (now County Environmental Committees)

Coordination of sectoral regulation of environmental media is also a core purpose of EMCA.[55] Towards this end, EMCA was afforded supremacy over sectoral laws governing the environment and therefore providing a framework for harmonization of sectoral laws in line with provisions of the framework law for realization of sustainability.[56] In this regard, sectoral statutes were to be amended, revised or reformed to avoid inconsistencies with the framework environmental law ostensibly in pursuit of horizontal integration.[57]

However following enactment of EMCA, only a few notable sectoral laws were reviewed or amended (i.e. water[58], forest[59] and energy[60] laws). This notwithstanding, overlaps between the aforesaid sectoral laws and EMCA persist suggesting horizontal fragmentation. For instance, there were discernible overlaps in standard- setting mandates in respect to water quality and effluent discharges, as well as jurisdiction over protection of fragile water resources between institutions of EMCA and those of the sectoral water law.[61] Whereas the water law vested the standards setting powers on the Water Minister,[62] EMCA vests similar powers on the Cabinet secretary for environment. [63] Similarly, the water law granted the Cabinet secretary for Water power to declare a vulnerable water resource, a protected area[64], with EMCA vesting similar powers upon the Cabinet secretary for Environment.[65] Despite the clear provisions of Section 148 of EMCA, which affirms supremacy of the framework law, there are provisions of the water law that appears to oust

[55] Ibid s 148 of the Act seeks to achieve this by making EMCA the supreme law subordinating all sectoral laws to it.
[56] Ibid s 148
[57] See Okidi et al (eds) (n39) at p. xix- xx, where it is noted that Uganda, after enacting the environment framework statute in 1995, proceeded to amend or reenact at least 6 sectoral statutes besides a host of implementing regulations in a bid to ensure integration.
[58] Water Act, No 8 of 2002 which repealed Water Act, Cap 372 as well as sS 168-176 of the Local Government Act, Cap 265
[59] Forest Act No 7 of 2005, which repealed the Forest Act, cap 385
[60] Energy Act No 12 of 2006 which repealed the Electric Power Act, Cap116 and Petroleum Act
[61] Migai Akech, 'Governing water and sanitation in Kenya' in Okid et al (n38) 325
[62] See Waste Act s 12, Cap 372; its noteworthy that Section 12 of (the new) Water Act No 43 of 2016 vests such powers on the proposed Water Resources Authority, with no reference to EMCA at all
[63] See EMCA s 71; noting that such powers where hitherto vested in NEMA under s 71 of the original EMCA
[64] See Water Act s 17, Cap372; while noting that s 22 of Water Act (2016) now vests the same powers on the proposed Water Resources Authority
[65] EMCA s 54

the overriding power of EMCA.[66] This has set the ground for institutional conflicts between NEMA as the preeminent manager of the environment and sectoral lead agencies in the water sector.

The rolling out of the devolved system of governance, under the Constitution of Kenya (2010) has revealed a fresh challenge related to vertical environmental integration between various levels of government in Kenya. Under the current constitutional dispensation however, county governments are indeed distinct and inter-dependent entities in relation to the national government.[67] Unlike the defunct predecessor local authorities, the County governments have substantial executive and legislative powers as well as expanded environmental management responsibilities.[68] A risk of vertical fragmentation of environmental regulatory framework arises where both levels of government enjoy legislative overlapping competence on a concurrent function such as environmental management. The legal capacity and efficacy of NEMA (a creature of ordinary statute) therefore, to purportedly supervise and coordinate constitutional structures such as county governments presents a legal question in relation to its institutional primacy over environmental matters.

EMCA framework provides the primate regulatory framework for municipal solid waste management (MSWM), besides a host of other sectoral laws and emergent county laws.[69] NEMA therefore is the principal regulator of the MSWM sector but still the overall coordinator of sectoral agencies involved in regulation of solid waste. The role therefore of EMCA framework and NEMA in fostering environmental integration in a sector where both are dominant such as the MSWM invites academic attention.

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[66] See Water Act 2016 s 156 (6) which states that the provisions of EMCA relating to water resources conservation, protection and water pollution control are to be subject to the relevant provisions of the new Water Act.

[67] Constitution of Kenya 2010 art 6 (2)

[68] Prior to the 2010 constitution, the forbearers of county governments were institutionally- weak local authorities, subordinated to the central government and with little constitutional significance. The repealed constitution only mentioned local authorities (county councils) in Chapter XI, outlining their roles and powers over trust lands, thus leaving their institutional design and mandates to elaboration by ordinary statutes, principally the (repealed) Local Government Act, Cap265

[69] Besides substantive provisions of EMCA (s 86-93) the Environmental Management and Coordination (Waste Management) Regulations 2006 (also known as EMCA Waste Regulations 2006) are applicable

1.2 Problem Statement

By enacting EMCA as the framework law, Kenya is among 38 African countries that have taken similar steps towards implementing principle of integration (consideration of environmental exigencies in the development process) for realization of sustainability.[70] The foregoing notwithstanding, Kenya's environmental sector, continues to exhibit fragmented institutional framework evincing a sectoral rather than integrated approach has proved inadequate in addressing Kenya's environmental challenges, thereby undermining sustainability.[71] According to the World Bank, Kenya's forest cover has declined from 8.3% in 1990 to 7.8% in 2015.[72] This remains well below the constitutional objective of realizing a 10% forest cover nationally.[73] Data from the World Bank also indicates that the percentage of Kenya's population exposed to air pollution levels that exceed the recommended World Health Organization levels has increased from 43.9% in 1990 to 59.8% in 2015.[74]

Municipal solid waste management exhibits similar trends, with ever-increasing waste generation rates and unmatched capacity by local authorities to efficiently collect and safely dispose such wastes, leading to environmental pollution and hazards.[75] According to UNEP, Nairobi generated between 800-1000MT of solid waste daily, of which less than 10% was collected.[76] These figures rose to 2,752MT in 2018, of which approximately 45% was collected and disposed.[77]

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[70] This is based on analysis of statutes listed on *ecolex* and *lexadin* online databases accessed variously in 2017

[71] Republic of Kenya, *National Environment Policy, 2013*, 5

[72] See <http://data.worldbank.org/indicator/AG.LND.FRST.ZS > accessed 17 November 2016

[73] Constitution of Kenya (2010) art 69 (1) (b)

[74] See also< http://data.worldbank.org/indicator/EN.ATM.PM25.MC.ZS?view=chart > accessed 17 Nov 2016

[75] NEMA, *National Solid Waste Management Strategy*, 48; UNEP, *Kenya: atlas of our changing environment*, 156

[76] UNEP, *Kenya: atlas of our changing environment*, 156

[77] Kenya National Bureau of Statistics, *Economic survey 2020* (KNBS, 2020) 148 < https://s3-eu-west-1.amazonaws.com/s3.sourceafrica.net/documents/119905/
KNBS-Economic-Survey-2020.pdf> accessed 11 July 2020

In a nutshell therefore, despite the enactment of EMCA and efforts towards pursuing environmental integration since its enactment in 1999, regulatory fragmentation in environmental governance persists, particularly in MWSM along with worsening environmental pollution and degradation, raising doubts as to whether environmental concerns are sufficiently integrated in the development process. This presents the central problem to be investigated in this study.

1.3 Research Questions

The central question to be addressed by this study is: why is environmental integration not adequately entrenched in Kenya's municipal solid waste management, despite the implementation of EMCA since 1999 and ongoing reforms in Kenya's environmental governance under Constitution of Kenya (2010)? In attempting to resolve the research problem, this study seeks to answer the following questions:

1. How is the legal framework on MSWM in Kenya designed to achieve environmental integration?
2. To what extent is horizontal environmental integration implemented in Kenya's MSWM regulatory regime?
3. To what extent is vertical environmental integration implemented in Kenya's MSWM regulatory framework?
4. What lessons appropriate to Kenya can be drawn from experiences of Sweden and South Africa on environmental integration in their respective MSWM regulatory framework?

1.4 Research Objectives

The overall aim or purpose of this study is to critically assess the design and implementation of environmental integration in Kenya's MSWM regulatory framework.

The specific objectives of the study are:

1. To analyse the extent to which Kenya's legal framework on MSWM espouses environmental integration
2. To analyze the extent of implementation of horizontal environmental integration of MSWM regulatory framework
3. To analyse the extent of implementation of vertical environmental integration of Kenya's MSWM regulatory framework
4. To analyse environmental integration in MSWM regulatory frameworks of Sweden and South Africa with a view to drawing appropriate lessons for Kenya's context

1.5 Justification

More than two decades after enactment of EMCA, assessment of some key environmental indicators has revealed decline in several key sectors thus undermining sustainability. These point to challenges which institutions with mandates for environmental management are faced with. NEMA has linked the ensuing environmental degradation to the inadequacies in sectoral and cross-sectoral laws, which negatively impact on environmental quality.[78] Consequently, NEMA called for harmonization of sectoral laws with EMCA and promotion of cross and inter-sectoral coordination and policy integration of environmental consideration into sectoral policies, plans and programmes.[79] NEMA also cites inadequate synergy in development, harmonization and implementation of policies as a key challenge to addressing health problems arising from inadequate MSWM among other adverse environmental conditions.[80] However, NEMA does not provide insights on how and why fragmentation persists in environmental governance generally and in MSWM regulation specifically. This study therefore seeks to make a contribution to the academic discourse on environmental integration in Kenya, in light of the persistence of unsustainability trends.

[78] NEMA, *Kenya state of environment report-2008*,(NEMA, 2009)110
[79] NEMA, *Kenya state of environment report-2013*, 165-168
[80] Government of Kenya & National Environment Management Authority, *National environment action plan framework 2009-2013*, (NEMA 2009) 18

Secondly, municipal solid waste (MSW) embodies environmental, economic and social dimensions of sustainability, thus creating an imperative for environmental integration in this sector.[81] In addition, management of wastes typically brings together different sets of regulators to manage different aspects of the process.[82] For instance, there will be different regulatory authorities handling waste planning, approvals, operational management (collection, treatment & disposal), supervision and reporting. These regulatory relationships may be arranged horizontally or vertically in line with various levels of governance thus creating a risk of regulatory fragmentation. Perceiving waste as an economic resource with extractable value has emerged as the dominant paradigm, overshadowing the hitherto dominant view of waste as a nuisance to be disposed (hence waste disposal paradaigm).[83] Tied to the emergence of waste as economic resource paradigm is prioritization of waste re-use, recycling, recovery and disposal which invariably has introduced non-state actors (from private sector and informal waste actors) thus imposing an imperative for integrating this new sector and their perspectives into waste governance.

However, there is insufficient research on legal aspects of environmental integration in the environmental sector in developing countries generally and Kenya for that matter. [84] Instead, much focus has been on discrete issues relating to inadequate enforcement of environmental laws, funding constraints faced by regulators and low public awareness on environmental problems without a clear perspective on environmental integration. This study therefore fills a knowledge gap and contributes to new academic information that will further stakeholder's understanding of integration of Kenya's environmental regulatory framework and particularly as it regards the MSWM sector.

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[81] Jing Ma & Keith Hipel '*Exploring social dimensions of municipal solid waste management around the globe- a systematic literature review*' (2016) 56 Waste Management 3-4; waste is an environmental risk; a product of social relations, practices and attitudes and; waste is a resource.

[82] Matthew Watson, Harriet Bulkeley & Ray Hudson 'Unpicking environmental policy integration with tales from waste management' (2008) 26 Environment and Planning C: Government and Policy, 481-498

[83] Ibid

[84] See Andrew Jordan.& Andrea Lenschow "*Integrating the environment for sustainable development: an introduction*" in Andrew Jordan & Andrea Lenschow (eds) *Innovation in environmental policy?: Integrating the environment for sustainability*, (Edward Elgar, 2008) 5

Thirdly, solid waste generation is linked to urbanization growth rates, levels of industrialization and income.[85]. Urbanization in African countries including Kenya is on an upward trajectory.[86] Nairobi's population is expected to rise from over 3 million to over 6Million by 2025.[87] In the 2000s for instance, Nairobi witnessed an increase in generation of solid waste by 7% annually, leading to doubling of the figure within a period of 10 years, yet the rates of collection and proper disposal of the said wastes remained roughly unchanged.[88] Generation of MSW is therefore likely to increase with the rising urban population. Municipal solid waste can pollute and contaminate the environment, pose a threat to human health and represent a loss in terms of material and energy resources.[89] A UNHABITAT report relates the higher prevalence of acute diarrhoea and respiratory diseases among children living in near waste disposal sites as compared to other areas in the same cities where waste is regularly collected and disposed.[90]

According to the KNBS, 63.7% of households in Kenya dispose waste through dumping or burning within their compounds whereas 10.5% dump waste in streets, vacant plots or drainages.[91] These unsanitary and probably illegal waste disposal methods are a threat to environmental sustainability. Landfill is the predominant waste disposal method for collected wastes underlining the preponderance of waste disposal paradigm.[92] Unless effective policy and legislative measures are put in place, Kenyan cities will find it difficult to cope with expected increase in MSW volumes as cities and municipalities expand as predicted.

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[85] Sands, (n34) 678 and; Harro von Blotnitz & Peter Ngau, 'Integrated solid waste management plan for the city of Nairobi 2010-2020' (A report for the City Council of Nairobi on assignment to the United Nations Environment Programme, March 2010) 7 <http://www.centreforurbaninnovations.com/sites/default/files/Integrated%20Solid%20Waste%20Management%20Plan%20for%20Nairobi%20City.pdf> accessed 14 September 2019

[86] UNEP, *Africa waste management outlook* 6; urban population is set to rise from 40% in 2014 to 55.9% of total population in 2050

[87] UNEP, *Kenya: Atlas of our changing environment* 148

[88] Ibid

[89] UNEP *Africa waste management outlook* 9-10

[90] UNHABITAT, (n7) XXI

[91] Kenya National Bureau of Statistics, "*Basic report- 2015/16 Kenya integrated household budget survey (KIHBS)*", (KNBS, 2018) 47& 51 < https://www.knbs.or.ke/download/basic-report/ > accessed 4 August 2018

[92] NEMA, *Kenya state of environment report*-2013, 151.

Fourthly, this study comes at a time when Kenya is reviewing its legal framework on MSWM to align with the Constitution of Kenya (2010) and the new Environment Policy (2013).[93] The adoption of the sustainable development goals (SDGs) and in particular, SDG 12 which commits States to the adoption of the waste hierarchy provide an impetus for review of the national framework on MSWM. Such alignment should also give effect to the principle of sustainable development by ensuring adequate integration of environmental protection considerations in emergent MSWM laws at both national and county levels.

Fifthly, a study on integration of environmental governance is also timely, given the emerging challenges to the environment such as the emergent extractives industries (oil, gas, coal and rare mineral) and proposed establishment of large scale infrastructure projects in Kenya (e.g. coal-fired plants, oil transport corridors, irrigation complexes etc) with significant waste generation potential. Whereas economic considerations dominate the decisions around the establishment of extractives industries, adverse environmental and social impacts from waste generated therefrom are likely to undermine any intended benefits, if these are not effectively anticipated and mitigated from the onset. This study seeks to propound a model for environmental integration in MSWM that could be applicable to waste management in the emergent extractives sector.

1.6 Theoretical Framework

Theoretical framework is defined as system of logical statements or propositions that explain reality or the relationship between two or more objects, concepts, phenomena or characteristics of human behaviour.[94] In research, theories serve to explain how some aspect of the world works or relationships between variables.[95] Within the context of this

[93] Text to (n18); The Ministry of Environment and Forestry has published the Sustainable Waste Management Bill of 2019, whereas several counties are in the process of designing and adopting County solid waste laws.
[94] Bruce Berg *Qualitative research methods for the social sciences* (7th edn, Pearson Education Inc 2009) 21-22
[95] Allen Repko *Interdisciplinary research: process and theory*, (Sage, 2012) 356-7

study, theory provides a framework for explaining the problem of fragmentation and environmental integration, as well as how the law applies to these concepts.

The study proceeds from the premise that sustainability is realizable if the concept of environmental integration is evident (that is, environmental concerns are sufficiently integrated in the development process) in a particular environmental regulatory framework. In the same vein, environmental integration is more likely to manifest if the environmental regulatory framework is coherent and sufficiently harmonized (and therefore integrated as opposed to fragmented) to allow or enable regulators and policy actors holistically take into account environmental issues and concerns in the development process.[96] Framework laws such as EMCA play a critical role in fostering environmental integration in a country's environmental regulatory framework. This section therefore seeks to answer the question- how does legal theory account for environmental integration in law?

Luc Wintgens provides a rather hybrid theoretical account of coherence of law, drawing on works of various schools of jurisprudence, which therefore outlines the theoretical framework for this study.[97] To Wintgens, coherence of law implies a requirement that a legal system should exhibit rationality or make sense as a whole when its individual constituents (rules) are examined.[98] Rationality of a legal system is conceptualized into two categories; internal and external. Internal rationality refers to consistency of norms or rules in a legal system resulting in a non-contradictory whole of rules that follow in a sound or valid way from the basic preferences held by the legislator.[99] In other words, without internal rationality, a legal order is beset by contradictions, which could threaten its vitality.

[96] Peeters (n38) 91-5
[97] Luc Wintgens 'Coherence of the law' (1993) 79 Archives for Philosophy of Law and Social Philosophy 483-519
[98] Ibid 487
[99] Ibid

In this regard, Wintgens internal rationality embraces the Cottrel,[100] Kelsenian[101] and Weberian[102] positivist notion of coherence of law, which is largely procedural and structural. This correlates to the concept of internal integration as well as vertical environmental integration concept.

External rationality on the other hand refers to the rational quality of a legal system for an external point of view by examining the purposes of legal rules, their adequacy in terms of achieving their legislative purposes and their moral acceptability (justice, freedom, efficiency etc).[103] This combines the ideas of Dworkin, [104] MacCormick,[105] Fuller's[106] and sociologists of law,[107] in viewing rationality from a substantive point of view. This corresponds with the concept of external integration, which therefore provides a theoretical basis for evaluating the extent to which a regulatory framework allows for integration of environmental considerations in the development process. This correlates with the concept of horizontal environmental integration. However, both types of rationality are related; the

[100] Roger Cottrel *The politics of jurisprudence: a critical introduction to legal philosophy*, (Butterworths 1989) 10; he views coherence as a matter of showing how the entirety of legal rules and regulations constitute a single rational structure and how diverse elements of legal doctrine form a system, of elements organized into a uniform whole

[101] Hans Kelsen, 'The pure theory of law and the analytical jurisprudence' (1941) 55 Harvard Law Review 44-70; Kelsen views coherence from a hierarchical dimension, pointing out that the legal system comprises complex series of interlocking norms arranged in hierarchies, with each norm gaining validity from a higher norm and ultimately to the basic norm or Grundnorm. Therefore, the maxim *lex superior derogate inferior* is grounded in this theory.

[102] John Sutton *Law/society: origins, interactions and change* (2001 edn, Pine Forge Press 1949) 114; to Max Weber, rationality means that rules must be arranged coherently to form a logically- clear, internally-consistent and gapless system

[103] Ibid

[104] Ronald Dworkin, 'Law's empire', in Michael Freeman "*Lloyd's introduction to jurisprudence*" (8th edn, Sweet & Maxwell, 2008) 752-772; According to Dworkin, integrity is a fundamental requirement/character of law which requires judges and legislators to make/interpret total set of laws morally coherent in terms of achieving justice and fairness

[105] Neil MacCormick *Legal reasoning and legal theory*, (1997 edn Oxford, 1978:)152; he advances a theory of coherence of law, which holds that multiplicity of rules in a system make sense together, if they are all consistent to with some general norm or principle

[106] LonFuller *The morality of law*, (6th edn, Universal Law/ Yale University Press, 1969) 65-8; he views coherence as one among the moral criteria for validity of a legal system and that the solution to the problem of contradiction of norms within the same statute lies in trying to ascertain the will of the legislator and hence giving effect to the norms that accords therewith

[107] Dias R.W. M. *Jurisprudence*, (Butterworths, 1985) 422; the author argues that coherence of law, according to sociologists of law, is premised on the capacity of a legal system in reconciling the conflicting societal interests

more norms exhibit consistency (and non-contradiction), the more they appear rational from an external point of view.

Proceeding for the above conceptual distinctions of rationality, Wintgens makes some key theoretical claims that are pertinent to this study. First, due the dynamic nature of legal systems, coherence is not an absolute condition but rather a matter of degree when it comes to assessment from an external point of view.[108] As such, a legal system may bear contradictory norms yet exhibit coherence but only to some point beyond which it loses its systemic character.

Second, a legal system resolves problems of coherence at three levels. The first level of coherence entails ensuring consistency and non-contradiction between individual norms (judicial decision or legislative rule).[109] This is straightforward, if one is dealing with norms within the same branch of law. Where norms derived from separate branches of law (e.g. property and tort) contradict over same subject-matter however, coherence is ensured at a second level, through applying principles in choosing the appropriate norm in manner that make sense for the system as a whole.[110] An intermediate level of coherence (between first and second) is suggested, to account for inconsistency in application of the same rule in different time spans, where change of circumstances (due to passage of time) may lead to redundancy of the said rules.[111] In instances where branches of law appear incompatible, then an extra-legal theory (legislative purpose, morality etc) is used as a justification for creating a basis for resolving or systematizing inconsistences hence the third level of coherence.[112] Such extra-legal theory is the analytical theory of a legal system, which provides guidance on choice of principles of legislative drafting and interpretation of rules

[108] Luc Wintgens 'Legisprudence as a new theory of legislation' (2006) 19 *Ratio Juris* 15
[109] Wintgens, *Coherence of law* 496; ibid 16
[110] Ibid 497;
[111] Wintgens, *Legisprudence* 16-18
[112] Wintgens, *Coherence of law* 498

to establish their meaning and application, hence resulting in a legal system making sense as a whole.[113]

Third, it is impossible to have a unique principle that unifies an entire legal system contrary to Dworkin's assertions. Attempts to expand existing principles in order to account for coherence of individual branches of law begets vagueness of these principles thereby making it possible for multiple interpretation of rules. Thus, efforts to apply such expanded principles at a third level of coherence actually provokes compartmentalization of a legal system into separate branches of law.[114] This particular claim is made to account for persistence of fragmentation of law in legal systems.

This study will therefore adopt the Wintgens theory of coherence of law as its theoretical framework for evaluating environmental integration in law. Applying the theoretical framework to the present study, it can be postulated that an environmental (e.g. MSWM) regulatory framework is coherent if; (1) its rules reflect a horizontally and vertically harmonized framework and; (2) its rules adequately serve the purpose of realization of sustainable management of in the environmental sector.[115]

1.7 Conceptual Framework

The conceptual framework for this study is drawn from literature on environmental policy integration (EPI), which was the precursor to the concept of environmental integration, and propounds two broad factors or variables that affect or influence the level environmental integration in a particular environmental regulatory framework, as described below:

[113] Wintgens, *Legisprudence* 22-24
[114] Ibid 516
[115] Hoornweg & Bhada-Tata, '(n21): Sustainability in MSWM is achieved through adoption of waste hierarchy entails prioritization of waste prevention, minimization, re-use, recycling and recovery (energy) over disposal, is considered the most environmentally sustainable and integrated way of waste management.

1.7.1 Normative framework incorporating the principle of integration

These refer to values, norms and traditions that determine the basic significance of environmental integration in legislative and policy making and hence influence the effectiveness of strategies and instruments.[116] Adoption of environmental protection and sustainability norms in the regulatory framework through such legal devices as environmental rights and duties.[117] It may also include entrenchment of the principle of sustainability in the legal framework with clear obligations regarding its implementation.

Normative factors will also include level of political support and commitment towards environmental integration. This may also include level of public support for integration as this espouses societal values that are supportive of the concept of integration. Administrative or regulatory culture that is supportive of integration also plays a key role in promoting consensual and collaborative approaches necessary for optimal balancing of interests. [118] These are signified by attitudes towards use of knowledge and science in policymaking processes, particularly in face of uncertainty, degree of cooperation among policy actors and level of weddedness to the sustainability agenda among the policy actors or community. Policymaking rules that promote stakeholder participation (as opposed to closed processes), enhance holistic consideration of consequences and decision-making styles that promote collaborative/consensual problem-solving (rather than adversarial/bargaining) approaches to decision-making tend to promote integration.[119] The concept of co-regulation is also relevant here, in that it promotes interactive relationship between the regulator and the regulated, defined by agreement or covenant, whereby the overall policy or regulatory objectives are set by the regulator and the details are subject to

[116] Asa Persson, 'Environmental policy integration: an introduction' (Stockholm Environment Institute, June 2004) 28 < http://wedocs.unep.org/bitstream/handle/20.500.11822/18981/pints_intro_Persson_2004.pdf?sequence=1 > accessed 11 September 2015; M Weber & P Driessen, 'Environmental policy integration: the role of policy windows in the integration of noise and spatial planning' (2010) 1125
[117] Buhrs, *Environmental integration*
[118] Persson(n116) 29
[119] Ibid

a negotiated agreement between the two parties.[120] In other words, co-regulation brings into the formal regulatory process, self-regulatory mechanism which otherwise operate at the periphery of policymaking.

The foregoing corresponds the external rationality criteria of coherence of law articulated in Wintgen's theory of coherence. The above normative factors provide a substantive rationale for establishing coherence of a regulatory framework.

1.7.2 Harmonized legal framework incorporating the principle of integration

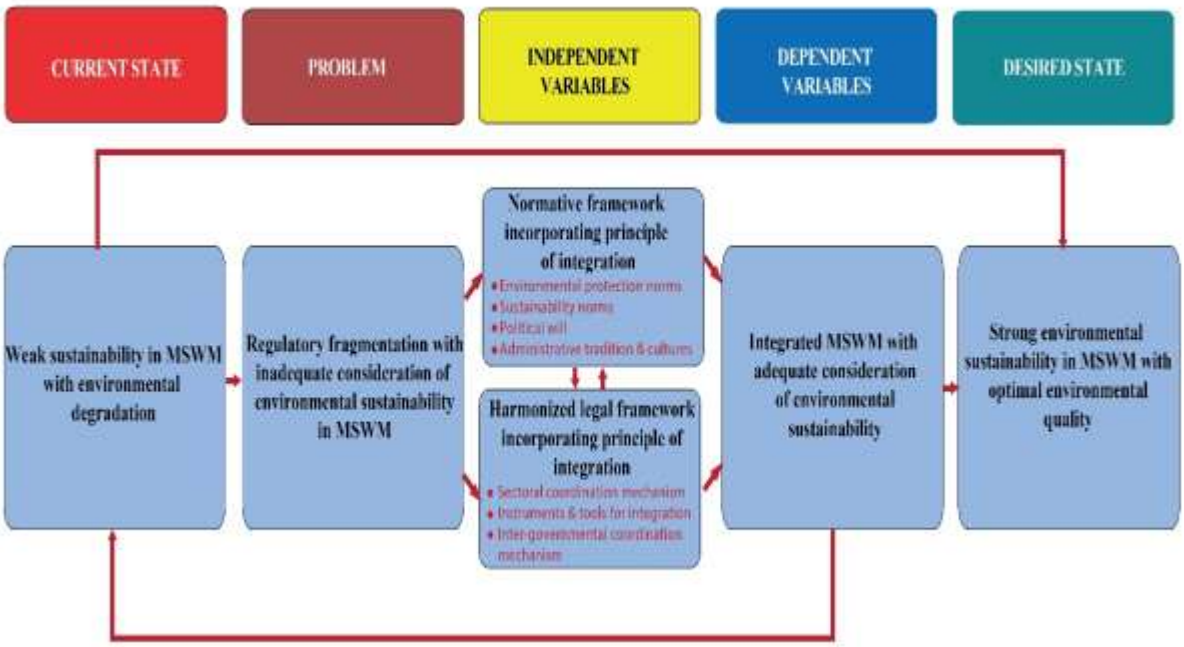
These include sectoral coordination mechanisms designed to promote communication, collaboration and cooperation in decision-making processes between environmental ministries, departments and agencies with other sectors (governmental and non-governmental).[121] Such arrangements are conceptualized to address problems of institutional fragmentation, sectoral compartmentalization and tier responsibility, which affect successfully environmental integration.[122] These could take the form of *ad hoc* or formal structures coordination mechanisms. Related to this is the issue of regulatory capacity of institutions with mandate promoting sectoral coordination, including financial resources, expertise, skills, institutional independence and legal competencies/mandate.[123]

Secondly, instruments and tools for environmental integration play an important role. Instruments will refer to sequence of measures taken to implement a system of integration and may include policy analyses, environmental impact assessments, sustainability plans

[120] M Kidd, 'Alternative to criminal sanction in the enforcement of environmental law' 9 *South African Journal of Environmental Law and Policy* (2002) 29
[121] Ibid 31
[122] Weber & Driessen (n116) 1125
[123] See Ann Carlson 'Regulatory capacity and state environmental leadership: California's climate policy' (2012-2013) 63 Fordham Environmental Law Review, 66-67; Persson, (n116) 33

and strategies.[124] Tools that foster environmental integration include the existence of green government procedures such as green planning, budgeting and procurement. Plans and budgets are known to be effective tools for operationalizing government priorities and therefore provide opportunity for balancing of environmental and development concerns therein while also outlining incentives and sanctions in support of achievement of environmental objectives. Procurement on the other hand enables the government to direct its spending in manner that supports sustainable development.

These factors correlate with Luc Wintgens' theorization of internal rationality of legal system which is viewed as procedural and structural. .



source: Nilsson & Persson, 2003 Persson, 2004; Buhrs, 2009, Weber & Driessen, 2010

Figure 1.1 Conceptual framework:

[124] Mans Nilsson & Asa Persson 'Framework for analysing environmental policy integration' (2003) 5 Journal of Environmental Policy and Planning 345; Persson, (n116) 31-32; Weber & Driessen, (n116) 1124-5

1.8 Methodology

1.8.1 Research approach and design

This study was designed as a mixed method research, which according to Tashakkori & Cresswell is a type of design in which the investigator collects and analyses data and integrates the findings and draws inferences using both qualitative and quantitative methods in a single study.[125] Quantitative methods entail testing objective theories by examining relationships among variables measured and analysed statistically using numerical data.[126] Quantitative method is grounded in the positivist paradigm, which emphasizes the nature of reality as objective and free of subjective values of the researcher. On the other hand, qualitative method is primarily aimed at discovering the underlying motives, explanations behind phenomena using in-depth interviews for the purpose.[127] This method is primarily based on the constructivist paradigm which propounds that reality or meaning is constructed by the researcher. Punch deems both qualitative and quantitative methods as types of empirical research, distinguished by the kind of data involved i.e. numeric and non-numeric respectively.[128]

Mixed method research (MMR) has thus emerged as a third research tradition, which recognizes the usefulness of both qualitative and quantitative methods and seeks to maximize on their respective strengths and minimize on their weaknesses.[129] The tradition is based on the pragmatism, which seeks to debunk concepts such as "truth" and "reality" and instead focuses on "what works" and solutions to problems as the central aim of research.[130]

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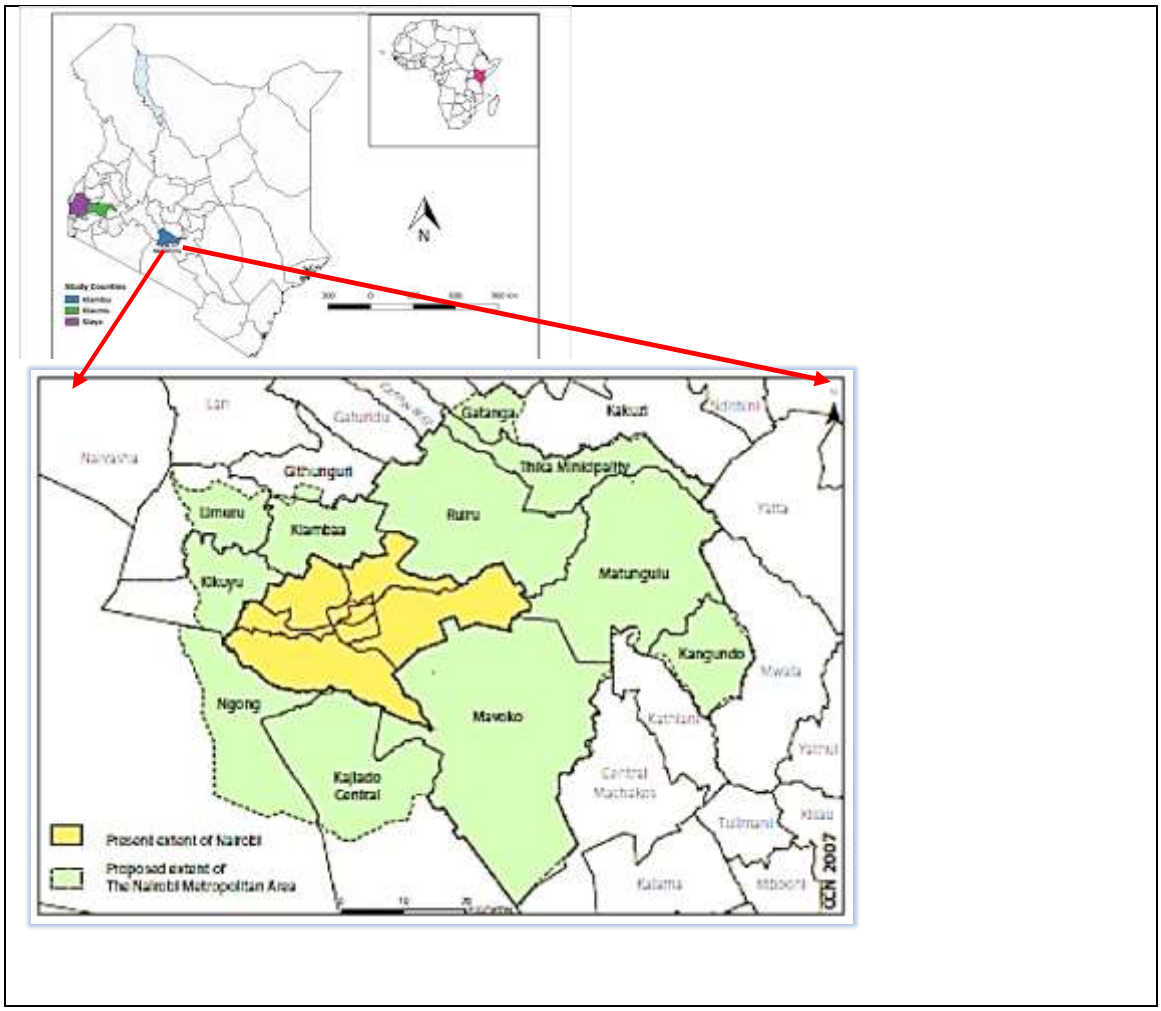
[125] Abbas Tashakkori & John Cresswell 'The new era of mixed methods' (2007) 1 Journal of Mixed Methods 4
[126] John Cresswell *Research design: qualitative, quantitative and mixed method approaches* (Sage, 2009) 4
[127] C.R. Kothari *Research methodology: methods and techniques*, (2nd revised edn, New Age International, 2004) 2
[128] Keith Punch *Introduction to social research: quantitative and qualitative approaches* (2nd edn, Sage 2005) 3
[129] Burke Johnson & Anthony Onwuegbuzie 'Mixed methods research: a research paradigm whose time has come' (2004) 33 Educational Research 14-5
[130] Charles Teddlie & Abbas Tashakkori "Foundations of mixed methods research" (Sage, 2009) 7-8; Cresswell (n126) 11

This study adopts the MMR for three reasons. First, the study entails the assessment of the design and implementation of a regulatory framework. Textual analysis of the law (statutes and case law) and academic literature as part of qualitative analysis is essential in order to establish meaning to the words in legal texts. Secondly and integral to the assessment process, the appropriateness and efficacy of a regulatory framework can be discerned from the manifest effects (reality) of its implementation. To calibrate these effects or prevailing reality, it is necessary to measure and statistically aggregate the perceptions of regulated entities in manner through which generalization of their views is possible, hence use of quantitative methods. Thirdly, in order to appreciate better and accurately the inferences drawn from quantitative data analysis, it is necessary to seek views of experts on the findings and analyse these further using qualitative methods.

In terms of scope, the study is conceptualized as a national study but also includes county-level analysis for purposes of investigating aspects of vertical alongside horizontal integration in the environmental sectors. For logistical reasons, the study covered the Nairobi Metropolitan Area. This area is defined in the "*Master Plan and Feasibility Study to alleviate Traffic Congestion and Improve Traffic Safety in the Metropolitan Area*" that was prepared by Japan International Cooperation Agency in 2006.[131] It comprises Nairobi County, northern parts of Kajiado County, southern parts of Kiambu County and western parts of Machakos County. Nairobi City County alone accounts for 25% of the MSW generation countrywide.[132] There is considerable movement of persons within the designated areas hence presumed movement of wastes. Given its high population density, Nairobi metropolitan region has the highest concentration of actors in the waste management chain with noticeable effects on environmental sustainability and thus could provide useful insights in respect to the subject-matter of the study.

[131] Cited in JICA, "*The project on integrated urban development master plan for the city of Nairobi in the republic of Kenya: Final report (draft*)", May 2014, unpublished at section 1-2

[132] Tilahun Haregu Abdhalah Ziraba & Blessing Mberu 'Integration of solid waste management policies in Kenya: analysis of coherence, gaps and overlaps, (2016) 8 Urban Africa Risk Knowledge Working Paper 3; Nairobi generates slightly over 1Million tonnes of waste as compared to an estimated 4million tonnes nationally.



Map 1 **Study Area- Nairobi Metropolitan Region**[133]

The quantitative method entailed a survey targeting key waste generators in the target counties. A survey is defined as a research method which provides a quantitative or numeric description of trends, attitudes or opinions of a population by studying a sample of that population.[134] The survey method therefore sought to establish and measure perceptions of key waste generators on the design and implementation of regulatory framework from an integration point of view. The qualitative method entailed the grounded

[133] Source < https://www.google.com/url?sa=i&url=https%3A%2F%2Fwww.researchgate.net%2Ffigure%2FMap-of-Kenya-showing-the-three-counties-where-the-sampling-was-conducted-Inset-is-a-map_fig1_336024566&psig=AOvVaw1s65azWMRt9u51I5M56Ufi&ust=1605175913870000&source=images&cd=vfe&ved=0CAIQjRxqFwoTCKCsx8Cg-uwCFQAAAAAdAAAAABAE> accessed 11 November 2020

[134] Tashakkori & Creswell (n125) 12

theory, which according to Cresswell is a strategy of inquiry in which the researcher derives a general abstract theory of a process, action or interaction grounded in the views of participants.[135] In this case, the study sought the views of key informants with special knowledge on waste management or environmental regulation in order to establish how integration manifests (or otherwise) in Kenya's environmental sector.

A comparative analysis was also undertaken, with a view to collecting and analysing information from two jurisdictions, namely, Sweden and South Africa. Sweden was analysed as a jurisdiction with appreciable level of environmental integration in a developed country setting.[136] South Africa, on the other hand is a country with a larger economy than Kenya's, good continental ranking on environmental protection[137] and could offer comparative lessons, on basis of commonalities in legal systems.

1.8.2 Data needs, types and sources

The research questions provided a good basis for determining the data needs and requirements for the study. Analysis of the legal framework required textual data from statutes, case law and academic writings. Analysis of normative framework as well as aspects of horizontal and vertical integration required perceptions and view points from regulated entities and regulators as well as experts. Such data was to be supplemented by opinions and analyses from written sources (academic writings, statistical briefs and officials reports). Lessons from other jurisdictions were distilled from existing literature and insights from regulators and experts.

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[135] Ibid

[136] Persson, (n116)

[137] See Hsu A. et al, *2016 Environmental performance index* (Yale University, 2016) available at <http://epi2016.yale.edu/sites/default/files/2016EPI_Full_Report_opt.pdf> last accessed on 11th August 2018. At position 81 globally, South Africa is the 3rd highest ranked sub-Saharan country during conceptualization of this study and 6th in Africa after Tunisia (53), Morroco (64), Mauritius (77), Namibia (78) and Botswana (79). Kenya was the highest ranked East African country at 123 whereas Sweden was 3rd globally.

1.8.3 Sampling: Sample size & procedures

This being a MMR study, both probability and non-probability sampling methods were applied. Probability sampling was used for identification and sampling of survey respondents. The sampling population was derived from commercial and industrial entities registered as workplaces under the Occupational Safety and Health Act (OSHA).[138] Registered workplaces generate waste in the course of undertaking economic production activities and therefore OSHA imposes obligations on workplaces to ensure highest standards of occupational hygiene, include maintaining cleanliness and proper waste storage. Registered workplaces are also subject to regulation under EMCA and County laws for waste management issues. Thus, registered workplaces are subject to multiple waste legal regimes and oversight by multiple waste authorities, thus providing ideal setting for assessment of environmental integration from horizontal and vertical dimensions.

A sampling frame consisting of registered workplaces in the target area (Nairobi, Machakos, Kiambu and Kajiado counties) was obtained from the Directorate of OSHA and consisted of 6284 entities. The key categories of these entities include: industries, hotels, retailers, wholesalers, academic institutions, financial institutions.

The sample size was determined using the statistical formula recommended by Mugenda & Mugenda for sampling populations below 10,000 units as follows:[139]

$$nf = \frac{n}{1+(n/N)}$$

nf=	The desired sample if target population is less than 10,000
n=	The desired sample if target population is greater than 10,000 where confidence level is 95%
N=	The estimate of the population size (6284)

Thus,

[138] Act No 5 of 2007 (Revised Edition 2012)
[139] Abel Mugenda & Olive Mugenda, *Research methods: quantitative and qualitative approaches* (ACTS press 2003) 44; also in C. Frankfort- Nachmias & D. Nachmias *Research methods in social sciences*, (2004 edn, St Martin's Press/Arnold 1996) 199

$$nf = \frac{384}{1+(384/6284)} = \mathbf{328}$$

Applying the above formula, a sample of 328 was arrived at.

The selection of subjects was based on the mixed methods multi-level sampling methods. This entailed combining both probability and non-probability methods in successive levels until the sample size was complete.[140] The probability sampling method utilized was stratified simple random sampling, which according to Mugenda entails organizing the sampling frame into distinct categories/sub-groups and thereafter randomly selecting subjects from each sub-group to ensure desired representation of each sub-groups.[141] The non-probability sampling method used was purposive, which according to Cauvery et al entails selecting certain units within a universe in a deliberate manner and exercising good judgement to ensure they are representative of the universe.[142]

The sample for the survey was selected in multiple levels. The first level entailed selection of types of waste generators. Through purposive cluster sampling, the researcher selected registered workplaces under the OSHA. The second level entailed selection of the counties from which registered workplaces were to be identified. Using purposive sampling, the researcher selected 4 counties of Nairobi, Kajiado, Kiambu and Machakos for reasons explained in the previous section. Except for Nairobi, only the sub-counties neighbouring Nairobi were further selected from among those in the counties of Kajiado, Kiambu and Machakos. These sub-counties were deemed to have registered workplaces with sufficient characteristics as those in Nairobi in terms of waste management.

[140] Teddlie & Tashakkori (n130)190
[141] Abel Mugenda *Social science research: theory and principles*, (Applied Research & Training Services 2008) 190
[142] R.Cauvery U. Sudhanayak M. Girija & R.Meenakshi *Research methodology*, (2007 reprint, S. Chand 2003) 99

The third level involved selection of registered workplaces within the 4 counties. The researcher applied stratified simple random sampling to ensure the sample was proportionately spread-out in all the target counties. Below is the apportionment of the sample per county:

County	**Total of registered workplaces**	**Proportion of sample**
Kajiado	80	4
Kiambu	285	15
Machakos	410	21
Nairobi	5509	288
Total	**6284**	**328**

Table 1. Survey sample size

The qualitative component of the field work entailed sampling of key informants comprising experts (regulators and practitioners) or persons in positions of privilege (officials of stakeholder groups). Gilchrist & Williams[143] define key informant as one "…*who possesses special knowledge, status or communication skills, who is willing to share their knowledge and skills with the researcher and who have access to perspective or observation otherwise denied to the researcher through other means*." This definition was relevant to this study as the researcher sought out persons who possessed crucial information or knowledge on aspects of environmental regulation by virtue of being regulators, regulated or being a professional or expert (researchers and capacity builders) in this field. The study adopted a stratified purposive sampling, which according to Kuzel[144] allows individuals within distinct sub-groups (e.g. regulators and regulated stakeholders) to be selected for greater representativeness of the sample. This method also facilitates comparisons on perspectives and interpretation of phenomena between and among sub-groups.

[143] V. Gilchrist & R. Williams "Key informant interviews" in B. Crabtree & W. Miller *Doing qualitative research*, (Sage,1999) 73
[144] A Kuzel. "*Sampling in qualitative inquiry*", in Crabtree & Miller, ibid 39

A total of 38 respondents were sampled from regulators (county governments, NEMA and lead agencies); regulated entities (industry lobbies; business and residents' associations) and independent experts (academics and environmental law and management consultants and practitioners) as indicated below:

Category	**Sub-category**	**Total**	**Comments/Reasons**
Regulators	NEMA headquarters officials	1	Director responsible for waste management
	County Govt officials responsible for environment	9	Chief Officer or Director responsible for the environment docket; Chairperson of County Assembly Departmental Committee responsible for environment; Chief officer or Director for Planning
	NEMA County officials	4	County Directors deployed to the Counties
	County Environmental Committee officials	4	These are the respective county environment officers and chairpersons of County environment committees
	Lead agencies at national level	2	Director of OSHA, Director of Physical Planning
	Lead agency officials at county level	3	Officials of Directorate of OSHA responsible for 3 sampled counties
Regulated entities	Business associations	7	Officials of sampled private sector officials whose businesses are subject to environmental regulation on priority basis- manufacturing industries, traders, private sector, waste management organizations, hoteliers, jua kali, academic institutions.
	Resident associations	5	Officials of resident's associations were chosen from 4 sampled counties and one national body

Category	Sub-category	Total	Comments/Reasons
Independent experts[145]		3	These were drawn from the universities with research and teaching interests in environmental matters as well as registered and practicing EIA experts
Totals		**38**	

Table 2 Sample of Key Informants

1.8.4 Data collection methods

The study employed the following data collection methods:

Structured Interviews: this was the method used in the survey design. A questionnaire was designed to operationalize the research question and the variables in the conceptual framework. To ensure validity and reliability of the instrument, the questionnaire was pretested by the researcher through mock interviews that targeted 10 respondents. Using the findings of the pre-test exercise, the researcher refined the questions by eliminating those that were deemed repetitive and restructured those that were ambiguous to the respondents. All efforts were made to ensure the 10 respondents were not included in the sample.

The researcher recruited and trained three (3) research assistant on how to administer the questionnaire. The questionnaires were administered in the month of August- October 2018. A total of 295 respondents responded positively, translating into an achievement rate of 90% of the target sample which is deemed sufficient for this kind of study.[146]

The respondents were drawn from small, medium and large enterprises. The definition of size of enterprise was derived from official categorization of business by the government

[145] Includes researchers and capacity builders

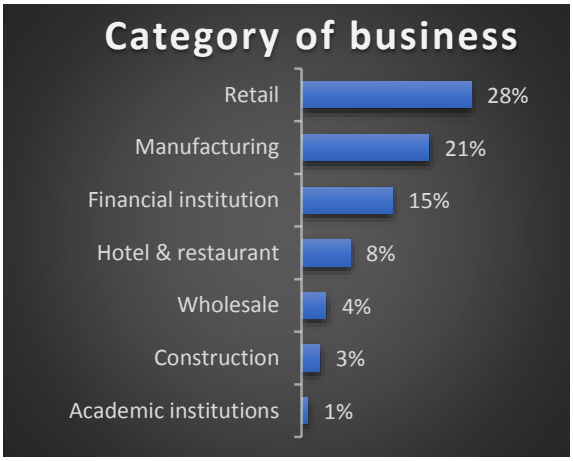
[146] Fred Kerlinger, *Foundations of behavioral research*, (3rd ed, Harcourt Brace College Publishers 1986); the author notes that 80% of achieved sample is good enough for analysis

of Kenya.[147] Small (including micro) enterprises employ between 1-49 persons, whereas medium enterprises 50-99 persons and large enterprises employ over 100 persons. Slightly more than half of the establishments were medium businesses, large scale enterprises accounted for 38% while small scale businesses were only 6%. This distribution is consistent with those of the KNBS survey of micro, small and medium enterprises (MSMEs), which established in medium enterprises were more represented than small enterprises among licenced business with monthly turnover of over Ksh200,000.[148] This means majority of the establishments would probably have large amounts of waste for disposal.

In terms of the category of business, retail businesses were the most surveyed businesses accounting for slightly more than a quarter of all business that participated in the study, followed closely by manufacturing businesses which were a fifth of the sample. Hotel and restaurants were 8% of the sample while construction businesses were only 3%. These findings are largely consistent with those of the KNBS survey of micro, small and medium enterprises (MSMEs), which established distribution of licenced MSMEs in the following order; Wholesale and retail (57%), Manufacturing (11%), Accommodation and food service (9%); Financial activities (4%), education (2%).[149]

[147] See Section 2 of Micro and Small Enterprises Act No.55 of 2012; also Kenya National Bureau of Statistics, "*Micro, small and medium establishments: Basic report 2016*", (KNBS,2016) 10
[148] Ibid, 25; Business with turnover of more than Ksh200,000 would typically belong to the category of workplaces registered under OSHA
[149] Ibid 26-27

Figure 2: Sample by organization



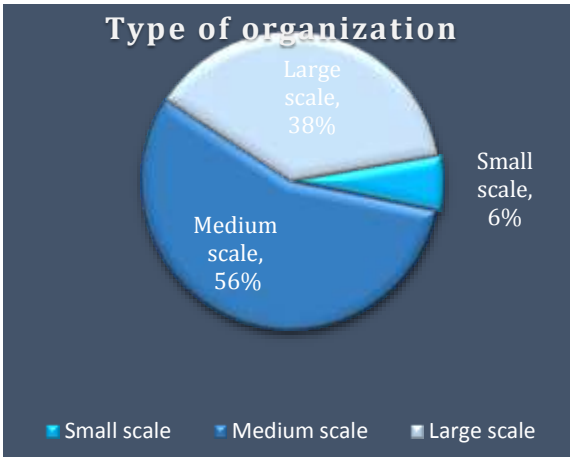


Figure 3 Sample by Category of business

There was a slight gender disparity whereby more males than females participated in the interviews. The study mainly targeted those with responsibilities over solid waste management and invariably, those who granted interviews held relatively senior positions in either human resources or occupational safety departments.[150] This data is consistent with a recent study by the National Gender and Equality Commission which indicated that males are more likely to find formal employment and hold senior positions (managers) in establishments than females.[151]

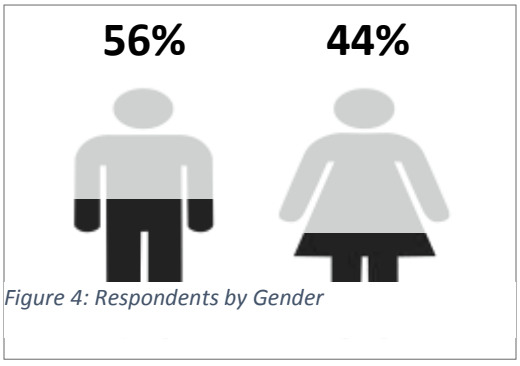
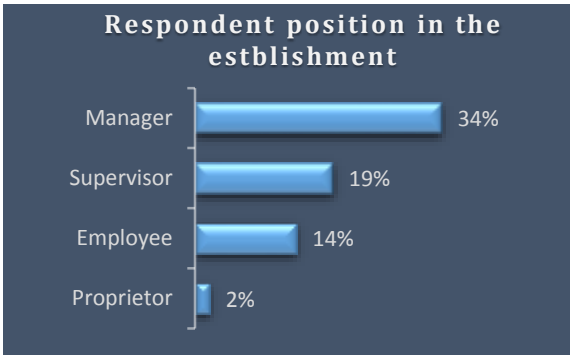


Figure 4: Respondents by Gender

[150] The interviewers observed that in most establishments, SWM is regarded as a sensitive compliance matter and therefore only senior managers were trusted to make pertinent disclosures on the same without risking the reputation of the establishment

[151] See National Gender and Equality Commission "*Status of equality and inclusion in Kenya*", (NGEC, 2016)

Figure 5 Respondents by nature of establishment



85% of businesses surveyed indicated that they were subject to environmental authorization requirements under EMCA. This demonstrates overlaps in MSWM regulatory regimes (OSHA and EMCA) for enterprises targeted by this study thus further underscoring the importance of this research.

Key informant interviews: The researcher conducted key informant interviews by means of a pre-developed interview schedule (annexed to this thesis). The design of the interview guide was guided by the data needs of the study. The questions were framed in an open-ended manner to elicit the widest scope possible of answers. The manner of questioning was intended to corroborate information through triangulation of information sources and seeking of critical perspectives or disconfirming evidence. All categories of sampled groups were interviewed through this method.

Below is a summary of the sample of key informants that was achieved:

Category	**Sub-category**	**Target**	**Achieved**
Regulators	NEMA headquarters officials	1	2
	County Govt officials responsible for environment	9	11
	NEMA County officials	4	5

Category	Sub-category	Target	Achieved
	County Environmental Committee officials	4	1
	Lead agencies at national level	2	2
	Lead agency officials at county level	3	0
Regulated entities	Business associations	7	1
	Resident associations	5	3
Independent experts[152]		3	1
Totals		**38**	**27**

Table 3 Achieved Sample of Key Informants

As part of the study, the researcher visited the City of Gothenburg in the region of Vastra Goatland, Sweden and had opportunity to interview the following key informants:

Category	Sub-category	No	Comments/Reasons
Regulator	Swedish Environment Protection Agency	1	Environmental economists at SEPA HQ
	Environment and Land Court	1	A judge (Vanesborg) in Vastra Goatland Court- overseeing county administration boards in Västra Götaland, Halland, Värmland and parts of Örebro counties
	County Administrative Board of Vastra Goatland	1	An environment officer at the regional authority in charge municipalities in the Gotherburg city area

[152] Includes researchers and capacity builders

	Municipal Public Health Committee of Gothernburg	1	Environment officer at the municipality responsible for waste management in Gotherburg city area
Total		4	

Table 4: Key informants from the City of Gothenburg

Literature review: this method was used for collecting secondary data as identified from the data needs hereinabove. The researcher sought the relevant books, articles, monographs and newsletters from libraries and online databases. Law statutes and case law was obtained from online databases from Kenya, South Africa and Sweden.[153] The researcher also collected relevant materials and statistical information from specialized governmental institutions (UNEP, UNHABITAT, NEMA, county governments etc) and non-governmental sources. The literature review was guided by document review checklist developed prior to the review exercise.

1.8.5 Data analysis

Quantitative data analysis was based on responses from Likert-type questions that were applied in the survey questionnaires. The responses to single questions were aggregated and analysed using frequencies, which is recommended for this Likert-type data.[154] The frequencies were expressed as proportions and percentages (of level of agreement) and necessary inferences were made. These inferences were subjected to further interrogation during the key focus interviews as part of data triangulation.

The principal qualitative method of data analysis employed in this study was content analysis. Content analysis refers to…. "*as the intellectual process of categorizing qualitative textual data into clusters of similar entities or conceptual categories, to identify*

[153] <www.kenyalaw.org>; <https://www.environment.gov.za/legislation/actsregulations> and; <https://open.karnovgroup.se/> respectively
[154] Harry Boone & Deborah Boone, 'Analyzing Likert Data' (2012) 50 Journal of Extension, 4

consistent patterns and relationships between variable or themes."[155] This method was used in analysing literature from that was reviewed as part of the study as well as transcribed material from field interviews and FGDs. It was also employed in analysis of statutes and case law to identifying legal issues and discern emergent jurisprudence. Themes emerging from the content of the literature were categorized into conceptual categories, which thereafter were subjected to further analysis with a view to identifying patterns (trends) and connectedness (relationships) that arose from the data. From the identified themes, the researcher also examined and discerned both explicit and implicit meaning of textual content that was analysed.

Using the Miles and Huberman analytical framework, the process of analysis of textual data entailed three steps:[156]

- **Data reduction**: this entailed editing, segmenting and summarizing data into themes clusters and patterns.
- **Data display**: this entailed organizing, compressing and assembling information into visual displays such as diagrams, causal models, graphs, networks etc. this helped show the interconnectedness of themes and patterns as relationships. The process was repeated to ensure validity of the emerging relationships.
- **Drawing conclusions and verification**: this was the end product of reduction and display of data, as the researcher was able to make inferences in the form of propositions on the emergent analysis. The propositions were subjected to continuous verification until all data had been analysed.

Where statistical data was analysed from texts, the researcher reduced these into simple descriptive measures such as averages, counts and percentages for purpose of analysis of the same. The data was presented in charts or graphs for purposes of display. Relevant conclusions were appropriately drawn from these analyses and verified accordingly.

[155] H Julien, "*Content analysis*" in L.M. Givens (ed) *The Sage encyclopedia of qualitative research methods*, (Sage, 2008), 121 <http://dx.doi.org/10.4135/9781412963909.n65> accessed 27 June 2016
[156] Punch (n125) 198-199

1.9 Limitations and Assumptions

Limitations refer to aspects of a study which may affect the results or generalizability of the same, and for which the researcher exercises no control over.[157] Accordingly, several limitations emerged in this particular study.

First, the size of the sample of target sites (4 out of 47 counties) may not provide results that could be generalized for the whole country, with a high degree of confidence. This stems from the fact that the sampling size is relatively small because it is restricted to workplaces registered under OSHA. The fact that also individuals sampled in these target sites do not have equal probability of getting into the sample due to gaps in register of workplaces,[158] also affects the generalizability of findings derived from data collected from them. Secondly, the study took place at a time when reforms in the environmental sector are ongoing. Significantly, county governments are developing and elaborating legal frameworks to govern environmental sectors. The waste law in the South Africa and Sweden as well as at the international level was also evolving. Thus, keeping up with legislative changes at all these levels proved to be a challenge.

Thirdly, waste management is a politically-sensitive area and therefore an assessment of this kind is treated by authorities with significant apprehension.[159] Data for this study was collected after an (2017 general elections) electioneering period. Thus, some respondents invariably adopted certain biases when giving their views regarding performances of county governments in relation to aspects of environmental regulation. Fourthly, the study registered a high non-response rate which was attributed to unwillingness of sampled entities to participate as well as non-traceability of some subjects. The researcher therefore

[157] Mugenda & Mugenda, (n136) 215
[158] See Office of Auditor General, *Performance audit on protection of safety and health of workers at workplaces,* (OAG, 2018) 7 < http://oagkenya.go.ke/Audit-Reports?path=Performance%20Audit> accessed on 16 August 2019; The OAG notes that out of the 1.7 million registered workplaces reported in the Kenya Labour Market Profile (2014), DOSH had only managed to register 9,984 (or 0.6%) and further that the register kept had gaps.
[159] UNHABITAT (n7) 20-21

had to draw fresh repeat samples to cater for the high non-response rate and this could potentially introduce inadvertent sampling errors.

The researcher also makes some critical assumptions that could mitigate the limitations and provide proper basis for the validity and reliability of the envisaged results. First, the study assumes that county governments have fundamental characteristics that are common and unique to them, owing to historical circumstances that faced their predecessor institutions, the local authorities. Local authorities were deemed institutionally-weak, inefficient, prone to corruption and lethargic in their mandates. Even though county governments are expected to adopt different trajectories of institutional development and growth, this may take a long time. In the absence of such differentiation, it is therefore possible for now to generalize findings derived from the 4 target sites to the all other counties, on account of existence of commonalities among them.

Secondly, legislators both at national and county levels suffer from weak capacities that impede adoption of appropriate legislations. Thus, despite ongoing legal reforms in the environmental sector, it is anticipated any new laws resulting from such reforms will be flawed or exhibit gaps. Such laws will therefore fortify the study and its findings. Thirdly, the study assumes that the significance of the problems associated with environmental sector is large enough to elicit conscientious responses from respondents. Proper and effective management of environment is a critical concern for communities and stakeholders. For this reason, respondents will overcome their individual biases and provide responses that approximate to the truth.

1.10 Structure of Thesis

The thesis is divided into seven chapters outlined as follows:

Chapter 1 provides a background to the study and lays out the problem statement. It outlines the research questions and objectives that will guide the study. The theoretical and conceptual framework is laid out and the methodology of the study is explained and the outline of the thesis presented.

Chapter 2 provides an extensive literature review on environmental integration. Using literature review and case law, this chapter examines the evolution of principle of integration under international and domestic environmental law. The conceptual link between principle of integration and the concept of environmental integration is explored. The section reviews the context of MSWM in Kenya and environmental integration and points out gaps in literature.

Chapter 3 lays out the legal framework on MSWM pertinent to the implementation of the environmental integration in Kenya. The framework is examined at various levels; international, regional, constitutional, national statutes (framework environmental and sectoral laws) and county statutes. The emergent case law has been analysed to provide insights on judicial interpretations of the formal statutes. Using data from the field survey and key informant interviews, the application of the normative framework in ensuring environmental integration in MSWM is examined. The strengths and weaknesses of the legal framework are evaluated as part of the assessment.

Chapter 4 examines the actual implementation of the normative framework anchoring environmental integration in MSWM using data collected from the field survey and key informants. The factors affecting efficacy of the normative framework are examined in depth.

Chapter 5 examines the actual implementation of horizontal and vertical environmental integration in MSWM framework. The sectoral coordination role of NEMA and county authorities vis-s-vis the relevant lead agencies and other sectors is examined in-depth, based on findings and results from the field survey. Similarly, the intergovernmental coordination in MSWM between national and county governments is examined from field data. A critical assessment of the sectoral and intergovernmental coordination in MSWM is assessed and its implications for horizontal and vertical environmental integration respectively.

Chapter 6 provides a comparative analysis of environmental integration in Sweden and South Africa. The legal framework, sectoral and inter-governmental coordination that relate to environmental integration are discussed in-depth. Factors that promote or hinder integration are identified. The best practices as well as lessons will be distilled and fleshed out comparisons and contrasts with the Kenyan situation will be made.

Chapter 7 contains the overall conclusions and recommendations of the study. The extent to which the study has achieved its objectives; the theory validated and modified; assumptions of the study prevailed will all be analysed. Thereafter recommendations in respect to the legal and institutional framework shall be made. The chapter also lays out the optimal arrangements for entrenchment of environmental integration in MSWM framework in Kenya.

CHAPTER TWO:

THE CONTEXT OF ENVIRONMENTAL INTEGRATION IN MSWM IN KENYA: A LITERATURE REVIEW

2.1 Introduction

Using literature review, this section provides an overview of normative status of the principle of integration at both domestic and international levels. The implementation of the environmental integration in Kenya is examined in-depth under the EMCA regime. The context of MSWM in Kenya is outlined and research on environmental integration in this sector is examined. Relying on the rationale behind literature review given by Mugenda & Mugenda,[1] the last part of the section identifies gaps in knowledge to be addressed by the study based on prior research.

2.2 Normative Status of Principle of Integration under International Law

Literature review reveals lack of consensus among various scholars over the legal content or normativity of the integration principle under international environmental law. Sands[2] on one hand holds the view that the principle is of practical legal consequence in that it imposes obligations on states to integrate environmental concerns in development processes. He further cites incorporation of the principle in various treaties and enunciation in international case law as a sign that states are willing to be bound by it, hence it assumes the character of a rule of international customary law.

[1] Abel Mugenda & Olive Mugenda, *Research methods: quantitative and qualitative approaches* (ACTS press 2003) 29-30

[2] Phillipe Sands, *Principles of international environmental law*, (5th edn, Cambridge University Press, 2007) 263-265

Barral[3] also observes that the arbitral tribunal in the *Iron Rhine*[4] case took perhaps the boldest step towards recognition of customary status of integration principle by noting that "*international law requires integration of appropriate environmental measures in the design and implementation of economic development activities*". Therefore according to the Tribunal, where development may cause significant harm to the environment, there is a (legal) duty to prevent or at least mitigate such harm. This reasoning affords the integration principle the status of a principle of general international law.

On the other hand, some writers have expressed doubts over the normative status of the principle of integration. Pallemaert [5] has argued that the integration principle in its application, has been subordinated environmental considerations to economic development imperatives. Likewise, Galizzi & Herklotz[6] point to the dilution of the principle in the outcomes of the World Summit on Sustainable Development, with the implication that the environment could not be considered on an equal footing with economic development. As a consequence, therefore, the core elements of the principle are weakened thus undermining its normative content. In essence therefore, these scholars argue that the principle assumes the significance of a political, rather than a legal concept, which however could guide the conduct of states and help shape other legal norms.

Some scholars also argue that the legal status of integration principle has been undermined by the fact that the normative status of the concept of sustainable development by itself is questionable. French[7] has contended that there is little of true substance in the concept of

[3] Virginia Barral '*Sustainable development in international law: nature and operation of an evolutive legal norm*' (2012) 23 The European Journal of International Law 377-400
[4] *Award in the Arbitration regarding the Iron Rhine (Ijzeren Rijn) Railway between the Kingdom of Belgium and the Kingdom of the Netherlands*, 27 RIAA (2005); ibid,387
[5] Malgosia Fitzmaurice, *Contemporary issues in international environmental law* (Edward Elgar 2009) 70
[6] Paolo Galizzi & Alena Herklotz 'Environment and development: friend or foes in the 21st century?', in Malgosia Fitzmaurice, David Ong & Panos Merkouris *Research Handbook on international environmental law*, (Edward Elgar 2010) 84
[7] See Duncan French, 'Sustainable development' in Fitzmaurice et al (eds) (n6) 54-58

sustainable development to determine the legality of state action. Bosselmann[8] has reviewed some key judicial decisions from international tribunals and concluded that the concept of sustainable development is yet to assume the status of an adjudicatory norm capable of shaping the *ratio decidendi* of court decisions. He observes that most of the cases where sustainable development has been tackled, the determinations on the same appear in the *obiter dicta*, pointing to the possibility that the norm-generating quality of the concept has not been appreciated or recognized[9] A UN expert report assessing implementation of international environmental law has also underscored persistent doubts over binding nature of sustainable development principles and whether they should constitute a source of law.[10] Lowe[11] has thus concluded that if the concept of sustainable development continues to attract skepticism over its legal status, then its constitutive principles (such as integration) lack the appearance of archetypal norms.

Yet there is considerable scholarly work that supports the normative status of the concept of sustainable development. Lowe[12] has argued that whereas the concept of sustainable development has not acquired the status of a primary norm which can affect the legal conduct of State parties, it has nevertheless assumed normative force as a "meta-principle" or rule for judicial reasoning in the character of an "interstitial norm", which modifies the effect of primary norms. As an interstitial norm, sustainable development serves resolve normative overlaps and conflicts between primary norms in the same manner other meta-principles of law such as "reasonable man's test" or "balancing of interests". Sustainable

[8] Klaus Bosselmann 'The environmental jurisprudence of international tribunals: does sustainability make a difference*?'* in Lee Paddock. David Markell & Steven Goldstein (eds) *Compliance and enforcement in environmental law: towards more effective implementation* (Edward Elgar 2011) 61-82; the international tribunals reviewed include the International Court of Justice (ICJ); International Tribunal on the Law of the Sea (ITLOS) the Appellate Body of the World Trade Organization (WTO); United Nations Committee on Human Rights (UNCHR) and European Court on Human Rights (ECHR).
[9] Ibid p62
[10] United Nations, "*Gaps in international environmental law*, 11-12; the report identifies as a gap, the lack of a holistic legal concept of sustainable development capable of addressing relationship between international environmental law and other fields of law
[11] Vaughan Lowe 'Sustainable development and unsustainable arguments' in Alan Boyle & David Freestone (eds), *International law and sustainable development: past achievements and future challenges*, (Oxford University Press 1999) 39-60
[12] ibid

development is thus applied as a modifying norm to resolves conflicts between right to development and right to environmental protection.

Barral[13] has analysed references to sustainable development in over 300 treaties and concluded that the concept has normative force as a legal rule that regulates conduct of legal subjects towards realizing a particular objective (to develop sustainably). She differs from Lowe by arguing that sustainable development indeed, aims to regulate conduct of legal subjects rather than regulating the relationship between primary norms. For Barral, the concept is a rule of obligation of means (rather than results), requiring the deployment of all possible means to achieve a particular result (in this case, to develop sustainably). The constitutive principles of sustainable development, such as principle of integration or inter-generational equity are therefore the means to develop sustainably.

Citing decisions from the International Court of Justice, the Panel of World Trade Organization, the Committee for Human Rights, Gillory[14] also affords sustainable development the status of a legal principle but with relatively limited influence in adjudication of disputes between states. In these cases, he argues that sustainable development is trumped by the respective core norms establishing these dispute settlement regimes and is only considered in the obiter dicta rather than ratio decidendi of the analyzed disputes.[15] For sustainable development to assume full adjudicatory norm status, he proposes that the concept should be embraced as the core norm of one of the existing dispute settlement regimes such as the International Tribunal of the Law of the Sea (ITLOS) and the yet-to-be established environmental division of the ICJ.

[13] Barral (n3) 388-391

[14] John Gillroy 'Adjudicatory norms, dispute settlement regimes and international tribunals: the status of environmental sustainability in international jurisprudence' (2006) 42 Stanford Journal of International Law 1-52

[15] Ibid; Gillory argues that the doctrine of state sovereignty is the core norm for the ICJ; economic efficiency is the core norm for the WTO regime; Freedom and dignity as the core-norms for the human rights dispute resolution regime

Dernbach & Cheevers view sustainable development as a normative conceptual framework equivalent to other concepts like freedom, equality and justice.[16] Its normativity is said to draw from its logical necessity and its endorsement by international community and tribunals.[17] As such, the concept is capable of causing legal effect owing to its fundamental morality and influencing development of environmental law at national and international levels.[18] Birnie et al[19] express optimism for emergence of justiciable standards of sustainable development by citing the *Ogoniland* Case[20] as an instance where international courts have reviewed the sustainability of economic development using human rights criteria. They also cite the *Gabcikovo Nagymaros* case[21] as another instance where the international courts relied on elements of sustainable development (environmental impact assessments, intergenerational equity etc) as criteria to review State conduct in environmental disputes. Should future jurisprudence advance the normative content of the concept sustainable development as expressed by the foregoing, perhaps the legal status of principle of integration will improve correspondingly.

The above contestations notwithstanding, doubts have been cast on the usefulness of defining the integration principle in normative terms, given the actual preponderance of economic development over environmental concerns in contemporary political decision-making processes.[22] Instead, it is opined that more efforts should be directed towards establishing how law can contribute to realization of sustainable development. This study therefore may be construed as an effort in this direction. Birnie et al [23]also point out that though integration may not be a panacea, it nevertheless provides the most likely means to secure a balanced view of environmental needs within competing priorities (including

[16] John Dernbach. & Federico Cheevers 'Sustainable development and its discontents' (2015) 4 Transnational Environmental Law 251
[17] Fitzmaurize, (n169) p83
[18] Andrea Ross, '*Modern interpretations of sustainable development*', (2009) 36 Journal of Law and Society 39
[19] Patricia Birnie, Alan Boyle & Catherine Redgwell "*International law and the environment*", (3rd edn, Oxford University Press 2009)126
[20] *Social and Economic Rights Action Center and the Center for Economic and Social Rights v Nigeria,* ACHPR, Communications No155/1996
[21] *Hungary v Slovakia* (Merits) [1997] ICJ Rep 3
[22] Fitzmaurice, (n5) 86
[23] Birnie et al, (n19)

economic development). A cautious view has also emerged which accords the concept of sustainable development and its principles (such as integration) normativity under certain conditions or contexts.[24]

2.3 Normative Status of the Principle of Integration under Domestic Law

Under domestic law, literature suggests that there is growing support for the legalization of the principle of integration and the adoption of national framework environmental laws serve this purpose.[25] Framework laws emerged in large part to deal with the problem of fragmentation in sectoral law regime characterized by the tendency to pursue environment regulatory strategies and instruments that address each environmental medium (air, water, land) separately, with overlapping and conflicting goals thereby undermining sustainability.[26] It has been cautioned that a framework law does not seek to replace existing sectoral environmental statutes, but rather operates to integrate sectoral laws at all levels of government by harmonizing the statutes and coordinating their implementation thereby promoting efficiency and providing a reliable framework within which evolutionary change is to occur.[27]

Lehtonen[28] notes that the principle of integration as expressed in the concept of environmental policy integration (EPI) has legal status under the EU law[29] and therefore continues to shape environmental law and policy within the membership of the EU since the 1970s. Ross[30] also observes that the elevated status of integration principle in the EU

[24] French, *Sustainable development* and Beyerlin, cited in Fitzmaurice, (n5) 81
[25] Marjan Peeters, 'Elaborating on integration of environmental legislation: the case of Indonesia', in Michael Faure & Nicole Niessen (eds), *Environmental law in Development: Lessons from the Indonesian experience*, (Edward Elgar 2006) 92-99
[26] Barry Rabe & Janet Zimmerman 'Beyond environmental regulatory fragmentation: Signs of integration in the case of the Great Lakes basin' (1995) 8 Governance: An International Journal of Policy and Administration, 59
[27] John Nolon 'Fusing economic and environmental policy: the need for framework laws in the United States and Argentina' (1995-1996) 13 PACE Environmental Law Review 709-710
[28] Markku Lehtonen 'Environmental policy integration through OECD peer reviews: integrating the economy with the environment or the environment with the economy?' (2007) 16 Environmental Politics 15-35
[29] Treaty of the European Union (Maastrich Treaty) c191, 29/07/1992, Art 130r
[30] Andrea Ross 'Its time to get serious- why legislation is needed to make sustainable development a reality in the UK' (2010) 2 Sustainability 1101-1127

has influenced the content of legislation at both the United Kingdom (UK) and its devolved government levels. However, he notes that unlike in Canada, the concept of sustainable development and its principles are not embedded at the constitutional level in the UK and therefore there lacks an overarching framework for integration within government.[31] Instead, the concept is to be found in various sectoral statutes and in devolved laws (in Scotland and Wales). Efforts to ensure a coherent and integrated framework for sustainable development is pursued through national strategies that lack legislative backing and guidance, making it difficult for citizens to hold government accountable through court action. Thus, Ross calls for the enactment of a framework law which provides for substantive duties backed by procedural tools on government to implement sustainable development at both national and devolved government levels.[32]

Ross & Dovers[33] have reviewed the practices and structures for environmental policy integration in Australia from a public administration perspective. The authors do rightly note that incorporation of principles of sustainable development in legislation can be an important tool for integrating environment in government and policy and practice.[34] Whereas the Australian constitution lacks clear provisions in favour of integration, the framework environmental law- The Environmental Protection and Biodiversity Act of 1999- empowers the Minister for Environment to integrate environmental considerations in major development actions by way of assessments.[35] The authors however evince scepticism over actual implementation of these provisions in favour of *actual* integration and call for greater embedding of sustainability in structures and processes through among other mechanisms, charters, regulations and guidelines.

[31] Ibid 1110-1111
[32] 1190-1120
[33] Andrew Ross & Stephen Dovers 'Making the harder yards: environmental policy integration in Australia' (2008) 67 The Australian Journal of Public Administration 245-260
[34] Ibid p248
[35] Ibid 248-249

China has since 1992 evolved a system of sustainable development law, which according to Zhou *et al* (2014)[36] comprised 239 statutes, out of which 20 had clear reference to sustainable development. Even though China enacted a framework environmental law - The Environmental Protection Law of China- in 1989, sustainable development was incorporated as a fundamental principle by way of amendment in 2014 by the Standing Committee of the National People's Congress.[37] Sustainable development lacks constitutional status, and its implementation is viewed largely as bureaucratic-led and focused on weak sustainability.[38] The emphasis on weak sustainability in policy is rationalized by Zhou et al (2013)[39] on the prioritization economic growth and technological development as supreme national goals. The authors have analyzed the extent to which China's sustainable development legal system embraces the constituent principles of sustainable development and showed that the integration principle is moderately promoted.[40] They attribute this to prioritization of weak sustainability, in which environment protection is subordinated to economic and social development.[41] Reliance on policy prior to legislation for guiding implementation of sustainable development in China was attributed to the need for initial experimentation by small political and bureaucratic elite that runs state machinery before the gradual acceptance of the concept by the legislators.[42] These challenges notwithstanding, the authors see increased political will for implementation of sustainable development as espoused in the recently unveiled development blueprint themed, "*Building an ecological civilization*" as the goal of the Chinese state, characterized by transition from weak to strong sustainability.

[36] Ke Zhou, Huicong Zhang, Josef Baum & Chen Wei 'The evolution of policy and law for sustainable development in China' (2014) 9 Frontiers of Law in China, 390-402
[37] Ibid p 392
[38] See Lucas Seghezzo 'Five dimensions of sustainability' (2009) 18 Environmental Politics 539-55- for discussion on weak sustainability. According to the author, weak sustainability entails maintaining overall value of environmental assets into the future while allowing for unlimited substitution between natural and other types of capital hence it is acceptable to exploit natural capital to its total depletion as long as proceeds thereof are invested in other forms of capital and passed on to the next generation.
[39] Ke Zhou, Shan Ouyang & Jiangyuan Fu 'An evaluation of Chinese legal system on sustainable development' (2013) 8 Frontiers of Law in China 103-123
[40] Ibid p114; the analysis reveals that principles of sustainable use of natural resource use is highly promoted whereas public participation and human rights as well as good governance are poorly promoted in China's sustainable development law
[41] Ibid pp115-6
[42] Zhou et al *The evolution of policy and law for sustainable development in China*

Review of literature on several jurisdictions in Africa reveals strong legal evidence for normative status for the principle of integration. The book, "*The balancing of interests in environmental law in Africa*" contains analyses by various authors, essentially on how environmental law and policy have been developed and deployed in integrating environmental concerns in the development process in 17 African countries.[43] The authors find widespread incorporation of the principle of sustainable development in the legal systems of the countries under study and that together with other environmental principles (polluter pays and precautionary principle) play an instrumental role in facilitating the balancing of environmental and economic interests in the development process. Besides, the incorporation of the environmental right in the constitutions of most countries, coupled with judicial interpretation of the right to life in a manner that affords right to safe and clean environment, creates a legal basis for courts and administrative authorities to pursue balancing of environmental and other interests.

In 12 of the 17 countries studied, framework environmental laws are in place, which have made it possible for integration of permit-granting procedures and decision-making, which are critical for the balancing of interests. The authors explore the question of centralization v/s decentralization on decision-making in balancing of interests and appear to conclude that most countries have maintained centralized systems at ministerial or national environmental authority structures with notable fragmentation. In few countries (e.g. Nigeria) which have decentralized environmental decision-making, the problem of local collusion (with strong local business interests) makes balancing of interest rather problematic.

[43] Michael Faure & Willaim du Plessis (eds), *The balancing of interests in environmental law in Africa* , (Pretoria University Law Press 2011); the countries examined include Botswana, Cameroon, Democratic Republic of Congo, Ethiopia, Ghana, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Nigeria, South Africa, Swaziland, Tanzania, Uganda and Zimbabwe. The authors note that exclusion of the North African (Maghreb) jurisdictions in the study may undermine generalization of findings to the entire continent

However, the authors raise concerns over the adequacy and efficacy of balancing of interests noting that economic considerations tend to overshadow environment concerns in the decision-making relating to development processes. They attribute this to undue external (colonial or donor) influence in development of environmental legal frameworks that may not be suited to the African context, thus making the balancing of interests a rather alienated process from lived realities of Africans. The weak enforcement, human and financial capacity and the overall weak governance context also undermine the efficacy of balancing of interests.

2.4 Context of Environmental Integration in Kenya

2.4.1 Policy and Legal Basis for Environmental Integration

Prior to enactment of EMCA, integration was pursued as a without a coherent policy framework. Mireri and Letema[44] have provided an outline of six sessional papers and national development plans adopted since 1965 that were the major sources of policy in this area, noting that there was no coherent environmental policy in place at the time. They further note that the 1974-78 National Development Plan articulated the need to manage the environment for ecological, socio-cultural and economic reasons, thus the earliest articulation of the principle of integration in Kenya's national policy. In formulating the 7th National Development Plan was launched in 1993, the government required ministries/departments to demonstrate how they would take into account environmental conservation, in the development activities.[45] Adoption of the Sessional Paper No. 1 of 1999 on *Environment and Development* emphasized the need for integrated policy framework for sustainable management of the environment, greater involvement of citizens and enactment of a framework law to provide legal backing to the policy framework.[46]

[44] Caleb Mireri & Sammy Letema 'Review of environmental governance in Kenya: analysis of environmental policy and institutional frameworks in Kenya*'* in James Adoyo & Wangai Cole (eds) *Kenya political, social and environmental issues* (Nova Science Publishers 2012) 153-166
[45] UNEP & ACTS, *The making of a framework environmental law*, (ACTS Press 2001)103
[46] Thomas Yatich, Alex Awiti, Elvin Nyukuri, Joseph Mutua, Agnes Kyalo, Joseph Tanui &Delia Catacutan 'Policy and institutional context for NRM in Kenya: challenges and opportunities for landcare' (2007) ICRAF Working Paper 43/January 2007, 6

Reliance on policy alone to ensure implementation of environmental integration had its limitations. It has been noted that in the 1980s, government had a policy requiring proponents of new projects to demonstrate environmental impacts (among other implications) before licencing by the New Projects Committee of the (then) Ministry of Industry.[47] The (now defunct) National Environment Secretariat (NES) therefore tried to promote environmental impact assessments (EIA) for new projects through the (also now defunct) Inter-Ministerial Committee on Environment. It was further noted that EIAs were only conducted when it suited ministries or where there were no contentious issues.[48] The upshot was that in the absence of systematic legislative sanctioning, the policy framework for integration was largely ineffective. It was also observed that Kenya's environmental policymaking process lacked an overarching logical framework, had a short time-frame (linked to 5-year development planning cycle) and was not sufficiently supported by data and evidence.[49] These challenges contributed to weak environmental integration as well.

Legal backing for integration appeared for the first time in the Physical Planning Act (PPA) which was enacted in 1996. Wachira[50] notes that public outcry on deteriorating environmental status among other issues in the period before enactment of PPA highlighted the need for a well- codified land use law. She further notes that the single most important power vested in local authorities by (Section 36 of) the Act in terms of promotion of environmental protection in the development process, was the requirement for an EIA report prior to approval of a project that was deemed to have injurious impact on the environment.[51] Odote[52] noted, in respect to conservation of wetlands, that reliance on this provision could ensure their development needs will be weighed against environmental imperatives of the ecosystem. In addition, there was opportunity for integration of

[47] UNEP & ACTS (n45) 88
[48] Laurence Juma, 'Environmental protection in Kenya: will the Environmental Management and Coordination Act (1999) make a difference? (2002) 9 South Carolina Environmental Law Journal, 201
[49] Yatich et al (n 46) 17-18
[50] Wachira R, 'Synchronizing physical planning law with the framework environmental law' in Charles Okidi, Patricia Kameri-Mbote & Migai Akech (eds) *Environmental Governance in Kenya: Implementing the framework law*, (East African Educational Publishers 2008) 212
[51] Ibid p213;
[52] Odote C 'Wise use and sustainable management of wetlands in Kenya' in Okidi et al (eds) (n50) 345

environmental concerns in development framework through the requirement on the Director of Physical Planning to prepare local and regional physical plans. These two provisions therefore under-wrote the legal imperative of environmental integration prior to EMCA.

The enactment of EMCA added impetus to implementation of environmental integration. Angwenyi[53] analyzed EMCA's initial design and demonstrated how the framework law sought to ensure coordinated approach to implementation of diverse sectoral statutes through establishment of a robust institutional framework with NEMA as an apex agency, elaboration of general principles of environmental law and promoted enforcement through variety of instruments of compliance and mechanisms for managing natural resources. She noted that effective governance of the environment required a harmonized and coordinated approach of the competences and mandates of each of the lead agencies, and hence NEMA's apex role in this regard was critical.[54] As such NEMA was horizontally linked to lead agencies and vertically with local authorities, private sector and civil society for coordination of environmental sector.

The adoption of the Constitution of Kenya (2010) marked another milestone in environmental governance of the country with implications for institutional integration. The new constitutional dispensation adopted the principle of sustainable development as a directive principle of state policy (under Article 10) and enshrined the right to a clean and healthy environment as well as the correlative duties in the (Article 42 of) Bill of Rights. Kibugi[55] contends that the constitutional norm of sustainable development (under Article 10) suggests that any development planning policy, law or decision take into account the principle of sustainable development. Thus, sustainable development norm will temper the

[53] Angwenyi A., 'An overview of Environmental Management and Coordination Act ' in Okidi *et al* (eds) (n50)142-182
[54] Ibid 146
[55] Robert Kibugi 'Mainstreaming climate change into public policy functions: legal options to reinforce sustainable development of Kenya' (2013) 10 Florida A&M University Law Review 206

process of socio-economic development by ensuring environmental protection safeguards are guaranteed. This is foundational to environmental integration.

Kibugi has further argued that the implication of these provisions is the elevation of the legal status and position of environmental protection in administrative policy-setting and decision making that typically would not consider environmental management as a core objective or function, thus entrenching integration.[56] Thus, judicial protection and enforcement of the right to clean and healthy environment can ensure that development activities do not undermine environmental health thus contribute to realization of sustainability. The constitutionalizing environmental duties of the State seemingly addressed what Kamau[57] alluded to as lack of clear reference to government's own responsibility under EMCA, which made it difficult to bind and hold the state accountable. In this regard, Kibugi further argues that the provision now creates a constitutional basis for the government to ensure sustainable utilization, exploitation or management of natural resources as the basic minimum requirement for sectoral policies and decision-making, thus promoting integration.[58]

2.4.2 Sectoral coordination and Horizontal Environmental Integration (HEI) in Kenya

Sectoral coordination is viewed as a means of incorporation of environmental concerns into other non-environmental policy domains.[59] Where environmental integration is pursued at the same tier of government (ministries and sectors), this is referred to as horizontal environmental integration (HEI) which is to be achieved through sectoral

[56] Robert Kibugi "*Governing land use in Kenya: from sectoral fragmentation to sustainable integration of law and policy*,"(LLD Thesis, University of Ottawa, 2011) 93
[57] Evanson Kamau, 'Pollution control in developing countries with a case study on Kenya: a need for consistent and stable regimes' (2011) 9 Revista Internacional de Direito e Cidadania p33
[58] Kibugi, *Governing land use* 94
[59] Karl Hogl & Ralf Nordbeck, 'The challenge of coordination: bridging horizontal and vertical boundaries' in Karl Holgl, Eva Kvarda, Ralf Norbeck, Michael Pregernig (eds) *Environmental governance: The challenge of legitimacy and effectiveness* (Edward Elgar,2012) 112

coordination.[60] Sectoral coordination under EMCA is linked to the apex nature of NEMA as a supervisor and coordinator of the environment sector vis-à-vis sectoral lead agencies as well as its convening role (especially in EIA licencing, environmental planning and policy consultations roles) vis-à-vis other lead agencies.[61] NEMA's mandate in promoting environmental mainstreaming can also be viewed as a sectoral coordination role, and this has been pursued through deployment of environmental officers to line ministries, sector departments and agencies.[62] Sectoral coordination is also manifested in terms of alignment of sectoral laws to constitutional principle of sustainable development through an overarching legal, policy and institutional mechanism.[63] Therefore EMCA provides such an overarching mechanism in the sense that it requires harmonization of sectoral statutes to the cardinal principles (including sustainable development) outlined in EMCA.

Despite the framework nature of EMCA and the important coordination role of NEMA, sectoral coordination remained a challenge in the initial years. First challenge was evident in the weak institutional linkages between EMCA bodies and lead agencies. Wachira[64] noted that institutional framework and environmental planning processes under Physical Planning Act was insufficiently linked to those of NEMA to ensure realization of coordination results such as enforcement of standards in urban development and land use planning as well as the integration of environmental considerations in development plans. Situma[65] made a similar observation in respect to weak linkage between forest committees that were created under Forest Act of 2005 and the provincial and district environmental committees created under EMCA of 1999.

[60] William Lafferty & Eivind Hovden, 'Environmental policy integration: towards an analytical framework' (2003) 12 Environmental Politics 14-17
[61] Kibugi *Mainstreaming climate change into public policy functions* 216
[62] Martin Oulu & Emmanuel Boon, 'Environmental mainstreaming in development policy and planning in Sub-Saharan Africa: a case study from Kenya' in Leal Filho (ed), *Experiences of climate change adoptions in Africa: climate change management* (Springer, 2011) 226
[63] Kibugi *Mainstreaming climate change into public policy functions* 215
[64] Wachira (n50) 216-9
[65] Francis Situma, ' Forestry law and the environment' in Okidi et al (eds) (n50) 235-259

Secondly, jurisdictional conflicts between NEMA and lead agencies persisted. Akech[66] pointed out that the Water Act of 2002 vested in the Minister control over all water resources in the country yet EMCA also conferred NEMA with regulatory functions over the same water resources. Angwenyi[67] also pointed out these early tensions between NEMA and lead agencies over jurisdictional conflicts and emphasized the need to clarify roles of these institutions and adoption of framework for building capacity of lead agencies to discharge their statutory duties effectively.

Thirdly, enactment of new environmental laws or amendments to the ones existing at the time did not take into account the provisions of S.148 of EMCA to ensure alignment and harmonization. Akech noted that enactment of the Water Act of 2002 (three years after EMCA) created new regulatory institutions (Water Resources Management Authority- WARMA- and Water Services Regulatory Board- WASREB) which had no reference to NEMA.[68] The upshot was that these bodies risked engaging in turf wars with NEMA while resisting any attempts to be supervised or coordinated as per EMCA. Kindiki[69] also observed that the Energy Act of 2006 (enacted 7 years after EMCA) did not explicitly recognize the role of NEMA in supervising observance of both substantive and procedural environmental norms with respect to energy undertakings.

Fourthly, the regulatory capacity of NEMA was limited. Kamau[70] analyzed the legal framework for pollution control in Kenya and observes that one of the key challenges faced was the slow operationalization of institutions of EMCA ten years into its implementation, which in turn undermined the efficacy of NEMA. Ochieng underscores this point, noting that it took five years to operationalize NEMA due to funding constraints.[71] Even then,

[66] Akech M, 'Governing water and sanitation', in Okidi et al (eds) (n50) 326 & 334
[67] Angwenyi (n53) 178-180
[68] Akech (n66) 325
[69] Kithure Kindiki 'Synchronizing Kenya's energy law with the framework environmental law' in Okidi et al (n50), 389-390
[70] Kamau (n57) 29-42
[71] Benson Ochieng 'Institutional arrangements for environmental management in Kenya' in Okidi et al (n50) 203

NEMA lacked critical mass of personnel at headquarter and district levels to effectively discharge its mandate of coordination and supervision of lead agencies and stakeholders. It has been observed that inadequate technical expertise, resources and political will may undermine integration efforts of entities mandated either undertake horizontal coordination or vertical oversight (supervision) of environmental mainstreaming.[72]

Oulu & Boon are critical of designation of NEMA as coordinator of environmental mainstreaming in the public sector.[73] They consider NEMA as a parastatal agency with little political clout which inhibits its ability to compel government ministries to mainstream environmental considerations within their respective sectoral departments. This effectively undermines prospects for effective horizontal environmental integration. For this reason, they propose that such responsibility should vest in a high-level strategic office such as the Office of the President or (now-defunct) Prime Minister's Office.

Lastly, in the implementation framework of CoK 2010 was enshrined a requirement for amendment of existing laws and promulgation of new laws to give full effect to the supreme law. For this reason, the Commission for the Implementation of the Constitution (CIC) was established to monitor, facilitate and oversee development of legislation and administrative procedures required to implement the Constitution, in line with the Fifth Schedule to CoK 2010 within a timeline of five years.[74] This provision indeed provided opportunity for review of laws and policies in the environmental management realm to align the same with the new constitution. Opportunity was thus created for operationalization of Section 148 of EMCA, which sought the alignment of sectoral laws with the framework laws to foster horizontal environmental integration.

[72] Fiona Nunan, Adrian Campbell & Emma Foster 'Environmental mainstreaming: the organizational challenges of policy integration' (2012) 32 Public Administration and Development 274-275
[73] Oulu & Boon, *Environmental mainstreaming in development policy* 228; perhaps elevation of NEMA to a constitutional commission could have addressed the problem of its "clout"
[74] Section 5 of Fifth Schedule to the Constitution as well as Section 4 of the Commission for the Implementation of the Constitution, Act of 2010 and Section 15 and 16 of the Transition to Devolved Government Act of 2012

In its appraisal of legislative and policy measures taken to implement the Constitution on the fifth year (2015), the CIC listed nine (9) legislations that were to be enacted or amended within the transition period.[75] Out of these, four (4) laws had been adopted by Parliament. Among the enacted laws was the Environment Management Coordination Bill of 2014, which sought to amend EMCA (1999). The other three laws related to land administration and had been enacted prior to adoption of the amendments to EMCA. Relevant laws that had been drafted but to be enacted include Forest Bill, Mining Bill and Physical Planning Bill. The Council of Governors carried out a legislative analysis of these bills and noted some weaknesses that demonstrated limited alignment to EMCA. [76] For instance, provisions of Mining Bill lacked cohesive policies on reclamation of land after exhaustion of mining whereas the proposed Mining Policy lacked clear provisions on EIA for coal mining. The report also noted except for EMCA Bill, all other bills had not taken full account of the constitutional role of county governments in the governance of the subject-matter. Therefore, opportunity for entrenchment of horizontal environmental integration was missed.

With the amendments made to EMCA reconfiguring sectoral coordination arrangements and the ongoing rolling-out of the CoK (2010), it is necessary to assess the emerging impacts on horizontal environmental integration. This study is precisely designed to fill this gap in literature.

2.4.3 Inter-governmental Coordination and Vertical Environmental Integration (VEI) in Kenya

Vertical environmental integration (VEI) is considered as a decentralized approach for environmental integration, which shifts responsibility for integrating environmental

[75] Commission for the Implementation of the Constitution, *2014-2015 Annual Report- The Last Lap* (CIC, 2015) 59 &60
[76] Council of Governors, *Sectoral policy and legislative analysis (*Council of Governors 2015)30-38

considerations into other policy domains by lower levels of government.[77] From a climate policy integration perspective, Oulu views vertical environmental integration as integration of policies from national to sub-national levels in keeping with multi-governance approaches.[78] Under EMCA, VEI is viewed in terms of NEMA ensuring respective government sectors/departments (in all sectors) as well as devolved governments take up environmental responsibilities to lower levels of administration.[79]

Prior to enactment of EMCA, Ochieng[80] notes that the dominant command and control philosophy underpinning environmental management at the time necessarily relied on centralized institutional arrangements with little delegation of responsibilities to local authorities and citizens. Even where central government bodies with environmental responsibilities attempted to deconcentrate their activities to the local areas, there was little linkages of communication and reporting channels hence limited coordination.[81]

Enactment of EMCA however introduced decentralization of environmental management responsibilities from national to local levels through creation of provincial and district environmental committees (PECs & DECs). A similar approach was also adopted in environmental legislations that were enacted subsequently- the Water Act of 2002 and Forest Act of 2005. Analyzing Kenya's environmental planning framework for mainstreaming climate change at the time, Oulu and Kwesi-Boon[82] observed the District Environmental Committee (DEC) offered a *sui generis* framework and opportunity for mainstreaming environmental and climate change into district-focus development planning process. This was to be achieved through the mandate of DEC of preparing district environment action plan (DEAP) which were amalgamated into the provincial environment

[77] Klaus Jacob & Axel Volkery, 'Institutions and instruments for government self-regulation: environmental policy integration in a cross-country perspective' (2004) 6 Journal of Comparative Policy Analysis 291-309
[78] Martin Oulu 'Mainstreaming climate adaption in Kenya' (2011) 2 Climate Law 378-9
[79] Kibugi *Mainstreaming climate change into public policy functions*,
[80] Ochieng (n71)
[81] Ibid, Ochieng cites the example of Chyulu Hills catchment area where in 1990s, four central government bodies had set-up conservation activities but demonstrated no linkages or synergy
[82] Oulu & Boon (n220) 223-224

action plans (PEAP) and finally into the national environment action plan (NEAP). This process offered opportunity for environment-development integration.

The efficacy of District Environment Committees (DEC) was examined by Funder and Marani, [83] using the case study of Taita Taveta. The authors noted that the local DECs had intervened in cases of environmental degradation (e.g. illegal sand harvesting) and issued bans which were enforced with positive results. However, the effectiveness of DECs was undermined by the rather large size of the committees and that the limited budgetary resources allocated to District Environmental Officers (DEOs) could not sustain their activities.[84] In addition, the effectiveness of DECs largely depended on the goodwill and capacity of the respective DEO and provincial administrators. Kameri-Mbote observed that the legal backing for DEC decisions was doubtful after the High Court held that DECs could not legally enforce their decisions or orders since disobedience to the same could not be deemed as violation of the relevant provision of the Penal Code.[85]

The role of local authorities and linkage with NEMA in the initial years of EMCA was further analysed by Ochieng who observed that these authorities had considerable leverage in environmental management at the local level.[86] At the time, local authorities were responsible for a host of natural resource management activities including administering trust lands within their jurisdictions; licencing natural resource extractions (timber, sand, stones etc); managing game reserves; urban planning and management (including provision of amenities and waste disposal); local tax administration (which included taxing natural resource products). Enactment of EMCA elevated the roles of local authorities in environmental governance, through their designation of the role of lead agencies. Local authorities created and maintained environmental directorates run by environmental

[83] Mikkel Funder & Martin Marani 'Implementing national environmental frameworks at the local level: a case study from Taita Taveta County, Kenya' (2013) Danish Institute for International Studies, Working Paper 06,1-60
[84] Ibid p35
[85] See Patricia Kameri-Mbote 'The use of criminal law in enforcing environmental law' in Okidi et al (eds) (n4) 122, citing the case of *Gathoni v R*, Criminal Appeal No. 297 of 2004
[86] Ochieng (n71)193-195

officers, a reflection of decentralized environmental management approach. Kamau, citing the case of Thika Municipal Council noted that these officers were effective in local enforcement strategies for control of pollution in industrial zones through collaboration with central government entities such as Government Chemist and the Directorate of Occupation Health and Safety.[87]

It was however noted that decentralization of environmental governance as result of EMCA, which had vested more authority on local governments and resource users on management of natural resources, had not translated into meaningful action towards sustainability.[88] Ochieng linked this weakness to the fact that these authorities lacked administrative and financial resources to discharge the aforementioned responsibilities.[89] As lead agencies, the power of local authorities was deemed rather limited due to the fact that they were creatures of statute, rather than the constitution itself.[90] By- laws enacted by local authorities were deemed as subsidiary legislation with no standing in case of conflict with those enacted by Parliament. The local authorities were run by government officers appointed and seconded by the Public Service Commission, hence owed no allegiance to the elected leaders of the authorities.[91] They were also largely funded by central government since they lacked sufficient revenue mobilization capacity. To some considerable extent, the rather inferior legal and political status of local authorities vis-à-vis central government agencies therefore undermined their ability to discharge key environmental management mandates.

Adoption of the CoK (2010) established a devolved system of government which altered institutional arrangements for environmental integration. Even though articulated in the CoK (2010), the nature of Kenya's system of devolved governance is contested. Yash

[87] Kamau, (n57) 31
[88] Angwenyi *An overview of Environmental Management and Coordination Act* 175
[89] Ochieng (n71) 194-5
[90] CKRC, *Report of the Constitution of Kenya Review Commission- Volume One- The Main Report*, (Government Printers 2003) 234; CKRC observed that due to lack of constitutional protections, local governments were exposed to manipulation, corruption and unbridled exercise of power by the Minister
[91] Ibid p233

Ghai[92] has analysed the nature of Kenya's devolved system of government as against the constitutionally- anchored decentralization schemes of devolution, federation and autonomy. He demonstrates, using constitutional provisions and comparative evidence that Kenyan systems embraces varied aspects of federalism and devolution and therefore rejecting the Supreme Court's holding that devolution in Kenya rests on a unitary state.[93] Kangu takes a similar position, arguing that the Constitution establishes a multilevel system of government that combines a measure of autonomy anchored in self-rule at the county level and a measure of shared rule at the national level.[94]

The devolved system is described as combining concepts of self- governance and shared governance at both national and county levels.[95] The element of self-governance means that the people have flexibility to make decisions that are unique to their localities whereas shared governance is meant to facilitate their involvement in making decisions that affect the entire country at the national level. This gives rise to the notion of shared institutions at the national level, such as the Senate, constitutional commissions and independent offices. Such institutions are said to provide infrastructure for cooperation, consultation and consensus building in the process of decision-making on what constitutes the common good of the people of Kenya.[96]

According to Kibugi, the purpose of the devolved system of government is to promote effective service delivery and equitable sharing of national resources and therefore is intrinsically linked to search of sustainable development.[97] Since sustainable development

[92] Yash Ghai 'Comparative theory and Kenya's devolution*' in Conrad* Bosire & Wanjiru Gikonyo (eds) *Animating devolution in Kenya: the role of the judiciary- commentary and analysis on Kenya's emerging jurisprudence under the new constitution*, (IDLO/JTI/Katiba Institute 2015) 13-37
[93] Ibid pp22-22; citing the majority opinion of Justices Tunoi, Ibrahim, Wanjala and Ojwang as well as the separate opinion of Justice Ndungu in *Speaker of the Senate v Speaker of the National Assembly* (2013) eKLR
[94] John M. Kangu, *Constitutional law of Kenya and devolution*, (Strathmore University Press 2015) 98-101
[95] Republic of Kenya, "*Final report on devolved government in Kenya: developmental devolved government for effective and sustainable counties*", (Office of the Deputy Prime Minister and Ministry of Local Government, 2011) 16-17
[96] Ibid
[97] Kibugi, *Mainstreaming climate change into public policy functions* 212

is considered a cardinal concept underpinning environmental integration, implementation of devolution therefore could contribute towards realization of integration. Kariuki et al[98], examine Kenya's policy, legal and institutional framework on management of natural resources under the CoK 2010 and suggest that in the scheme of sharing of environmental management responsibilities, the status of national government is more elevated (vis-à-vis counties) since national law can override county laws on matters related to environmental protection, particularly where county governments are deemed to act unreasonably or prejudicially.[99] Where environmental responsibilities (e.g. climate change mitigation and adaptation) are not specifically apportioned in the Constitution, it is presumed that the National government has exclusive jurisdiction. However, Kibugi argues that notwithstanding the exclusive jurisdiction of national government, sectoral functions for climate change mitigation are shared between the two levels of government and therefore implementation will require cooperation between national and county government in ensuring socio economic and environmental sector integrate climate change measures into their ordinary function.[100]

However, devolution of functions has not been a smooth affair. The (now defunct) Transition Authority identified several challenges relating to this issue.[101] First, county government continued to suffer inadequate capacity related to key functions such as policy and legislative formulation, development and management of programs and human resources and financial management. Secondly, counties had centralized resources at the headquarters and were unwilling to decentralize to sub-county levels. Thirdly, national government had not sufficiently built the capacities of counties to take up their new roles. In this regard, national government had not enacted requisite laws to support implementation of devolved functions. National government had also retained resources meant for devolved functions, thus starving counties of required means to discharge their

[98] Muigua Kariuku, D Wamukhoya & Francis Kariuki. *Natural resources and environmental justice in Kenya*, (Glenwood 2015)
[99] Ibid pp93-95
[100] Kibugi *Mainstreaming climate change into public policy functions* 213
[101] Transition Authority, *Transition to devolved system of government in Kenya (2012-2016): the end term report*, (The Transition Authority 2016) 122-124

functions. Intergovernmental relations were characterized by tensions and conflicts over resources and power, which often ended up in courts rather than being resolved through alternative dispute resolution mechanism that were envisaged in law. All these appeared to undermine ability of counties to deliver services including those related to environmental management.

The impact of challenges encountered in devolution of environmental responsibilities was assessed by the Commission of Implementation of the Constitution towards the end of the transition period. As a result of the rather haphazard transfer of functions to counties, it was established that 13 out of the 47 counties (or 30%) had not begun implementing devolved functions relating to air pollution, noise pollution and public nuisances; 12 out of 47 counties had not commenced implementation of specific national government policies on natural resources and environmental conservation by 2014.[102] Among the key reasons given for the delays in transfer of functions were; limited staff capacity (within counties), lack of appropriate environmental management legislation; continued collection of levies and licence fees by NEMA and WARMA (denying counties revenue); retention of forestry management mandate by national government and; lack of financial resources (e.g. to facilitate waste disposal).[103] Thus, the manner in which devolved functions were transferred impacted on institutional integration.

Gachenga analyzed the devolution of water governance responsibilities under the Water Act of 2016 in line with CoK 2010 imperatives.[104] She noted that whereas the new water law had devolved certain aspects of water resource governance to county governments, this demonstrated a rather cautionary approach of gradual rather than immediate transfer of institutional responsibilities from national to county governments. Ostensibly this approach

[102] Commission for Implementation of the Constitution, '*Assessment of the implementation of the system of devolved government*', (CoIC 2014)
[103] Ibid pp34-36
[104] Elizabeth Gachenga. 'Kenya Water Act (2016): real devolution or simple the 'same script, different cast' in Kameri-Mbote, Paterson A., Ruppel O., Orubebe B. & Yogo K (eds) *Law, environment, Africa*, (e-book, Nomos/Assellau/Kondrad Adenauer Stiftung 2018,) 429-452

was taken to avoid challenges encountered in the implementation of the predecessor water law (Water Act of 2002) such as lack of capacity and political capture which undermined the ability of local governments to take-up fully decentralized water governance responsibilities. She contrasts this cautionary approach in water governance devolution with the abrupt devolution of health sector responsibilities and the chaos that ensued (characterized by duplication of roles and capacity constraints). This perspective is important when analyzing the impact of devolution on waste management in Kenya. However, the analysis does not fully account shared nature of water governance responsibilities between national and county levels and government and impact of the same in institutional design of agencies in the water sector.[105] Seemingly, the national government has monopolized control over water agencies to the exclusion of county governments. The cautionary approach alluded is insufficient to explain this anomalous legal situation.

The tenure of the first County governments elected under the CoK (2010) ended in 2017, two years after the expiry of the transition period for implementation of the supreme law. This study commenced at the sunset of first tenure of County governments and therefore it will bring out an assessment of how intergovernmental coordination has ensued in the environmental sector, deeper into the post-transitional period of CoK (2010).

2.5 Environmental Integration and MSWM Framework- a conceptual link

MSWM systems seek to protect environmental & human health, promote quality of urban environment, support economy and generate employment and income, hence the emergence of the notion of integrated and sustainable SWMs.[106] Sustainability of MSWM is set to be achieved through promotion of waste prevention, recycling, reuse and safe and environmentally sound disposal, which correspond to the waste hierarchy approach.[107]

[105] Intergovernmental Relations Technical Committee, *Emerging issues on transfer of functions to national and county governments* (IGRTC, 2017), 42, 70-72
[106] Schubeler et al *Conceptual framework for municipal solid waste management in low income countries* 18-9
[107] Ibid

Waste hierarchy approach underpins the 'waste-as-a-resource' paradigm, which is the driving force behind marketization of wastes and the emergent circular economy.[108]

Geissedorefer et al have analysed the conceptualization of the term circular economy by various scholars and concluded that the term means a regenerative system in which resource input and waste emissions and energy leakage are minimized by slowing, closing and narrowing material and energy loops.[109] This is to be achieved through long-lasting design, maintenance, repair, re-use, remanufacturing, refurbishing and recycling, hence an expansion of the waste hierarchy.[110] Kirchherr et al also undertook a conceptual analysis of the term and concluded that circular economy operates at micro level (products, companies, consumers), meso level (eco-industrial parks) and macro level (cities, regions, nations and beyond) with the goal of realizing sustainable development (environmental quality, economic prosperity and social equity for current and future generations).[111]

The concept of circular economy, by contributing to sustainable development, lends itself to the pursuit of environmental integration. It has also been observed that the waste hierarchy approach also creates demand for environmental integration across multiple scales (local, regional, national, International) and arenas of governing (social, economic, environmental etc).[112] The same can also be said of circular economy, which is an broadened waste hierarchy concept. It is also argued that waste management as a policy area represents a variety of coordination problems due to horizontal interaction with other sectors (e.g energy) and cross-levels interactions (local-national) through various approval

[108] Watson et al *Unpicking environmental policy integration* 489-490
[109] Martin Geissdoefer, Paulo Savaget, Nancy Bocken & Erik Hultink, 'The circular economy- a new sustainability paradigm?' (2017) 143 Journal of Cleaner Production, 758
[110] Ibid
[111] Julian Kirchher, Denise Rieke & Marko Hekkert, 'Conceptualizing the circular economy: an analysis of 114 definitions' (2017) 127 Resources, Conservation & Recycling, 221-232
[112] Watson et al *Unpicking environmental policy integration* 490

processes.[113] This therefore establishes the conceptual link between sustainable MSWM and environmental integration.

The notion of integrated MSWM arises from the conceptualization of the system as comprising of two elements, namely hardware and software. The hardware or physical elements entail operational aspects of waste collection, treatment & disposal and recovery (valorization and recycling) through the waste hierarchy appraoch.[114] The software or governance elements of MSWM and comprise financial sustainability, inclusivity and proactive institutions & policies.[115] Financial sustainability relates to allocation of resources to ensure effective MSWM within the prevalent financial resource constraints of the municipal authorities, while promoting efficiency and cost recovery mechanisms.[116]

Inclusivity refers to involvement of broad range of stakeholders in the MSWM decisions and actions.[117] To effectively manage services related to MSWM, authorities will require sufficient organizational capacity (in financial, operational aspects) underpinned by procedures that ensure transparency and accountability in operations. Thus, a complete waste management system combines both soft and hardware elements hence the imperative of integration. This further underlines the conceptual link between MSWM and environmental integration.

2.6 Environmental Integration in Municipal Solid Waste Management in Kenya

A couple of studies on Kenya's MSWM have been carried out in the last few years, but these are mostly from the environmental sciences discipline which undoubtedly

[113] Man Nilsson, Mats Eklund & Sara Tyskeng, 'Environment integration & policy implementation: competing governance modes in waste management decision-making' (2009) 27 Environment and Planning C: Government and Policy 2
[114] UNHABITAT *Solid waste management in the world's cities* (Earthscan, 2010) xx-xxii
[115] Ibid pp xxiii-xxv
[116] David Wilson, Costas Velis & Ljiljana Rodic, Integrated sustainable waste management in developing countries' (2013) 166 Waste and Resource Management, 62
[117] ibid 61-2

acknowledge the significance of the MSWM in the scheme of sustainable environmental management. Njoroge et al[118] observe that population growth, rapid urbanization, industrialization and increased waste generation have transformed solid waste into a public health and environmental concern. UNHABITAT[119] observes that policymakers, citizens and other actors in Nairobi city share awareness that inadequate waste management is linked to poor human health. Nyangena[120] also underscores the adverse environmental impacts of poor MSWM as exemplified by deteriorating environmental health of urban areas, exposure to health and safety hazards by waste handlers and sustainability challenges posted by poor levels of waste recycling.

Review of literature on economic dimensions of SWM reveal dominance of informal sector and community based organizations in marketization of wastes. Kim[121] undertook a study on composting in Nairobi in the 1990s and observed a thriving market for small-scale waste compost that was generated by local community groups. The demand for such wastes was attributed to residents of high income areas with private gardens. In assessing the application of reuse, recycle and recover (3Rs) in waste management activities of 4 major counties (Nairobi, Nakuru, Kisumu and Mombasa), Ombis[122] concludes that value creation activities are predominated by small-scale informal sector actors who feed local industries with recovered waste as raw materials for production processes. Seemingly, there is no quantification of the size and extent of market for solid waste. Of note, large scale 3R processes are lacking in Kenya, pointing to limited marketization of wastes as an economic resource. This belies a rather limited integration economic dimensions of the sector.

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[118] BKN Njoroge, M Kimani,& D Ndunge,' Review of municipal solid waste management: a case study of Nairobi, Kenya' (2014) 4 Journal of Engineering and Science

[119] UNHABITAT, *Solid waste management in the world's cities* (Earthscan, 2010) 72

[120] Nyangena *Economic issues for environmental and resource management in Kenya* p82

[121] Kim Peters. 'Community-based waste management for environmental management and income-generation in low income areas: a case study of Nairobi, Kenya' (City Farmer/Mazingira Institute 1998) 3.2 <http://www.cityfarmer.org/NairobiCompost.html> accessed 22 February 2019

[122] Leah Oyake-Ombis 'Awareness on environmentally sound solid waste management by communities and municipalities in Kenya' (2017), A study report for Ministry of Environment and Natural Resources, UNDP and GEF, accessed from <https://www.ke.undp.org/content/dam/kenya/docs/energy_and_environment/Awareness%20on%20environmentally%20Sound%20Solid%20Waste%20Management_.pdf> accessed 24 August 2018

Related to social sustainability dimensions of waste management, there are concerns relating to equity in participation and engagement of various stakeholders in the waste hierarchy. Literature on gender and SWM for instance indicates that women and men define waste differently;[123] play different roles in waste value chains and earn differently (with men getting more than women); [124] women are more represented in scavenging activities than men; both sexes are affected by health hazards differently and;[125] with more men than women managing wastes enterprises and holding supervisory and managerial positions in waste collection firms.[126] Amugsi et al[127] have analyzed Kenyan SWM laws and policies with a focus on Nairobi and Mombasa counties and found that the existing framework generally lacked provisions addressing gender-specific challenges. The few policies that had a focus on gender were poorly implemented. The authors conclude that the prevailing situation was that current framework may not deliver on sustainability due to weak integration of gender concerns and perspectives in policies and programmes on SWM.

Various challenges bedevilling MSWM with implications for integration can be gleaned from this literature. First, the quantitative estimation of the importance of MSWM is however plagued by limited reliable data. For instance, UNHABITAT[128] estimates waste generation was at 2,400 tonnes per day in Nairobi as at 2010. NEMA[129] puts the figure at 2,600tonnes per day, whereas UNEP[130] estimates it at 3,000 tonnes. In its draft County Integrated Development Programme (CIDP) document, Nairobi City Government

[123] G.M Adebo & O.C. Ajowele "Gender and urban environment: analysis of willingness to pay for waste management disposal in Ekiti- State, Nigeria' (2012) 2 America International Journal of Contemporary Research, 228- 236
[124] M.N. Muhammad & H.I. Manu 'Gender roles in informal solid waste management in cities of Northern Nigeria: a case study of Kanuna Metropolis' (2013) 4 Academic Research International 142-153
[125] E.O. Longe,. O.O. Longe & E.F. Ukpebor 'People's perception on household solid waste management in Ojo local government area in Nigeria' (2009) 6 Iran Journal of Environment, Health, Science and Engineering 209-216
[126] Muhammad & Manu (n269)
[127] Dickson Amugsi, Jane Mwangi, Tilahun Haregu , Isabella Aboderin, Kanyiva Muindi & Blessing Mberu 'Solid waste management policies in urban Africa: gender and life-course considerations in Nairobi and Mombasa' (2016) Urban Africa Risk Knowledge, Working Paper 14/December 2016
[128] UNHABITAT (n119) 73
[129] NEMA, *National solid waste management strategy,2014* 20
[130] UNEP, *Kenya: Altas of our changing environment* (UNEP, 2009)

estimates that 2,400 tonnes of garbage are collected per day (in 2018) and that the same is project to grow to 3,200 tonnes per day by 2022.[131] Without clear quantitative basis, waste planning and management is difficult to undertake.

Secondly, collection of wastes is not optimal in most towns, even though data on the same is far from unanimous. Gakungu et al[132] estimate rate of collection of MSWM in Nairobi to range between 30 and 40%, whereas Muniafu & Otiato place the figure at 25%. NEMA[133] and Nairobi City County[134] put the estimate at 80%. In Kisumu, rates of collection (as at 2011) were estimated at a paltry 20% Coverage of waste collection services is also considered sub-optimal and inequitable. For instance, Muniafu & Otiato[135] point out that less than 50% of households in Nairobi receive waste collection services, whereas UNHABITAT places the figure at 54%. Muniafu & Otiato[136] also contend that waste collection in affluent parts of Nairobi is well serviced by private sector, whereas the poorer sections are underserved by public sector services. A similar finding is made by Mukui[137] in respect to public provision of waste management services in Nyeri town, noting that the less affluent resort to illegal dumping of uncollected garbage, hence endangering the environment. The discrepancies in statistics notwithstanding, an overall picture of inefficient and inequitable waste collection system in Nairobi stands out. This reaffirms the significance of the problem being studied in this thesis.

[131] Nairobi City County, 'County Integrated Development Plan (CIDP) 2018-2022- Working Draft' November 2017 < http://devolutionhub.or.ke/resource/nairobi-county-integrated-development-plan-2018-2022-> accessed on 24/ November 2018
[132] Ndung'u Gakungu, Ayub Gitau, B K Njoroge & Mary Kimani 'Solid waste management in Kenya: a case study of public technical training institutions', (2012) 5 ICASTOR Journal of Engineering, 128
[133] NEMA *National solid waste strategy* 20
[134] Nairobi City County (n131) supra at p73
[135] M.Muniafu & E. Otiato 'Solid waste management in Nairobi, Kenya: a case for emerging economies' (2010) 2 Journal of Language, Technology & Entrepreneurship 343-344
[136] Ibid
[137] S.J. Mukui 'Factors influencing household waste management in urban Nyeri Municipality in Kenya' (2013) 6 Ethiopian Journal of Environmental Studies, 282-3

Thirdly, waste generation and storage is not sufficiently underpinned by minimization and separation methods. In a study conducted by Muiruri[138] focused on waste management practices in traders markets in Kiambu County, it was concluded that waste separation at source was completely lacking. Private-public partnerships in waste management were highly embraced and promoted among the private sector but few community-based groups were involved.

Fourth, treatment and disposal of MSWM is another significant challenge. Nairobi has only one official waste disposal site (Dandora) operated by the local authority. There is no sanitary landfill in the country hence open dumping is the only method of disposal accompanied by scavenging, burning and decomposition of wastes[139]. UNEP et al[140] estimated that by 2009, the dumpsite held 1.4million M^3 of waste against a capacity of 1.8million M^3. Njoroge et al observe that there are over 70 illegal dumpsites operating within the city.[141] Muniafu and Otiato contend that lack of basic infrastructure, coupled with poor management of the site has compounded pollution, health risks, and security risks within the locality of Dandora.[142] Rotich et al established that environmental considerations played limited role in the choice of location of dumpsites in towns of Nairobi, Eldoret, Nakuru and Mombasa.[143] Prevalence of untreated medical waste in the Kachok public dumpsite in Kisumu County points to the health hazards posed by unlawful disposal of hazardous wastes.[144] In most cases, convenience was cited as the primary consideration in selection of dumpsite and continued operation of the same, the attendant adverse environmental impacts notwithstanding. In fact, dumpsites are in most cases located in environmentally-sensitive areas in wetlands, forests, abandoned quarries or

[138] Phyllis Muiruri 'Assessment of strategic solid waste management: a case of selected markets in Kiambu County' (MBA thesis United States International University Africa, 2017)
[139] Oyake-Ombis (n122)
[140] UNEP, UNHABITAT, RoK & CCN, *The City of Nairobi Outlook*, (UNEP 2009)
[141] Njoroge et al (n118) 18
[142] Muniafu & Otiato, (n128) 346-7
[143] Henry Rotich, Yongsheng Zhao & Jun Dong 'Municipal solid waste management challenges in developing countries- Kenyan case study' (2006) 26 Waste Management 95-6
[144] G. Munala & B. Moirongo 'The need for an integrated solid waste management in Kisumu, Kenya' (2011) 13 Journal of Agriculture, Science & Technology, 68

adjacent to water bodies.[145] Waste disposal techniques at the dumpsite entail incineration, which further disperses pollutants into the city's atmosphere.

Recycling of wastes and recovery of value were not optimally pursued as integrated SWM strategies. Muiruri observes that less had been done (in terms of institutional measures) to motivate recyclers in Kiambu markets leading to suboptimal resource recovery from wastes.[146] Oyake-Ombis has analyzed the legal and institutional frameworks of 4 counties (Kisumu, Nairobi, Nakuru and Mombasa) and concluded that none of the counties had promulgated regulatory framework providing for use of economic instruments in promotion of 3R activities.[147] Without such regulatory backing, promotion of 3Rs activities is rather problematic.

Fifth, history of waste management governance is characterized by centralization. Rotich et al analyzed the level of decentralization of SWM in period before enactment of CoK 2010 and concluded that a centralized approach was predominant. Local authorities relied on policymakers at the Ministry of Local Government in Nairobi for key decisions, which resulted in delays in discharge of services. Involvement of private sector was minimal even though some authorities, notably Mombasa and Nairobi had privatized key SWM services.[148] Haregu et al[149] have analyzed the policy architecture of SWM in Nairobi in post- 2010 regime and concluded that national level institutions are vested with policy-making mandates while county- level authorities are responsible for implementation of national policies. However, in the absence of clear integrated model of policy implementation, the capacity of county-level authorities to discharge their functions would be greatly impaired. Thus, municipal (county) authorities appear to lack institutional

[145] James Okot-Okumu 'Solid waste management in African cities- East Africa' in Rebellon L. "Waste management: an integrated vision", Intech pp1-20 accessed from https://www.intechopen.com/books/waste-management-an-integrated-vision in 28th August 2018
[146] Muiruri (n138) 72
[147] Oyake-Ombis (n122) 53
[148] Ibid p. 96
[149] Haregu et al, *Integration of solid waste management policies in Kenya* 14

primacy in regulation of wastes at the local level, even though the study does not explain how.

Sixth, organizational capacities (financial, personnel, technological) of institutions tasked with regulating and operating the sector are inadequate. Oyake-Ombis notes that all the 4 major counties (Kisumu, Nairobi, Mombasa and Nakuru) have in place departments responsible for waste management, even though their level of capacity and authority vary.[150] Whereas some scholars have associated weak capacities with limited funding of local authorities[151] and weak prioritization of SWM financing, Kim[152] links this problem to the introduction of structural adjustment policies in the 1980s which emphasized on deficit reduction hence constraining the ability of urban authorities to adequately finance urban services (including waste management). Rotich et al observed operational weaknesses due to high level of inefficiencies in waste collection in key cities of Kenya, which was evidenced by high rates of breakdown (50%) of trucks used in collection services.[153] The absence of standards for waste collection, treatment and disposal as well as financial incentives make compliance a challenge. The analysis of the regulatory framework of waste management is rather thin and hence justifies the need for this particular study.

Seventh, political factors undermine effective SWM management. Muiruri had identified level of support and involvement of county government and political leadership in waste management as an important success factor in Kiambu County.[154] Njeru[155] has used a political ecology approach to demonstrate how political patronage enjoyed by plastic industry has allowed for unfettered production and consumption of plastic papers leading

[150] Oyake-Ombis (n122)
[151] Lesley Sibanda, Nelson Obange & Frankline Awuor 'Challenges of solid waste management in Kisumu, Kenya' (2017) 28 Urban Forum 387-402
[152] Kim (n121)
[153] Rotich et al (143) 95
[154] Muiruri (n138) 63
[155] Jeremia Njeru 'The urban political ecology of plastic bag in Nairobi, Kenya,' (2006) 37 Geoforum 1046-1058

to an intractable plastic waste problem in Nairobi. Exclusionary policies in provision of waste management services, particularly in low-income areas has invariably led to the poor and vulnerable bearing the greatest burden of the plastic waste problem.

Lastly, the literature reviewed on Nairobi point to fragmented legal and policy framework, which makes enforcement difficult. Regulation of waste collectors is evolving while their coordination is non-existent.[156] In a study on policy coherence and overlaps in SWM policies in Kenya, Haregu *et al*[157] examine solid waste regulatory framework at both national and county level. They observe that whereas EMCA had the potential to integrate the fragmented sector-specific laws, there persisted overlaps between the framework law and other sectoral laws with no indication of policy hierarchy among them. Analysis of alignment between national and county policies on SWM revealed lack of coordinated approach to policymaking as well as weak integration. However, the paper focused on textual analysis of contradictions in the policy and legal regime without an overarching theoretical framework. In addition, the paper did not proffer reasons at to why fragmentation persisted in MSWM framework. This study thus seeks to address these gaps by interrogating the MSWM framework using the lenses of environmental integration and identifying reasons for persistence of fragmentation.

2.7 Gaps in literature

Several gaps emerge from the literature reviewed and the analysis of the same. First, the normative status of the concept of sustainable development at the domestic level remains an enduring research gap owing to the contestations alluded to in previous sections. This study seeks to address by examining the implementation of the principle of integration in the MSWM framework. The thesis makes a contribution towards body of knowledge on state practice in this area, which may build up towards *opinion juris* and therefore a basis of customary international law on sustainable development in the near future.

[156] Njoroge et al (n118) 19
[157] Haregu, et al (n130), 1-14

Secondly, much of the literature reviewed has tangentially spoken to environmental integration by addressing aspects of sectoral coordination or inter-governmental coordination in the environmental management field. Pointed studies on environmental integration have examined land use, development planning and climate change mainstreaming. A gap therefore is evident on similar studies on MSWM sector.

Thirdly, whereas the adoption of 2010 Constitution gave foundation to environmental integration, there is dearth of literature on how the provisions of the Constitution have been implemented and to what effect in relation to integration. This study therefore will seek to establish empirical knowledge on the impact of the 2010 Constitution and its institutions on the entrenchment of environmental integration, particularly in MSWM sector.

Fourth, whereas literature on MSWM has extensively documented the problems and challenges facing the sector, there is little analysis of the same from an environmental integration perspective. Yet sustainable management of the MSWM sector would require entrenchment of environment integration to ensure integration of environmental, social and economic dimensions of waste. This study therefore seeks to provide this analytical lense for interrogating the MSWM sector in Kenya.

The reviewed literature presents gaps which this study seeks to address, and as a point of departure, the next chapter looks at the extent to which the MSWM legal framework espouses the principle of integration.

CHAPTER THREE:

ANALYZING KENYA'S LEGAL FRAMEWORK ON MSWM FOR ENVIRONMENTAL INTEGRATION

3.1 Introduction

This chapter analyses the legal framework on MSWM in Kenya and the extent to which it espouses environmental integration. The analysis entails interrogating the legal basis for operationalizing the principle of integration and assessing opportunities and challenges for horizontal as well as vertical environmental integration. The framework is examined at different levels; constitutional, national statutes, county laws and applicable international law. Case law and comparative foreign law in particular cases will form part of the analysis. Emergent gaps in law will be identified and at the end.

3.2 International legal Framework

MSWM was considered a domestic matter and largely regulated under municipal law.[1] With time, human health, environmental (particularly climate change) and trade dimensions in waste management increasingly assumed global significance, leading to elevated legislative interventions at the international level.[2] It should be noted that international treaties governing harzadous wastes[3] are not examined in this section because such wastes are excluded from the definition of MSW.

[1] Silpa Kaza, Lisa Yao, Perinaz Bhada-Tata & Frank Van Woerden, *What a waste 2.0: A global snapshot of solid waste management to 2050*, (World Bank Group Urban Development Series 2018), 89

[2] Santana Vergara & George Tchobanoglous, 'Municipal solid waste and the environment: A global perspective' (2012) 37 Annual Review Environment and Resources, 286-7

[3] These include the Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade (adopted in 10 September 1998, entered into force on 24 February 2004) 2244 UNTS 337; the Minamata Convention on Mercury (adopted 10 October 2013, entered into force 16 August 2017) and the Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement of Hazardous Wastes within Africa (Adopted 30 January 1991, entered into force 22 April 1998) 2101 UNTS 177

3.2.1 The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal[4]

The Basel Convention regulates transboundary movement of household wastes and ashes from incinerators of such wastes (categorized as "other wastes").[5] The Convention empowers States to prohibit importation of wastes and a corollary obligation of exporting States to seek consent from State of destination, where importation is permissible.[6] The Convention incorporates environmental protection obligations in permissible waste management activities, such as; waste prevention and minimization; environmentally-sound handling, transportation and disposal; prohibition of exports to states with no capacity to deal with wastes in an environmentally- sound manner.[7] These provisions underline an obligation for state parties to adopt waste hierarchy, whic is critical for environmental integration in MSWM. Importantly, various enforcement mechanisms are provided for including criminalization of illegal trafficking of wastes;[8] licencing of waste operators;[9] duty to reimport wastes;[10] and civil liability.[11]

Kenya is a signatory to the Basel Convention and therefore has obligations to not only integrate environmental protection in permissible waste management activities but also adopt the waste hierarchy approach for environmental integration.[12] NEMA has been issuing waste exports licences and therefore the relevant provisions of this treaty apply as well.

[4] (adopted in 22 March 1989 and entered into force 5 May 1992) 1673 UNTS 57
[5] Basel Convention, Annex II
[6] Basel Convention, Art 4 (1) & 6
[7] Ibid art 4 (2)
[8] Ibid art 4(3) & 9
[9] Ibid art 4 (7) &
[10] Iid art 8
[11] Ibid art 12 & Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and their Disposal,
[12] See <http://www.basel.int/?tabid=4499> accessed 23 September 2019; Kenya joined the treaty regime by accession on 01 June 2000 and the treaty entered into force on 30 August 2000

3.2.2 Stockholm Convention on Persistent Organic Pollutants

The Stockholm Convention on Persistent Organic Pollutants [13] was adopted in 22nd May 2001 after six years of negotiations over a legal framework to regulate the production, trade, export and disposal of persistent organic pollutants (POPs). POPs are carbon-based chemicals which are difficult to degrade naturally and therefore can become widely distributed in the environment and well beyond their points of source through natural processes.[14] They accumulate in fatty tissues of living organisms if consumed as food through a process of bioaccumulation and can increase concentration in such organisms in what is known as bio-magnification. Long term exposure to POPs can lead to health risks such as cancer, reproductive and immune disorders. The definition of POPs essentially characterizes these substances as hazardous and thus outside the definition of solid wastes. This notwithstanding, aspects of the Stockholm Convention incline it to the regulation of certain waste management activities and processes related to solid waste as discussed herein.

The Convention is designed to regulate the intentional production and use of POPs with the ultimate aim of eliminating the same in the long-term.[15] However, countries are allowed to register exemption for production and use of listed POPs for a limited period of time and this is aimed at allowing for such countries to gradually reduce and eventually eliminate reliance on the use of such POPs. The Convention is also designed to regulate the unintentional production and release of POPs from anthropogenic sources.[16] Among the anthropogenic sources of these POPs include waste incinerators (including municipal, hazardous or medical waste) and open burning of waste, particularly in landfill sites.[17] In combating these sources, the Convention provides guidelines for member states to adopt various prevention measures, which of relevance to this study include; use of low waste technology; promotion of recovery and recycling of substance generate and used in a

[13] (adopted 22 May 2001, entered into force 17 May 2004) 2256 UNTS 119 (Stockholm Convention)
[14] See <http://www.pops.int/TheConvention/ThePOPs/tabid/673/Default.aspx> last accessed 24February 2019
[15] Stockholm Convention art 3
[16] Ibid art 5
[17] Ibid Annex C on "Unintentional Production"

process; good housekeeping and preventive maintenance programmes and; elimination of open and uncontrolled burning of wastes particularly in landfill sites along with promoting of resource recovery, reuse, recycling, waste separation and promoting products that generate less waste.[18] All these prescribed strategies are consistent with the waste hierarchy approach which is critical for environmental integration in MSWM.

Kenya is a signatory to the Stockholm Convention and therefore the obligations arising from Annex C apply accordingly. It is noteworthy that the Guidelines in Annex C oblige Kenya to move away from open dumpsite disposal methods and instead establish sanitary landfill sites for ultimate disposal of wastes. The Guidelines also impose a duty on establishment of integrated MSWM which embraces the waste hierarchy along with environmental protection measures. Should Kenya decide to establish municipal incinerators, authorities will be obliged to ensure burning of wastes therein will not occasion unintentional release of POPs. However, the Guidelines afford some flexibility to member states on which best available techniques to be utilized given the specific circumstances, analysis of costs and benefits faced by such states.

3.2.3 United Nations Framework Convention on Climate Change (UNFCCC)

The United Nations Framework Convention on Climate Change (UNFCCC)[19] was adopted in New York in May 1992 and opened for signature at the Rio Conference on Environment and Development in September 1992. The key objective of the Convention is to realize stabilization of greenhouse gases (GHGs) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.[20] To operationalize the UNFCCC, State parties adopted the Kyoto Protocol[21] in 1998 which entered into force in 2005. The Protocol further elaborated the commitments of state parties

[18] Ibid Part V of Annex C on "General guidance on best available techniques and best environmental practices."
[19] (adopted 9 May 1992, entered into force 21 March 1994) 1771 UNTS 107;
[20] UNFCCC art 2
[21] Kyoto Protocol to the United Nations Framework Convention on Climate Change (adopted 11 December 1997, entered into force 16 February 2005) 2303 UNTS 162 (Kyoto Protocol)

to include inter alia., "limitation and/or reduction of methane emissions through recovery and use in waste management."[22]

In 2015, the Paris Agreement[23] to the UNFCCC was adopted by members, superseding the Kyoto Protocol. The Agreement sought to accomplish three key objectives; arrest increase of global average temperature to 1.5- 2ºC below pre-industrial levels; promote adaptation, climate resilience and low GHG development pathways; aligning financing to low GHG emissions and climate-resilient development pathways.[24] The Agreement deviated from the design of the UNFCC and Kyoto Protocol by extolling all parties without distinction to adopt ambitious economy-wide emissions reductions targets as their core obligation while challenging developed countries to do more than the developing counterparts.[25] In this sense, the Agreement is regarded as more global, flexible and calibrated in its ambitions while taking into account capacities and circumstances of different member parties.[26]

Unlike the Kyoto Protocol, the Agreement does not specifically mention waste management activities as among the prioritized measures to be taken to reduce emissions.[27] Rather, the Agreement leaves the prioritization of such measures to respective member parties as they develop their respective nationally- determined contributions.[28] The success of compliance is ostensibly pegged on a rather robust transparency and accountability framework which requires members to disclose efforts towards achievement of the NDC and as well, a requirement for periodic (5-year) expert-driven global stock-take of policy

[22] Kyoto Protocol 1998 art 2 (a) (viii); in addition, The Clean Development Mechanism (CDM) was established as part of the Protocol's financing mechanism and fundable projects include avoidance of landfill gas emissions by in-situ & passive aeration; flaring of landfill gas; waste energy recovery and; alternative waste treatment processes- see Approved methodologies for large scale CDM projects at http://cdm.unfccc.int/methodologies/PAmethodologies/approved last accessed on 24th Feb 2019
[23] (adopted 12 December 2015, entered into force 4 November 2016)
[24] Paris Agreement art 2
[25] Ibid art 4
[26] See Daniel Bondasky 'The Paris climate change agreement: a new hope?' (2016) 110 The American Journal of International Law, 288-319.
[27] Paris Agreement art 5, which nevertheless pays more attention to reduction of emissions through forest-related interventions
[28] Ibid art 6 on mitigation measures

and programmatic interventions undertaken by member states towards achievement of the goals of the Agreement.[29]

Kenya is a signatory to the UNFCCC, Kyoto Protocol and the Paris Agreement and therefore now legally bound to set and observe it GHG emissions abatement targets.[30] Kenya has enacted the Climate Change Act[31] in 2016 and formulated its Nationally-Determined Contributions (NDC) which prioritized adoption of sustainable waste management systems.[32] Kenya further adopted the National climate change action plan to operationalize its obligations under this framework.[33] The plan has prioritized national appropriate mitigation actions (NAMA) in waste management, noting that sector is the lowest contributor of national GHG emissions at 3% from 2015-2030.[34] Prioritized mitigation actions include achieving 30% waste recovery (recycling, landfill and composting), 70% controlled dumping in at least one urban areas in each 20 counties by 2020 and strengthening the regulatory framework to promote zero waste policy, extended producer principle and county-based MSWM frameworks.[35] Thus, through its commitment to the Paris Agreement, Kenya agreed to effecting obligations for adoption of sustainable waste management, underpinned by waste hierarchy approach which is vital to environmental integration.

[29] Ibid arts 13 and 14
[30] see <https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-7-d&chapter=27&clang=_en> accessed 23 September 2019; Kenya signed the Paris Agreement on 22 April 2016 and ratified it on 28 December 2016
[31] Act No 11 of 2016
[32] Ministry of Environment and Natural Resources, 'Kenya's intended nationally determined contribution (INDC), 23 July 2015' accessed from <https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Kenya%20First/Kenya_NDC_20150723.pdf> accessed 22 October 2020
[33] Government of Kenya, *National climate change Acton plan (Kenya):2018-2022. Volume 3:Mitigation technical analysis report* (Ministry of Environment & Forestry, 2018)
[34] Ibid 104; the sector's contribution to GHG emissions is expected to rise from $2MtCO_2$ in 2010 to $4MtCO_2$ by 2030
[35] Ibid 108; the report however notes that commitment to replace Dandora open dumpsite with a sanitary landfill under the 2013-2017 Plan was not met whereas the ban on single use plastic bags was achieved within the period.

3.2.4 United Nations Convention on the Law of the Sea (UNCLOS)[36]

Marine pollution through land-based sources has gained international prominence owing to the increasing prevalence of plastic and micro-plastic wastes in world's oceans and seas. Land-based sources can be defined as pollution of maritime zones due to discharges by coastal establishments or coming from any other source situated on land or artificial structures.[37] This is considered the greatest source of marine pollution owing to the fact that according to the UN Atlas, 44% of human population lives in coastal establishments located within 150 kilometres off the coastal areas[38] and that land-based source of pollution account for 70% of total marine pollution.[39] Thus, any further growth of human settlements is likely to increase pollution sources and levels, which may adversely affect marine environment, unless appropriate interventions are put in place.

Pollution emanating from coastal establishments could be in the form of domestic or industrial wastes and energies. Domestic wastes include domestic sewage, wastes from food processing and run-off from agricultural areas (comprising eroded soil and dissolved chemical nutrients).[40] Such wastes may be discharged directly into oceans or into rivers that flow into oceans. Industrial wastes on the other hand include heavy metals (e.g. mercury, strontium etc), radioactive materials, inorganic chemicals and heated water (discharged from nuclear and industrial plants). [41]

The United Nations Law of the Sea (UNCLOS) provides the preeminent international legal framework for tackling LBSs. This is expressly provided for in Article 207 of UNCLOS. The treaty adopts the approach of pollution control and prevention using domestic legislative measures that take into account internationally agreed rules, standards and

[36] (adopted 10 December 1982, entered into force 16 November 1994) 1833/4/5 UNTS 3
[37] Alexander Kiss & Dinah Shelton, *International Environmental Law* (Transnational Publishers/UNEP, 2004) 296
[38] <http://www.oceansatlas.org/servlet/CDSServlet?status=ND0xODc3JjY9ZW4mMzM9KiYzNz1rb3M~> accessed on 8 July 2014
[39] Kiss & Shelton (n37) 296.
[40] O. Schachter & D. Serwer, 'Marine pollution problems and remedies', (1971) 65 The American Journal of International Law 99
[41] Ibid

recommended practices and norms.[42] This is perhaps informed by the assumption that control and prevention of land-based pollution is best handled by respective members countries, owing to complexity of the nature of sources of this kind of pollution. These measures however, are to be informed (and not bound) by internationally-set norms. The use of the word "international" rather than "global" points to UNCLOS' preference more to a regional rather than global approach to dealing with LBSs.[43]

By exhorting State parties to take legislative measures to combat pollution, UNCLOS advocates for incorporation of environmental considerations in development of frameworks that have direct bearing on MSWM, hence propounding an environmental integration approach. However, in leaving State parties to contract further bilateral and regional treaties to give effects to its provisions, the efficacy of UNCLOS to entrench environmental integration in MSWM, therefore will be judged against effectives of treaties developed under its ambit.

3.2.5 United Nations Sustainable Development Goals

After a consultative and highly participatory process, 17 sustainable development goals (SDGs) were agreed upon and formally adopted by the UN General Assembly in September 2015 in a report titled "*Transforming Our World: The 2030 Agenda for Sustainable Development*".[44] The SDGs replaced the Millennium Development Goals (MDGs) adopted in 2000, comprising 8 goals (including 18 targets and 48 indicators for each target) that were to be achieved by nations by the year 2015.[45] The 17 SDGs were adopted along with 169 targets to guide implementation. The SDGs were designed along

[42] UNCLOS art 207 (1)
[43] Ibid art 207 (3)
[44] United Nations, "Transforming our world: the 2030 agenda for the sustainable development-A/Res/70/1" accessed from https://sustainabledevelopment.un.org/content/documents/21252030%20Agenda%20for%20Sustainable%20Development%20web.pdf on 07/06/2017
[45] A/RES/52/2 as adopted at the Fifty-fifth session of the United Nations Assembly on 18th September 2000; At the UN World Summit of 2005, the targets were later revised upwards from 18 to 21.

5 themes which reflected a better appreciation of the integrated nature of sustainability; people, planet, prosperity, peace and partnership.[46]

With regards to MSWM, SDG 12 on sustainable consumption and production, which requires nations to substantially reduce waste generation through prevention, reduction, recycling and re-use by 2030. Thus, the SDGs embrace the waste hierarchy approach thus underlining an imperative for environmental integration.

Even though SDGs are not legally-binding commitments, they represent consensus of the international community on key actions to be pursued towards achieving sustainability. The SDGs seek to balance social, economic and environmental dimensions of development in an integrated manner in order to achieve sustainability.[47] The SDGs are also integrated in their design and therefore offered better opportunity for promoting integration (rather than fragmentation) in implementation policy and action.[48] In relation to MSWM, at least 12 SDGs and related targets are of direct relevance to the subject of waste.[49] Thus, improvements in MSWM will lead to better outcomes in terms of better health, access to clean water, safer cities, improved consumption and production, climate change mitigation and conservation of terrestrial and marine environment. Thus, the integrated framework of SDGs, particularly on MSWM provide a further imperative of environmental integration.

[46] Ibid

[47] David O'Connor, James Mackie, Daphne van Esveld, Hoseok Kim, Imme Scholz & Nina Weitz, 'Universality, integration and policy coherence for sustainable development: early SDG implementation in selected countries (2016) World Resources Institute, Working Paper, 8-9

[48] Le Blanc D. "*Towards integration at last? The sustainable development goals as a network of targets*" in DESA Working Paper No. 141 (ST/ESA/2015/DWP/141) (March 2015) pp1-17; the author conducted a conducted a network analysis of the SDGs and its targets before concluding that most SDGs are well connected to each other and that taken , SDGs are better integrated than MDGs hence more likely to facilitate policy integration across sector

[49] See also Ljiljana Rodic & David Wilson 'Resolving governance issues to achieve priority sustainable development goals related to solid waste management in developing countries' (2017) 9 Sustainability 1-18. They analyze SDGs and conclude that SWM is integral to implementation of 12 SDGs. They overlooked importance of SDG 4 & 16 in their analysis

3.3 Regional Framework for MSWM

3.3.1 The African Convention on the Conservation of Nature and Natural Resources[50]

The African Convention was adopted in Algiers city following a decade-long efforts to develop a regional agreement for environmental protection in post- colonial Africa, replacing the Convention Relative to the Preservation of Fauna and Flora in the Natural State (the 1933 London Convention).[51]The African Convention introduced modern approach of conservation and rational use of natural resources for present and future generations, moving away from older notions of conserving resources for purely utilitarian purposes.[52] After two decades of implementation, the African member states began a process of reviewing the Convention to align it to prevailing state of international environmental law, which culminated in adoption of revisions to the treaty in 2003 at Maputo.[53]The treaty was further revised in 2017 to take into account recent developments under international environmental law.

The African Convention seeks to enhance environmental protection, and in this regards, enshrines the right to satisfactory environment.[54] The Convention thus affirms the environmental rights currently enshrined in the African Charter for Peoples and Human Rights.[55]This creates a basis for member states to incorporate and promote enjoyment of the right to clean and healthy environment, which is foundational to environmental integration.[56] The African Convention also seeks to foster conservation and sustainable use

[50] (adopted 17 January 1969, entered into force 16 June 1969; revised 07 March 2017, last signature 04 February 2019) 1001 UNTS 14689
[51] (adopted 8 November 1933, entered into force 14 January 1936) available at < https://www.ecolex.org/details/treaty/convention-relative-to-the-preservation-of-fauna-and-flora-in-their-natural-state-tre-000069/ > accessed 13 November 2020
[52] IUCN, *An introduction to the African convention on the conservation of nature and natural resources* (IUCN & Gland, 2004) 4, < https://portals.iucn.org/library/sites/library/files/documents/EPLP-056.pdf> accessed on 13 November 2020
[53] Ibid 5
[54] African Convention, art II (1) as read with art III (1)
[55] ACPHR, art 24.
[56] IUCN (n52) 7-8

of natural resources, reinforcing the right to development hoisted upon utilization of natural resources for benefit of the African people.[57]The Convention sets out to promote harmonization and coordination of environmental policies and as such, exhorts states to balance development and environment needs in a sustainable, fair and equitable manner.[58] These provisions undergird the integration of environmental conservation considerations with socio-economic concerns as a reflected in subsequent parts of the Convention in relation to planning,[59] environmental impact assessments[60] and public participation.[61]

With regards to wastes, the Convention imposes obligations on parties to take environmental protection measures in relation to sound management of radioactive, toxic and hazardous wastes, and outlines the adoption of measures consistent with the waste hierarchy approach i.e. resource efficiency for waste minimization, reuse and recycling.[62] Besides, the Convention also calls upon member states to harmonize their policies with international legal frameworks relevant to this endeavour, hence outlining and imperative for integration.[63] The focus of the Convention on promotion of economic incentives and disincentives opens possibilities for adoption of measures which encourage voluntary approaches to waste handling while also valorising to exploitation of wastes as resources.[64] even though the scope of the Convention appears limited for MSWM, if these measures are adopted by member states, they could have positive impulsion towards sounded management of all kinds of wastes.

[57] Ibid art II (2) as read with art III (2)
[58] Ibid art II (3) as read with art III (3)
[59] Ibid art XIV (1)
[60] Ibid art XIV (2)
[61] Ibid art XVI
[62] Ibid art XIII
[63] Ibid (2) (c)
[64] Ibid (2) (b)

3.3.2 Bamako Convention[65]

The Bamako Convention on the Ban of the Import to Africa and the Control of Tranboundary Movement and Management of Hazardous Waste was adopted by African states following outcry over failure by international community to impose an outright ban on transboundary movement of hazardous wastes in and out of the continent under the Basel Convention. The regional treaty was also intended to address problems of export to Africa, harazadous wastes purportedly for use, when in fact, waste traders and exporters sought to dispose them in the importing States' territory.[66] Even though hazardous wastes fall outside the scope of this thesis, Bamako Convention imposes obligations on States on waste management which are pertinent to MSWM regulation from an environmental integration standpoint.

First, Bamako Convention requires State parties to ensure waste minimization within their respective jurisdiction, consistent with the highest priority in the waste hierarchy.[67] Secondly, the Convention exhorts State parties to promote clean production methods, which adopt a product life cycle approach and prioritize waste minimization and recycling consistent with the waste hierarchy approach.[68] Thirdly, the Convention requires State parties to cooperate and harmonize standards in ensuring environmentally sound methods in handling, transportation and disposal of wastes, hence integrating environmental protection obligations in hazardous waste management.[69]

By upholding aspects of the waste hierarchy and importing environmental protection obligations, the Bamako Convention introduces environmental integration imperative in hazardous waste management. If these obligations are faithfully implemented, it is possible to have spill over impact on sustainable management of other waste categories, including

[65] (adopted 30 January 1991, entered into force 22 April 1998) 2101 UNTS 177 (Bamako Convention)
[66] UNEP, *Training manual on international environmental law* (UNEP, 2006) 134
[67] Bamako Convention, Art 3 (b)
[68] Ibid art 3 (g)
[69] Ibid art 10

MSWM. This is due to the fact that production and disposal of hazardous wastes invariable interface with MSWM,[70] hence the potential for cross-transferability of waste hierarchy approach and environmentally-sound MSWM actions.[71]

3.3.3 Africa Union (AU) Agenda 2063- The Africa We Want

In January 2015, the African Union Summit adopted the Agenda 2063 Framework Document as the blueprint to guide the member states collectively on political, social and economic development in the next 50 years.[72] Relevant to this thesis, the Framework Document has prioritized building a prosperous Africa based on inclusive growth and sustainable development as a key aspiration, for which adoption sustainable waste management is considered as a key action towards realizing modern, liveable habitats and basic quality services.[73] In the 10-year plan adopted in June 2015, the AU committed towards achieving recycling rates of 50% of urban wastes.[74] It is noted however that to achieve this goal, Africa must invest in reliable waste information management systems in order to monitor progress effectively.[75] This notwithstanding, the goal imposes duty on Members States to develop waste policies and systems aligned to this rather ambitious target. Since recycling is a key priority within the waste hierarchy approach, an imperative for environmental integration is therefore implied in this obligation.

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[70] See R. Slack, J. Gronow & V. Voulvoulis, 'Household hazardous waste in municipal landfills: contaminants in leachate' (2005) 337 Science of the Total Environment, 119-137

[71] See for instance Alec Liu, FEI Ren, Wenlin Lin & Jing-Yuan Wang, 'A review of municipal solid waste environmental standards with a focus on incinerator residues' (2015) 4 International Journal of Sustainable Built Environment, 165-188; the authors argue that incineration of MSW produces bottom ash which is considered as harzadous waste; reduction in incineration volumes or recycling of incineration ash controls hazardous waste generation.

[72] Africa Union Commission, *Agenda 2063: the Africa we want,01Background Note* (AUC, 2015) 2

[73] African Union Commission, Agenda 2063- The Africa we want, a shared strategic framework for inclusive growth and sustainable development: First ten-year implementation plan 2014-2023 (AUC, September 2015) 50, accessed from https://www.un.org/en/africa/osaa/pdf/au/agenda2063-first10yearimplementation.pdf on 19/08/2020

[74] Ibid

[75] UNEP, *Africa waste management outlook* (UNEP, 2018) 3.

3.3.4 The Nairobi Convention

Pursuant to UNCLOS regional approach to implementation of obligations on prevention and control of LBSs, countries in the Western Indian Ocean seaboard developed and adopted in 1985 the Convention for the Protection, Management and Development of the Marine and Coastal Environment of the Western Indian Ocean in Nairobi (1985 Nairobi Convention).[76] The Convention obliges Contracting Parties to address pollution from land-based sources and activities using similar language as the UNCLOS but broadens the sources by including "…*any other land-based sources and activities within their territories*".[77] This serves as an elaborate legal framework guiding state action on preventing, and controlling LBSs pollution in the region.

The Convention was further elaborated by 2010 Protocol for the Protection of Marine and Coastal Environment of the Western Indian Ocean from Land-based Sources which reiterated the obligation of CPs in addressing land-based sources and further urged States to use best environmental practice and best available techniques.[78] The Protocol requires CPs to enact laws and guidelines on EIA and Audits,[79] undertake educational and awareness programmes and promote public participation (including access to justice).[80] A draft protocol on integrated coastal zone planning and marine spatial planning is currently under consideration and if adopted will include tools that could foster integration in combating land-based sources.[81]

The emphasis on deployment of EIA systems in management of LBSs underscores the imperative of environmental integration, for which environmental assessments serve as important tools. Promotion of public education to address LBSs is likely to embed

[76] Adopted 21 June 1985, entered into force 30 May 1996 (and amended on 31 March 2010), UNEP (DEPI) EAF/CPP.6/8a/Suppl.
[77] Amended Nairobi Convention (2010) art 7
[78] Nairobi Convention Protocol (2010) artss 4 & 6
[79] Ibid art 13
[80] Ibid art 15
[81] See <https://www.unenvironment.org/nairobiconvention/events/conference/fourth-negotiation-meeting-draft-iczm-protocol-and-regional-msp-policy-workshop> accessed 27 August 2019

sustainability thinking among waste generators which is vital for entrenchment of waste hierarchy approach, particularly in regard to waste minimization and prevention. To this extent therefore, UNCLOS regime indeed promotes aspects of environmental integration in managing LBSs.

3.4 National Framework for MSWM

3.4.1 Constitutional Framework for MSWM

The CoK (2010) establishes two levels of government (national and county) and vests in County governments direct regulatory and service delivery functions on solid waste collection and disposal within the context public health and control of public nuisances. County governments have planning and development responsibilities, which entail strategic oversight roles over solid waste management through land-use regulation and development control processes. Auxiliary regulatory functions over SWM can be discerned in provisions relating to county government's jurisdiction over agricultural facilities (e.g. livestock yards & abattoirs), public amenities, transport facilities, markets and public housing, which constitute key waste generators in urban areas.

On the other hand, the Fourth Schedule to the CoK (2010) vests in national government the mandate to protect the environment and natural resources. This therefore gives the national government some oversight role over county governments and other state organs insofar as their activities affect the environment. The County governments have a duty to implement specific national policies on environmental conservation and this could be construed as establishing a policy hierarchy with the National government occupying an elevated position on waste management policy issues.

Despite the above provisions, assignment of regulatory functions over MSWM has remained a contentious issue, with both NEMA (a national government agency) and County governments claiming exclusive jurisdiction. This played out in the case of *Waste and Environment Management Association of Kenya (WEMAK) v Nairobi City County &*

NEMA[82] where waste operators (with NEMA's concurrence) sought suspension of the Nairobi City County Solid Waste Management Act, 2015 on various grounds among them that the impugned Act purported to confer upon the respondent County government the power to license waste operators and incinerators, contrary to provisions of EMCA. The judge declined to suspend the Act, noting that a cursory reading of the Fourth Schedule to CoK 2010 indicates that regulation of waste management was a devolved function. The court held that devolution was intended to give counties considerable constitutional autonomy and where institutions such as NEMA attempted to hold onto their pre-2010 autonomy, the courts had duty to interrogate this further at the trial stage. From the foregoing, the CoK 2010 has established vertical inter-governmental relationships over SWM which is key to vertical environmental integration.

In addition, the CoK (2010) contains an expansive Bill of Rights which enshrines the right to clean and healthy environment under Article 42. It is a composite right which includes a right to have environment protected for benefit of present and future generations through legislative and other measures contemplated in provisions outlining State's environmental duties and as well a right to have these duties enforceable in courts.

Among the environmental duties imposed on the State include pollution control and risk management. This is the prevention and elimination of environmental risks & hazards through adoption of pollution control, environmental impact assessment, audit and monitoring systems. These obligations go to the heart of SWM regulatory framework and therefore failure by the State (national or county government) to adopt a SWM regulatory framework intended to eliminate dangerous processes may constitute abrogation of this constitutional obligation to encourage public participation and thus entrenching participatory governance in environmental sector. Lastly the constitution imposes duties on non-state actors to cooperate with the State in ensuring environmental protection and conservation as well as sustainable development. These broad obligations are pertinent to

[82] (2016) eKLR also cited as Petition No 16 of 2016

MSWM regulation in that they impose a duty on authorities to ensure the regulatory framework embraces public participation and active stakeholder engagement in the MSWM system.

The Court has interpreted the Article 42 right as affording legal protection against unlawful and unsanitary solid waste disposal in the case *African Centre for Rights and Governance (ACRAG) & 3 Others v Municipal Council of Naivasha*.[83] The petitioners filed a suit against the respondent local authority alleging violation of right to clean and healthy environment due to noxious emissions and other forms of pollution attributed to poor management of a dumpsite in Naivasha town, which the local authority was found to be running without a permit from NEMA and in the absence of an EIA licence. The Court agreed with petitioners that the facts of the case constituted a violation to the Article 42 right and ordered the County Government of Nakuru to take necessary remedial measures and in addition seek a permit from NEMA to continue operating the dumpsite. NEMA was ordered to commission an EIA study as a precondition to issuance of a permit. The Court further ordered the Ministry of Environment and Forestry as well as the Council of Governors to come up with policy measures of ensuring compliance with EMCA and establishment of appropriate SWM systems.

Entrenching the right to clean and healthy environment in the constitution in effect elevated this right to a level where it could be balanced against other constitutional entitlements, something which was anomalous under the repealed Constitution.[84] In *Pastor James Jessie Gitahi & 202 Others v Attorney General*,[85] the court rejected a claim for invalidation of noise control regulations enacted under EMCA, on the basis that their implementation would curtail petitioners' livelihoods (as preachers) noting that the objects

[83] (2017) eKLR (also cited as Petition No. 50 of 2012)
[84] See for instance in the case *Park View Arcade Ltd v Kangethe & others* (2004) eKLR where the High Court had to disagreed with the respondents that they could rely on the right to clean and healthy environment (under S.3 (1) of EMCA) to impeach a constitutionally protected property right to land (essentially an economic right thereby upholding the sanctity of title of land and rights accruing thereto.
[85] (2013) eKLR also cited as Petition 683 of 2009

of the same fell within the range of activities that were necessary for the protection and promotion of a clean and healthy environment and were therefore not unconstitutional. The High court essentially therefore affirmed the promotion of right to clean and healthy environment in a manner which delegitimizes constitutionally-recognized socio-economic activities (including waste management actions) that would otherwise have harmful consequences to the environment.

The CoK 2010 recognizes sustainable development as a national value and principle of governance. The said national values and principles of governance (or simply "Article 10 Principles") are binding on all state organs, state officers, public officers and all persons when applying, interpreting laws, enacting laws and adopting and implementing public policy decisions.[86] Violation of Article 10 Principles can lead to invalidation of official actions and statutes.[87]

Within the context of environmental management, the High Court has interpreted the principle of sustainable development in *Abdalla Rhova Hiribae & 3 others v Attorney General & 7 others* (also cited as*Tana Delta Case*),[88]as imposing legal obligations on public authorities to take measures that protect the environment as per Article 60 of CoK (2010). These measures include enactment of overarching policy and legal framework and establishment of an agency to coordinate the work of various entities with responsibility over various aspects of environmental media and ensure effective monitoring and assessment of impacts arising from development projects.

[86] In the *Center Trust & Others v the AG* Petition No 243 of 2011 Article 10 Principles were not simply hortatory in their effect but that policymakers and legislators were duty-bound to consider them when discharging their respective mandates

[87] in *Robert Gakuru & Others v Governor of Kiambu County & 3 Others (*2014) eKLR (also cited as Petition 532 of 2013 & 12 ,35,36,42 & 72 of 2014; Judicial Review Misc App No. 61 of 2014 Consolidated) the Court invalidated a legislative tax measure in a petition presented by a group of concerned citizens on grounds that there was inadequate public participation in the legislative process. The court essentially determined the matter as a case of violation of Article 10 Principles and decreed that the impugned law was unconstitutional for failure to uphold public participation as contended by the Petitioners and hence invalid.

[88] (2013)eKLR also cited as High Court (Nairobi) Civil Case No 14 of 2010

The Article 10 principle of sustainable development also creates a good foundation for sectoral coordination in solid waste management regulation, because of the obligation imposed on all persons to cooperate with state organs towards achievement of ecologically sustainable development.[89] It is possible for one to challenge the legality of a solid waste management law or regulation which fails to integrate the three dimensions of sustainability (economic, social and environment) on account of violation of Article 10 principles. Similarly, sustainable development provides a good basis for evaluating the soundness of MSWM regulation.

3.4.2 Environmental Management and Coordination Act (EMCA)

EMCA defines waste as. " *any matter prescribed to be waste whether liquid solid, gaseous or radioactive, which is discharged, emitted or deposited in the environment in such volume, composition or manner likely to cause an alteration of the environment*".[90] No other national law has attempted to provide an alternative definition of wastes or solid wastes for that matter. The EMCA definition is rather problematic in three aspects. First, the definition alludes to designation of a matter as waste by way of prescription without specifying the authority to do so. Secondly, the definition omits the fundamental nature of waste as matter which is or intended to be discarded by the generator. Thirdly, any matter (waste or non-waste) is likely to cause alteration to the environment and therefore it would have been useful to qualify the nature of alteration in terms of significance and impact. Thus, the ambiguity of the definition on account of these issues undermines its utility.

EMCA establishes NEMA as the preeminent environmental regulatory agency vested with three key mandates; supervision, coordination and policy advice and implementation.[91] NEMA is designated as a national government agency and its constitution and operations are directly controlled by the National government.[92] In this sense, NEMA is not

[89] CoK (2010), art 69 (2); the use of the term "person" will include citizens, non-state actors as well as state agencies.
[90] EMCA s 2
[91] Ibid s 9
[92] Ibid sS 7 & 10

conceptualized as a shared institution, notwithstanding that some aspects of environmental protection are concurrent functions under CoK 2010. The involvement of county authorities in NEMA's governing structure would give rise to opportunity for counties to influence regulatory functions of the Authority.

A part of its core regulatory responsibilities, NEMA is mandated to issue licenses to waste transporters and operators of waste sites and plants involved in treatment, re-use and recycling (facility).[93] EMCA also empowers NEMA to halt waste management operations by obtaining a court order against the licensee accused of breaches. [94] As explained in the *WEMAK* case,[95] the licensing powers are contentious and contested in light of constitutional provisions which vest MSWM functions to county governments. It is important to note that NEMA's National Solid Waste Management Strategy (2015) acknowledges the need for reconceptualization of the role of the Authority vis-à-vis those of County governments but like EMCA, the Strategy fails the categorically apportion the regulatory responsibility over licencing of operators and incinerators.[96] This demonstrates normative incoherence and lack of clarity within NEMA on its regulatory niche under the CoK 2010 dispensation.

Regulatory responsibilities of NEMA can also be discerned from environmental impact assessment (EIA) and audit requirements of EMCA. Developers of projects specified in EMCA likely to have significant impacts on the environment are required to undertake prior an environmental impact assessment (EIA) study and acquire a licence from NEMA to that effect.[97] Among some of the issues to be considered in the EIA study include waste generated by the project under consideration.[98] Having been issued with a EIA licence, the

[93] Ibid s 88
[94] Ibid s 90
[95] Text to n67
[96] NEMA *Naitonal solid waste strategy* 48-49; Rather, the Strategy recommends that NEMA retains policy, supervision, enforcement and capacity building roles in SWM whereas County governments take up waste planning, collection, disposal, awareness creation, enforcement and promotion of partnerships
[97] EMCA s58
[98] Environmental (Impact Assessment and Audit) Regulations, 2003, reg 18 (f)

project operator (licencee) is required to undertake environmental audits (EA) annually, and submit to NEMA an audit report on compliance with approved environment management plan (EMP) and indicating measures undertaken to mitigate any unforeseen but undesirable effects.[99] In developing the audit report, licencee is required to provide an assessment of compliance with environmental regulatory frameworks and standards.[100]

NEMA is vested with a general duty to coordinate environmental management activities that are carried out by lead agencies and promotion of integration of environmental considerations into development policies, plans, programmes and projects.[101] This provides the statutory basis for the exercise of sectoral coordination function vis-a-vis lead agencies, including waste management authorities, which is necessary for horizontal environmental integration. To reinforce this mandate, NEMA is further mandated to render technical support and promoting cooperation among lead agencies, particular on environmental education, public awareness and participation.[102]

NEMA has general oversight powers over waste authorities designated as lead agencies, which includes taking over neglected functions and performing them at the expense of a particular authority.[103] In the context of MSWM, these powers were affirmed by the High Court in the case of *R v NEMA & another ex parte Philip Kisia & City Council of Nairobi*,[104] where it was held that "…*NEMA assists and guides lead agencies in the preservation and protection of the environment but when a lead agency fails to comply with the directives given by NEMA, then NEMA has no option but to engage the powers granted to it by EMCA*".[105] Through such powers, it is arguable that NEMA is in a prime

[99] EMCA s 68; waste management actions are to be included in the assessed measures and impacts thereof
[100] Environmental (Impact Assessment and Audit) Regulations, 2003 regs 31 (6) & (7)
[101] EMCA, s 9 (2) (a)
[102] Ibid sS .9 (2) (m) & (o)
[103] EMCA s 12
[104] (2013) eKLR also cited as JR case No 251 of 2011; In this matter a Town Clerk and the offending City Council had been preferred with criminal charges by NEMA related to failure to collect domestic wastes thereby causing pollution. Both parties contested the powers of NEMA to prefer criminal charges against a lead agency, arguing that the Authority is expected to cooperate, render technical advice and work in harmony with such agencies.
[105] Ibid at pg 11

position to influence behavior of County authorities as lead agencies and elicit optimal performance in MSWM matters.

NEMA is vested with broad enforcement powers through appointment of environmental inspectors with the mandate to monitor compliance with environmental standards, monitor activities of sector-specific inspectorates, monitor patterns of resource use and conduct environmental audits.[106] The inspectors may be appointed from among public officers and private persons as well. They have police powers (under warrants issued by courts) of entry and search, seizure and arrest.[107] They may order closure of environmentally deleterious activities and issuance of notice of improvement. Further, inspectors are empowered to conduct prosecutions related to environmental offences subject to the directions of the Director of Public Prosecutions. [108] However, inspectors do not need consent from the DPP in order to commence or initiate prosecutions[109] and this enhances the efficiency to enforce the law. It is noteworthy that EMCA has set out elaborate provisions of environmental offences, which are designed to make key provisions of the Act enforceable through punitive mechanisms.

NEMA's regulatory and coordination role was scrutinized by the Court in the case *Martin Osano & another v Municipal Council of Nakuru.*[110] Residents had contended that NEMA neglected its regulatory duties, precipitating the dumpsite crisis, while the agency argued that it had taken all steps including prosecuting the offending local authority. The Court interrogated the role of NEMA in safeguarding this right and noted:

> "*Though NEMA must be commended for discharging its investigative and prosecutorial powers in this case, it needed to do much more pursuant to its functions under* ***section 9*** *of EMCA. It ought to have exercised its co-*

[106] EMCA s 117
[107] Ibid
[108] Ibid s .118
[109] This was held in *R v NEMA & another ex parte Philip Kisia & City Council of Nairobi* (2013) eKLR
[110] (2018) eKLR (also cited as Petition No 53 of 2012)

> *ordination, advisory and technical support functions with a view to ensuring the citizens' right to a clean and healthy environment is safeguarded. Success of NEMA will ultimately be seen more in a clean and healthy environment for Kenyans than in anything else*."

The EIA and EA processes are important tools for ensuring integration of environmental concerns in the economic and socio-cultural aspects of the development projects and activities under consideration. Both processes are undergirded by public participation requirements, which facilitate stakeholders input and influence in the outcomes of the integrated assessments and audits. The tools are also undergirded by rigorous scientific methodologies which facilitate inclusion of empirical and verifiable information in the decision-making process and hence enhance the rationality of the same. Lastly, both EIA and EA promote collection of information and maintenance of records for continuous monitoring of environmental impacts. Without such information, long-term assessment of environmental integration may not be possible. To the extent therefore that EIA and EA processes have a specific focus on SWM, they provide useful tools for promoting and achieving integration in MSWM sector.

Under EMCA, the Cabinet Secretary is mandated to promote cooperation among state and non-state actors and as well, public participation in policy formulation processes.[111] However, no explicit formal structures are provided for by EMCA to facilitate the said sectoral coordination, cooperation and public participation particularly on waste issues following the abolition of the National Environment Council. This perhaps leaves the Cabinet Secretary with discretion to establish *ad hoc* structures for the said purpose. This notwithstanding, NEMA still retains a limited coordination role on environmental policy and action particularly on SWM in two important ways.

[111] EMCA s 5

First, NEMA is mandated to formulate a National Environmental Action Plan (NEAP) every 6 years for approval by the Cabinet Secretary.[112] The process of formulation of NEAP involves various stakeholders including lead agencies and non-state actors at the national level. The output of the process is a plan that contains a contextual analysis of the environmental sector, including the key environmental problems, trends and natural resource profiles. It prescribes the various policies, legal and administrative measures to be taken to safeguard the environment. Of note, the plan proposes guidelines for integration of standards of environmental protection into development planning and development. NEAP binds all persons and public authorities.[113] Thus, the NEAP process promotes horizontal coordination of various institutions in development of the plan, whereas the plan in itself provides a basis for further institutional coordination in integration of environmental concerns in the development process, hence horizontal environmental integration

Secondly, EMCA imposes a requirement that every lead agency should establish an environmental unit to implement the provisions of the Act.[114] If established, it would be expected that the said units would among other things be responsible for waste management issues. It is therefore expected that NEMA's coordination role and mandate is to be exercised by ensuring liaison with lead agencies at both national and county levels on matters relating to waste management through the aforementioned environmental units. Thirdly, Lead Agencies have a mandatory obligation to render comments to an EIA report forwarded to them by NEMA.[115] It can be argued that through this provision, NEMA enjoys an incidental coordination power over sectoral agencies. Since EIA licencing is integral part of development permitting processes in Kenya, NEMA thus has an important role in ensuring sectoral perspectives are integrated and considered in the final decision to render an EIA licence.

[112] Ibid s S37
[113] Ibid s.38 (l)
[114] Ibid s 69 (1A)
[115] Ibid s 60

Fourthly, at the County level, the County Environment Committees (CEC) are modelled to play the role of a coordinating structure between county government departments and non-state actors. The CEC is responsible for environmental management and formulation of a county strategic environmental action plan.[116] The Committee is constituted by the Governor and chaired by the County Executive Committee Member (CECM) responsible for environment. It draws its membership from key ministries, regional development authorities operating within the county and non-state actors (private sector, NGOs and farmers/livestock representatives). It is expected that waste management considerations are integral to a county environment action plan and therefore SWM is a matter for the CEC to consider and act on. The presence of NEMA in the CEC provides a vertical informational link between county actors and national institutions. It may also facilitate effective consideration of environmental protection matters in development of county strategies and policies on development. It can be argued therefore that the CEC plays an important sectoral coordination role and therefore environmental integration at the county-level including on SWM matters.

Lastly, EMCA requires NEMA to ensure that its services are accessible in all parts of the Republic.[117] This aligns EMCA to the provisions of CoK 2010 which require national state organs and state agencies to decentralize their services in the country.[118] This can be interpreted as an obligation on NEMA to establish offices at county level for accessible and efficient service delivery. This provides NEMA with infrastructure to vertically coordinate environmental agencies and initiatives in Kenya.

In addition to the above provision, EMCA lays down the foundation for integrated SWM in ways similar to the CoK 2010. First, EMCA provides for the right to clean and healthy environment in S.3, which reads..”*every person has a right to clean and health environment and has the duty to safeguard and enhance the environment*”. EMCA grants access to the

[116] Ibid S.29 & 30
[117] Ibid S.8
[118] CoK (2010), art 6 (3).

Environment and Land Court for any person aggrieved by actual or potential violation of the right to clean and health environment, reinforcing similar provisions in the CoK 2010. However, disputes relating to decisions made by the Director General and issuance of EIA are to be referred to the National Environmental Tribunal.[119] In resolving disputes, courts are required to apply various principles, including sustainable development. As discussed in the previous section, these could anchor environmental integration regulation of wastes through EMCA.

3.4.3 Environmental Management and Coordination (Waste Management) Regulations of 2006[120]

NEMA promulgated Waste Regulations in 2006 for better enforcement of EMCA. The Waste Regulations define waste management as …"…*activities either administrative or operational that are used in handling, packaging, treatment, condition, storage and disposal of waste*".[121] Solid waste management therefore can be construed as the aforementioned activities as they may relate to management of solid wastes. EMCA Regulations impose obligations on waste generators generally to collect, segregate and dispose waste using environmentally-sound methods and not dump wastes indiscriminately.[122] It also imposes clean production methods which conserve raw materials and energy while eliminating toxic raw materials, emissions and wastes using a product life cycle approach. However, consequences for not fulfilling these obligations are not provided for.

The Regulations elaborate further the licencing powers of NEMA in respect to waste operators. Licensing powers over waste transporters also extends to determining geographical coverage and designated routes for the licensed transporters as well as ensuring waste is carried in an environmentally-sound manner.[123] An EIA license is

[119] Ibid S.125
[120] Legal Notice No.121 (also referred to as "EMCA Waste Regulations")
[121] Ibid reg 3
[122] Ibid reg 4-6
[123] Ibid regs 8 & 9

required in addition to development permission for a establishing a waste dumping site.[124] A license to operate a waste facility is valid for a year and should be renewed annually while an environmental audit for such facility is to be undertaken annually.[125] Regarding industrial wastes, there is a general obligation on industrial operators to establish system of treatment of industrial wastes before they are discharged into the environment.[126] Industries that generate chemical wastes are required to ensure they have in place a system for handling, disposal, recycling or re-us of containers used for such purposes (these qualify as solid wastes) to protect human and environmental health and safety.[127]

The Regulations have several key gaps. First, the regulations do not have provisions on waste planning. They do not impose obligations on local authorities to undertake waste planning. Yet planning is critical for sustainable management of wastes. Secondly, the regulations do not provide for clear or quantifiable standards on waste management. No thresholds are provided for waste minimization, collection, treatment and disposal. This can be contrasted with the Noise Regulations promulgated under EMCA which stipulate the levels of noise that are deemed environmentally acceptable. Lastly the Regulations do not anticipate or envisage the role of County governments in SWM as provided for in CoK 2010. The Regulations were promulgated in 2006 and a lot has changed in the SWM legal framework since then. These regulations should be updated to align with the CoK2010 dispensation and the environmental policy framework.

3.4.4 Public Health Act[128]

The Public Health Act (PHA) prohibits keeping of waste (described as nuisance) on any land or premises which might be injurious to health.[129] The Act imposes duty on local

[124] Physical Planning Act (repealed) s 36
[125] EMCA Waste Regulation, regs 10& 11
[126] Ibid regs 14 & 15 .
[127] Occupational Safety and Health Act s 83 (4)
[128] Cap 242 of Laws of Kenya
[129] Ibid s 115; Also see Section 118 (1) which defines nuisance (as solid waste) to include noxious matter (e), any accumulation or deposit of refuse, offal, manure or any other matter offensive or injurious or dangerious to health (h); and any accumulation of stones, timber and other material..(i)

authorities to maintain cleanliness and sanitary conditions by preventing or removing wastes or causing the same to be done.[130] The Act also imposes duties on individuals (occupiers and owners of buildings as well as the general public) not to cause nuisance (including solid wastes).[131]

The Act vests in the Minister responsible for health significant regulatory powers in MSWM. First, the Minister is empowered to order a municipal authority to discharge its public health duty (including waste management), failure to which the Minister may appoint another person to discharge the same duty at the expense of the offending municipal authority.[132] These are coercive powers similar to those granted to NEMA over lead agencies under EMCA,[133] which are aimed at securing effective performance of statutory duties of County authorities in respect to waste management. It should be noted however, that public health and environmental dimensions of waste management often overlap and hence it is possible for NEMA and the Minister to simultaneously and in a duplicitous manner clamp down on a negligent local authority under the respective provisions of EMCA and PHA. This therefore shows an instance of normative incoherence which out to be resolved to avoid the apparent fragmentation.

The Minister is also granted powers to order a local authority to enact bylaws relevant to securing proper sanitation in buildings.[134] This power therefore gives the Minister a strategic lever in influencing the regulatory environment at the local authority level for promoting sanitation and effective SWM. In the same vein, the PHA requires the Minister responsible for local authorities to consult the Minister for responsible for health before approving bylaws submitted by a local authority. An opportunity for sectoral coordination and integration of public health considerations in law-making processes may be discerned in the operation of this provision. However, under the CoK 2010, this provision in

[130] Ibid s 116
[131] Ibid s118 (2)
[132] Ibid s 14 as read with s 116
[133] EMCA, s 12
[134] PHA s 126A.

inoperative since the legislative power of counties is now vested in the respective County Assembly.

The PHA vests power in health authorities to intervene in MSWM through exercise of development control in approval of erection or occupation of residential, commercial and industrial buildings.[135] The health authorities are also empowered to inspect, take enforcement action against owners and/or occupiers of buildings which may endanger human health.[136] This entails issuing enforcement notices and prosecuting offenders who fail to comply with the said notice in magistrates' courts. The powers of the court in this regard are wide and may entail: imposition of fines; ordering compliance with notices; ordering modification and/or demolition of buildings causing nuisance.[137]

The public health function has been devolved to counties and therefore it follows that implementation of Public Health Act ought to be the responsibility of the County Executive Committee Member responsible for Health, rather than the Cabinet Secretary responsible for health under National government. However, the Cabinet Secretary in charge of health is still considered as the penultimate regulatory authority under PHA.[138] Yet references to public health officers under the PHA are construed to mean such public health officers working under the respective County government.[139] The PHA will continue to have legal effect in counties, until County authorities enact county-specific public health legislations. The continued operation of the Act *as-is* evidences normative incoherence, creating an anomalous situation where public health officers under the employ of County goverments

[135] Ibid s 117
[136] Ibid s 119
[137] Ibid s 120; also see *Peter K Waweru v R* (2006) eKLR (also cited as Misc Civil Application No 118 of 2004) where High Court held that failure to issue such notice before preferring charges is unlawful
[138] See for instance *Republic v Ministry of Health & 3 others ex parte Kennedy Amdany Langat & 27 others* (2018) eKLR (also cited as JR Case 2 of 2018 & 709 of 2017 (consolidated); the High Court noted that the Cabinet Secreary had wide ranging powers under Public Health Act to undertake measures to ensure the safety of public health in the Republic (at para 81).
[139] Also see *R v Timothy Mutiso- Public Health Officer Ongata Rongai Health Office Kajiado North Sub-County & another Ex- parte Hiram Muigai* (2018) eKLR (also cited as JR No. 324 of 2016); at para 76 &77, the High Court held that County public health officers had statutory mandate to safeguard the public against any threat to public health following devolution of public health functions.

are vested with coercive powers that can be used against their respective County governments. This law therefore requires major overhaul to align it to the reality of devolved government under CoK 2010.

The PHA nevertheless undergirds the regulation of public health dimensions which are integral to holistic MSWM regulatory framework. However, the regulatory powers of public health authorities overlap with those of the NEMA, particularly with regards to taking over the neglected waste management functions from the offending local authority.[140] Public health authorities and NEMA both have power to prosecute waste offenders, with varied penalties and with no reference to each other evidencing another instance of normative incoherence.[141] The PHA does not provide for institutional coordination mechanisms which could foster sectoral coordination and engagement with key stakeholders in policy development and enforcement, which is critical for environmental integration. There is need therefore to rationalize this law with a view to ensuring effective balancing of the public health and environmental dimensions of MSWM regulation in line with environmental integration imperative to avoid fragmentation.

3.4.5 Occupational Safety and Health Act[142]

The Occupational Health and Safety Act (OSHA) is relevant to this analysis in that it is intended to regulate the safety, health and welfare of persons at the workplace.[143] The Act defines a workplace as any land, premises, location, vessel or thing in which a worker is to be found in the course of employment.[144] Thus, waste management facilities (including dumpsites and transfer stations) are indeed workplaces and therefore regulation under the

[140] Text to n 94; the *Phillip Kisia* case
[141] Under EMCA s 87 (5), the offence of handling and disposing wastes without licence or taking measures to mitigate pollution attracts punishment of imprisonment of not more than two years and/or a fine of not more than Ksh1million; A similar offence under PHA s 121 attracts a daily fine of Ksh1,500 per day until the nuisance is removed.
[142] Act No 5 of 2007 (Revised Edition 2012)
[143] OSHA was enacted in 2007 and repealed the Factories and Other Places of Work Act, Cap 514 enacted in 1951
[144] Ibid s 2

Act. OSHA imposes duty on occupier[145] (any person in occupation of a workplace), employees[146] and self-employed persons[147] to maintain the workplace in a condition that is safe and without risks. Occupiers as also required to undertake risk assessments, formulate risk policy statement and conduct annual safety and health audits.[148] The Act requires every workplace to be kept in a clean state and that wastes (including dirt and refuse) should be removed daily using suitable methods.[149] Even though the law does not specifically address the issue of wastes directly, it can be reasonably construed that its provisions may be applied to ensure occupiers handle and dispose- off wastes in a manner that jeopardizes health and safety of workers and persons at the workplace.

For enforcement of the Act, the office of a Director of Occupational Safety and Health Services is created with a broad mandate on research, registration of workplaces and appointment of occupations safety and health officers.[150] The Act requires occupiers with at least 20 employees to establish health and safety committee as a mechanism for participation of workers in decision-making and capacity building on health and safety matters.[151] The National Council on Occupational Safety and Health (NACOSH) is provided for to formulate standards and advise the Minister on policy and legislative matters.[152] The Council has non-state actors' representatives and thus can be viewed as a mechanisms to facilitate their participation in administration of the Act. It is important to note that NEMA is among the listed members of NACOSH and therefore this structure offers an opportunity for enhancing the sectoral coordination role of NEMA and as well, integration of environmental protection issues in regulation of the workplace. The law further establishes the Occupational Safety and Health Fund to finance core aspects of implementation and administration of the Act. Lastly the OSHA has an elaborate

[145] s 6 (2) (d) of OSHA
[146] s 13 &14 ibid
[147] s 12 & 17 ibid
[148] s 6 (3), S.7 & S.11 of OSHA respectively
[149] s.41 of OSHA
[150] See pt III of OSHA
[151] ibid s 9
[152] Ibid s 27

framework of offences and penalties that could tighten enforceability of the law.[153] The Act has provisions prohibiting discrimination or disadvantaging of workers on health and safety issues[154]

However, OSHA evinces several shortcomings. First, whereas the Act is elaborate in enunciation of duties, it appears to have lost opportunity to recognize and elaborate on the right of workers to occupational health and safety, which could strengthen the normative framework for protection of workers from environmental hazards related to occupational waste. This would facilitate normative integration between occupational (socio-economic) rights with environmental protection rights. Secondly, even though administration of the Act would rely on enforcement actions of County authorities, OSHA provides minimal role for devolved governments in its enforcement thus undermining potential for vertical environmental integration. This is a glaring gap, given that County authorities have constitutional mandate in prevention of pollution and county health services which directly impact on occupational safety and health.[155] Since the law was enacted prior to rolling-out of devolution, it is necessary to review it and ensure it accords with the system of devolved government. Thirdly, the law does not provide for access to justice, given that it is laden with obligations whose breach may necessitate the need for redress. Thus, aggrieved persons can only seek justice from formal courts, which could prove to be costly and therefore inaccessible.

3.4.6 County Government Act[156]

The County Government Act (CGA) is an important role insofar as MSWM is concerned in that it provides for institutional anchorage of County authorities, which now have a constitutional mandate to handle waste management issues.[157] The Act has broad

[153] Ibid pt XII
[154] Ibid s 8
[155] OSHA s 53 allows local authorities (now County authorities) to enforce requirements on provision of sanitary conveniences at the workplace, but only under the authority of the Minister.
[156] Act No 17 of 2012 (Revised edition 2017) (CGA)
[157] Ibid pt II

provisions detailing rights, obligations and institutional frameworks relating to decentralization of administrative authority[158] (from county to village levels), public participation,[159] access to information,[160] and civic education.[161]

The CGA espouses environmental integration approach in various ways. First, in providing for integrated development planning (IDP) responsibilities and powers of counties which may have an implication for waste planning and management,[162] the CGA includes realization of sustainable development as one of the over-arching goals of the planning process.[163] The CGA also imposes a correlative obligation on counties is to ensure county planning frameworks integrate economic, physical, social and environmental planning, while taking due cognizance of financial viability of development programmes.[164] The outcome of the integrated planning process is the county integrated development plan (CIDP) which is a 5-year plan detailing the clear developmental goals and objectives to be achieved by the county governments and the institutional framework for pursuing these results.[165] The Act also provides for development of county spatial plans and municipal plans which determine land uses and this has impact on citing of solid waste management facilities in urban areas.[166]

Secondly, the CGA empowers Counties to adopt and implement tariffs and pricing policy underpinned by equity and safeguarding of poor households in respect to provision of public services.[167] Among public services which counties are mandated to provide include SWM services. Thus, these provisions may provide counties with guidance on how to establish user fees for SWM services. In so doing the CGA integrates social equity

[158] ibid pt VI
[159] ibid ptt VIII
[160] ibid pt IX
[161] ibid pt X
[162] Ibid, pt XI
[163] Ibid s102 (e) & (f)
[164] Ibid ss104 (2) read together with s105 (d)
[165] ibid s 108
[166] Ibid ss 110 & 111
[167] Ibid s 120 A

dimensions to environmental and economic considerations for MSWM framework, thus underlining an environmental integration imperative. Thirdly, the CGA establishes the County Intergovernmental Forum which is chaired by the Governor bringing together heads of department of the national government entities working at the county and the CECMs.[168] The Forum is meant to promote harmonization of service delivery and coordination of development activities and intergovernmental functions. With certain aspects of environmental management being concurrent functions, this forum therefore provides another key structure for facilitating sectoral and inter-governmental coordination on environmental issues and initiatives, including MSWM matters.

However, the CGA framework exhibits normative incoherence which could undermine its environmental integration potential, in the sense that is no normative linkage between spatial and environmental sector plans with the county environmental strategic action plan-CEAP- (formulated under EMCA by the CEC). It is therefore possible for County planners to proceed with formulation of land-use plans that affect citing of MSWM facilities without reference to CEAP. This instance of normative incoherence could lead to duplication or fragmentation of planning efforts.

In the same vein, there is no normative linkage between CEAP and the CIDP. Yet CIDP is foundational to the county budget planning and implementation process, as was held in the case of *Tyson Ngetich & another v Governor, Bomet County Government & 5 Others*[169] wherein the county budget was invalidated for failure by the County government to have a CIDP and related plans adopted by the County Assembly. The integrated planning process therefore gives county authorities and environmental interest groups opportunity to influence the prioritization of environmental concerns (including waste management issues), which in turn make the budget embrace environmental issues, thus promoting environmental integration. Without normative reference to each other, it is possible for

[168] Ibid s 54
[169] (2015) eKLR also cited as Petition 415 of 2014

CIDP to embrace and cause the financing of environmental priorities that are at variance with CEAP, hence provoking fragmentation.

Arising from the foregoing, the CGA generally incorporates environmental considerations in the development planning and implementation processes at the County level, that are linked to MSWM services. These aspects of the CGA therefore provide a good basis for promotion of environmental integration in MSWM functions of the County as well. However, the normative incoherence between CEAP and CIDP frameworks under EMCA and CGA respectively ought to be resolved to ensure environmental protection priorities, particularly those relating to MSWM, of the counties are clearly integrated into spatial planning and budget frameworks for effective implementation.

3.4.7 Urban Areas and Cities Act[170]

The Urban Areas and Cities Act (UACA), provides for the institutional framework for the establishment and management of urban areas and cities in towns within Counties, in line with the principle of subsidiarity.[171] It provides for establishment of city and municipal boards and town committees to run the designated urban areas and cities as sub-County authorities.[172] These structures are mandated to undertake integrated development planning for their respective areas, which among other things is intended to provide basis for environmental management plans and importantly solid waste management.[173] Though enacted in 2011, the law has remained dormant until 2017, ostensibly due to disagreements between national and county authorities over the criteria for creation of urban areas.

From an environmental integration perspective, UACA is an important MSWM legislation in various ways. First, UACA mandates urban authorities to promote safe and healthy

[170] Act No.13 of 2011 (Revised Edition 2016), also known as "UACA"
[171] CoK (2010) Art 172 (2) which requires County governments to decentralize their functions and provision of services
[172] UACA, pt III
[173] Ibid s .36 (1) (d) (vi)

environment as part of their core responsibilities.[174] By vesting such obligation on these authorities, consideration of environmental protection in decision making is mainstreamed. Secondly, like County governments, urban authorities are required to undertake integrated development planning underpinned by sustainable development imperative. The resultant urban area integrated development plans are to be aligned to those of the respective county governments, thus creating an imperative for vertical environmental integration.[175]

Thirdly, UACA allows respective urban area boards to enter into partnership with utility companies for the provision of social infrastructure services, which may include MSWM services.[176] Public participation is provided for in governance of the Act, through establishment of citizen fora which allows for involvement of residents of an urban area or city to deliberate, monitor, make representations and petitions in respect to the running of urban boards. The foregoing allows for incorporation of social and economic considerations in design and delivery of environmental services, which is a key aspect of environmental integration.

However, it is not clear how urban areas created under UACA will relate to the existent sub-county units of decentralization established under the CGA to administer sub-County, ward and villages as units of administration. The creation of urban authorities alongside the extant sub-County administrative units represents normative incoherence that could result in duplication of functions thus provoking unwarranted turf wars.

[174] Ibid s 20 (1) (q) (for cities and municipalities) & S.31A (for Town Committees)
[175] Ibid s 37
[176] Ibid s 33

3.4.8 Physical and Land Use Planning Act[177]

The Constitution sets out physical planning as a concurrent function.[178] The Physical and Land Use Planning Act (PLUPA) establishes the broad institutional framework for implementation of the Act both at National and County levels. The law designates the Director-General and County Director of Physical and Land Use Planning as the national and county planning authorities respectively, vested with responsibilities which include developing land use plans and issuing development permissions at their respective levels.[179] These plans are relevant to MSWM in the sense that they provide a basis for environmental conservation, protection and improvement as well as managing human settlements.[180] Framework for development adoption and implementation of inter-county physical and land use plans is provided for, with involvement of the Director-General and these are relevant for inter-county MSWM projects.[181] The exercise of development control powers by respective planning authorities is meant to advance objectives that include environmental protection and conservation, public safety and health and orderly and planning building which speak to aspects of MSWM.[182]

Assessment of PLUPA reveals opportunities for promotion of environmental integration in MSWM by creating institutional structures for facilitating sectoral and intergovernmental coordination in environmental decision-making within the context of land-use planning and development approvals. The law establishes the National Physical Liaison Committees with representatives from NEMA and Council of Governors as an intergovernmental coordination structure, that plays policy advisory role as well as entertaining appeals against decisions made by national planning authority, which include environmental impacts of strategic projects[183]. The law also creates a County Liaison

[177] Act No 13 of 2019, which repeals Physical Planning Act Cap 286 (Revised Edition 2012)- hereinafter referred to as "PLUPA"
[178] CoK, 2010, Fourth Schedule, pt I para 9 as read with pt II, para 8
[179] PLUPA sS 11-13 & 18-20 respectively
[180] Ibid sS 22 & 37 respectively
[181] Ibid sS 33-4
[182] Ibid sS 55
[183] Ibid sS 75

Committee with similar powers and thus, ensures sectoral consideration of environmental impacts in the appeals on development approval decisions at that level.[184]

In addition, PLUPA provides for the National Physical Planning Consultative Forum as a multi-sectoral intergovernmental coordination mechanism for consultations over development a national physical plan and for promotion of integration of physical development planning and sector planning.[185] It is a high-level body with relevant Cabinet Secretaries, National Land Commission, and Council of Governors represented. Encouragingly, PLUPA explicitly provides for representation of non-state actors in the Forum and to a great extent therefore, the model of the Forum resembles that of the now-abolished National Environment Council. Besides, PLUPA establishes County Physical Land Use Consultative Forum as a multi-sectoral body bearing similar objectives as the National Forum, particularly on sectoral coordination and integration of physical and land use development and sector planning at County level.[186] Both structures have potential for support horizontal and vertical environmental integration in MSWM, given their mandates on consideration of environmental issues within land-use planning contexts at both national and county levels.

Secondly, PLUPA provides for development control and permit system, which seeks among other things to promote and conserve the environment, hence incorporating environmental considerations in development approval process.[187] This presents a useful tool in managing land use and approval of buildings in a manner consistent with environmental protection. There is a requirement that the project proponent and relevant County Environment Committee Member should submit a development permit application to members of the public and other lead agencies (including those responsible for environment) within the County respectively for comments before a decision is taken.[188]

[184] Ibid pt VI
[185] Ibid pt II
[186] Ibid s 15
[187] Ibid s 55 (1) (e) & (d)
[188] Ibid s 58 (6) & (7) as read with 60-61

This introduces a sectoral coordination imperative in the development control approval process. Thirdly, PLUPA provides for adoption of physical and land use plans at national, county and inter-County levels, that must contain environmental protection and conservation considerations.[189] The fact that the respective plans are subject to consideration by physical planning and land use forums at the respective levels with public participation introduces sectoral coordination imperative as well.

However, PLUPA also reveals normative incoherence, in that NEMA is not represented in the County Liaison Committee nor is the Committee vested with clear environmental protection obligations, hence raising questions regarding mainstreaming of environmental issues at that level.[190] In addition, NEMA is not represented in the Physical Planning and Land Use Forums at both national and county levels. It is possible therefore that these structures can make decisions without taking into account environmental perspectives from the penultimate coordinator of the environmental sector. Another instance of normative incoherence is evident in the fact that NEMA is not listed among the agencies to be consulted in approval of development permits, nor is the EIA approval enumerated as among the required documents to accompany a permit application.[191]Yet, EMCA requires that an EIA approval should be sought as a prerequisite to undertaking any development.[192]

3.4.9 The Local Government (Adoptive By-Laws) (Building) Order 1968[193] (or the Building Code)

The Building Code is the regulatory framework governing the approval of building plans by local (now County) authorities in Kenya. The Building Code requires that domestic, public and industrial buildings be provided for with approved means of refuse disposal, including a waste collection area.[194] For high-rise buildings exceeding 3 floors, a refuse

[189] Part
[190] Ibid ss 77 & 78
[191] Ibid s 59
[192] EMCA, s 58 (1)
[193] Legal Notice No.16 (2916) of 1968
[194] By-law 139 of the Building Code

chute is to be installed and a receptacle (collection area)/container provided for at the ground floor.[195] Issuance of a completion certificate of a building is partly contingent on adequate provision of waste collection facilities. The Code also prohibits dumping of construction wastes and empowers to local authority to dispose dumped wastes at the expense of the contractor.[196]

Thus, whereas the Building Code incorporates waste management concerns in the building approval process, however it does not embrace the waste hierarchy approach as such. For instance, the Building Code does not require installation of waste segregation containers nor waste treatment facilities (sorting or composting chambers) within curtilage of a building. The Code is also considered out of sync with modern realities and efforts to have it replaced by a modern framework appear to have floundered.[197] Unless reviewed to incorporate aspects of the waste hierarchy approach, the Building Code will have limited influence on environmental integration in the built environment.

3.4.10 Climate Change Act (CCA)[198]

Enacted in 2016, the CCA is relevant to SWM regulation for it is the overarching framework for developing, managing, implementing and regulation of mechanisms to enhance climate change and low carbon development of sustainable development.[199] The law came into force soon after the adoption of the Paris Agreement and coincided with an upswell climate change legislative activity in Africa and the world generally.[200] Waste management activities generate approximately 5% of global greenhouse gases (GHGs), but with waste generation on the rise, the threat of climate change has made emissions

[195] By-law 140 of the Building Code
[196] By law 239 of the Building Code
[197] Planning and Building Regulations -2009 (or KS Code) where developed by a taskforce appointed by the-then Prime Minister, Hon Raila Odinga following lobbying by the Kenya Private Sector Association. However, the regulations were never enacted.
[198] Act No 11 of 2016
[199] Ibid Section 3 (1)
[200] See Olivia Rumble 'Climate change legislative development on the African continent', in in Kameri-Mbote *et al Law, environment, Africa*, 33-60; Rumble observes that there were over 1200 climate change-related laws enacted globally by 2017, a twenty-fold increase in the last 20 years.

reduction from MSWM a policy priority for most States.[201] Therefore actions to mitigate climate change therefore must address the impact of unsustainable SWM on GHG emissions.

The CCA embraces aspects of environmental integration in various ways. First, the law seeks to mainstream sustainable development into the planning and decision-making processes and integrate climate change into functions of both levels of government thus facilitate horizontal and vertical environmental integration.[202] Such mainstreaming is to be achieved through the National Climate Change Council as the overarching coordination mechanism for ensuring mainstreaming of climate change.[203] The Council is chaired by the President and draws its membership from the cabinet, representatives of Council of Governors, civil society, academia and private sector.[204] The Council is both inter-governmental and multi-sectoral with the character of a shared institution.[205] Among the functions of the Council are mainstreaming of climate change in national and county governments, policy advisory and guidance on review, amendment and harmonization of sectoral laws and policies for the achievement of the objectives of the Act.[206] The mandate of setting targets for regulation of greenhouse emissions directly impacts of SWM regulation since dumpsites generate such emissions. The Council has powers to impose duties on public and private entities relating to climate change actions.[207]

Secondly, the CCA affords NEMA, as a member of the Council, an important monitoring and enforcement role in the implementation of the Act.[208] NEMA is thus in a prime position to influence sectoral and inter-governmental coordination of GHG emissions abatement in the work of the Council. Thus, the Council perhaps is the best example of

[201] Vergara & Tchobanoglous (n2) 286
[202] CCA s 3
[203] Ibid s 5
[204] Ibid s 7
[205] Ibid, the Chairperson of the Council of Governors is a member of the Council
[206] Ibid s 6
[207] Ibid ss 15 7 16
[208] Ibid s 17

horizontal and vertical environmental integration mechanism accorded with the highest level of political support in the country. Thirdly, the CCA imposes obligation on the Cabinet Secretary to coordinate the development and adoption of climate change action plans, strategies and policies which incorporate economic, social and environmental dimensions in measures to address climate change.[209] Waste management considerations are part of the GHG mitigation measures suggested in the Plan. The fact that such plans are adopted by the Council imposes an imperative of sectoral coordination.

Given that mainstreaming in the context of climate change requires vertical and horizontal integration of policies, laws and measures to address climate change in ongoing sectoral and development planning and decision-making process, it is commendable that the CCA does not disclose any normative incoherencies pertinent to this study.

3.4.11 The Public Procurement and Disposal Act (PPDA).[210]

Public procurement law is pertinent to the analysis of MSWM legal framework. MSWM entails procurement of considerable volumes of goods and services along the waste chain at both national and county levels. In addition, products generated from waste value chains could be procured by public authorities. In Nairobi City County expenditures on waste management services have almost doubled from Ksh567million in FY2013/14 to Ksh1,067billion on waste management services in FY 2016/17.[211] A considerable percentage of this budgetary allocation is utilized to procure supplies and stores as well as service providers to ensure refuse is collected and disposed in the city. How, therefore, a county authority is able to implement its procurement system will affect the quality of waste management service rendered to citizens.

[209] Ibid s 13
[210] Act No.33 of 2001 (2016 Revised Edition); the law repealed the 2005 Act which had been enacted to replace a rather rudimentary procurement system that was underpinned by the Government of Kenya's Supplies Manual of 1978 and circulars by Treasury
[211] Kenya National Bureau of Statistics *Economic survey 2018,* (KNBS 2017: Nairobi) 145

The PPDA espouses environmental integration in various ways. First the PPDA lays down the principles governing procurement and disposal processes including sustainable development and protection of the environment.[212] The incorporation of sustainability and economic protection considerations is commendable, considering that the PPDA governs what is essentially economic undertakings. Secondly, PPDA promotes social dimensions in the procurement processes by way of the principle of affirmative action through substantive provisions relating to schemes of preferences and reservation in procurement processes.[213] Affirmative action provisions are meant to protect participation in local companies as well as locally manufactured goods that would otherwise lose out in competitive selection processes where foreigners would have undue advantage.[214] These provisions could be applied in extending preferences in procurement processes to waste value chain products such as recycled products and energy recovered from waste. This in turn has the possibility of promoting marketization of wastes, thereby promoting sustainability of trade production and trade of waste products. affirmative action principle also seeks to protect and promote advancement of disadvantaged persons and groups and in this regard, women, youth and persons with disabilities are singled out.[215] The Public Procurement Regulatory Authority (PPRA) is under duty to report to ensure compliance by procuring entities on these provisions and report to parliament as part of accountability. These provisions could be applied to promote participation in procurement processes relating to waste management of persons in the lower echelons of the waste value chain, including informal waste actors.

Thirdly, PPDA enshrines the principle of *maximization of value for money* which can be employed to ensure pricing of goods takes into account the internalization of environmental (including waste minimization) costs of goods and services, which otherwise would lead to distortion of prices. [216] Where environmental cost of a particular good or service leads

[212] PPDA s 3(a) and (i) respectively
[213] This is in line with CoK 2010 art 227 (2) (a)
[214] PPDA s 55; the scheme of preference and reservation is also meant to promote procurement of local materials, technological transfer and employment creation as well.
[215] Ibid s 157 (10) to (14)
[216] Ibid s 3 (h)

to substantial inflation of the price, this ought to be deemed as reasonable and therefore acceptable. If this position is embraced, procurement process could stimulate uptake of environmentally-sound goods, services and technologies that minimize waste generation, which incidentally may be priced above their poorer alternatives in the market. In the European case *Concordia Bus Finland v Helsingin Kaupunki & HKL Bussiliikenne*,[217] the European Court of Justice held that the environmental criteria can be taken into consideration when assessing the most economically advantageous tender.

Lastly, unserviceable stores and supplies must be disposed –off by public authorities at some point thereby becoming wastes and entering the waste management chain. The PPDA identifies waste disposal management as one of the methods of disposal of public assets.[218] The law further requires procurement entities to only dispose radioactive or electronic wastes to persons licensed to do so under (section 88 of) EMCA. Besides this provision, the law appears to afford much prominence and attention of the sustainability principle.

From the foregoing, it is evident that the PPDA embraces the concept of green public procurement, which is defined by the EU as.." *a process whereby public authorities seek to procure goods, services and works with a reduced environmental impact throughout their life cycle when compared to goods, services and works with the same primary function that would otherwise be procured*."[219] This makes the law amenable to promotion environmental integration and hence contribute to sustainable management of municipal solid wastes.

[217] ECJ (2013) Case C-513/99
[218] PPDA s 165 (1) (e)
[219] Commission of the European Communities, "*Public Procurement for a Better Environment*", Communication from the Commission to the European Parliament, The Council, The European Economic and Social Committee and the Committee of the Regions, issued on 16th July 2008 at Brussels and available at <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52008DC0400&from=EN> last accessed on 17 February 2018

3.4.12. Intergovernmental Relations Act[220]

The Inter-government Relations Act is the principal statute regulating intergovernmental relations as is relevant to this study because vertical environmental integration is conditioned by intergovernmental coordination. The law establishes two inter-governmental structures, namely the National and County Government Coordinating Summit (The Summit) and the Council of Governors (CoG).[221] The Summit brings together the President and the County governors and therefore is the principal structure for regulating and mediating intergovernmental relations. Importantly, this structure this is responsible for coordination and harmonization of development policies at both levels of government among other duties.[222] In this regard, the Summit is designed as a vertical inter-government structure. The CoG on the other hand is composed of all the County governors, which is a consultative, information sharing and dispute resolution mechanism for the counties. It is thus a horizontal inter-governmental structure.

To support the functions of the Summit and CoG, the Intergovernmental Relations Technical Committee (Technical Committee) and Secretariat have been established with a mandate to establish sectoral committees or working groups.[223] In practice however, the CoG has established its own secretariat and therefore the work of Technical Committee is basically confined to providing administrative support to the Summit. The CoG is also mandated to establish other inter-governmental forums and sectoral committees to advance its work, whereas the National government and a County government may establish a joint committee as well.[224]

[220] Cap 5g of the Laws of Kenya
[221] Intergovernmental Relations Act, S.7 & 19 respectively
[222] Ibid s 8(j)
[223] Ibid s 11-15
[224] Ibid ss 20 (2) & (3) and 21

3.4.11 Sustainable Waste Management Bill, 2019

The Ministry of Environment, Forestry and Natural Resources in the National government is spearheading efforts towards enactment of the Sustainable Waste Management Bill (2019) as a consolidated national law on solid waste management that has substantially incorporated the waste hierarchy approach in its framework. The Sustainable Waste Management (SWM) Bill (2019) is a legislative proposal prepared by the Ministry of Environment and Forests in 2017 with overarching objective of providing a legal and institutional framework for efficient and sustainable management of wastes within the context of a green economy.[225] In a sense therefore, the Act is designed as a framework law, which is meant to provide for general principles, broad obligations and institutional design, leaving detailed matters to county and other sectoral legislations.

The Act lays out principles to govern waste management which importantly include a right to clean and health environment as well as realization of sustainable development goals relevant to waste management.[226] The Bill spells out duties of national and county government as well as private sectors and citizens in relation to wastes. As a national law which governs national government entities, the draft law does not define the obligation of these entities as waste generators particularly those which ordinarily operate beyond the remit of county government regulation (e.g. security agencies, sensitive national government infrastructures etc).

The Bill provides for institutional framework for implementation of the Act.[227] This comprises the Cabinet Secretary (responsible for policy formulation and oversight); Waste Management Council (knowledge management, technical support, coordination and policy advice); NEMA (enforcement, licencing, compliance national waste information system and capacity building) and; county government (implementation of devolved functions of SWM, cooperation with national government and other counties). It is noteworthy that the

[225] SWM Bill 2019, Preamble
[226] Ibid s 5
[227] Ibid pt II

Waste Management Council is designed as an inter-governmental structure with representation from non-state actors.

The Bill also spells out regulatory measures and actions which the Cabinet Secretary will undertake in promotion of marketization of wastes[228] and protection of human and environmental health.[229] These rather novel measures on incentivization of marketization of wastes and adoption of waste standards address a critical gap in the current EMCA framework. The draft law also requires County governments to establish a materials recovery facility prior to disposal via landfilling;[230] secure at least 20 acres of land for waste treatment and disposal facilities;[231] waste planning and reporting;[232] and punitive measures for non-compliant Counties.[233] Besides the Bill imposes obligations on public entities to observe environmentally-sound waste management practices at the pain of penal sanctions and imposition of restoration measures in the event of breaches.[234] The Bill duly recognizes the role of private sector and residents in waste management by imposing: extended producer responsibility (EPR) for packaging material through take-back schemes;[235] obligations on waste management using the waste hierarchy approach for companies and citizens;[236] punitive measures for non-compliance.[237]

The Bill also recognizes the role of waste recycling industry and non-governmental organizations in waste management decision-making in the Waste Management Council thus giving legal effect to the notion of co-regulation. Co-regulation is considered as a

[228] Ibid s .9 (2) (c); these include prescribing incentives, government procurement preferences and other policies for pre- and post- consumer recycled products
[229] Ibid s 9 (2) (a), (b) & (d); includes prescribing regulations for closure of dumpsites, procedures for waste management and health, safety and environmental standards.
[230] Ibid s.12
[231] Ibid s 15 (b) & (d) respectively;
[232] Ibid ss 15 (e), (f) & 16
[233] Ibid s 15 (2); this essentially entails withholding of transfer of national revenue transfer funds for offending counties meant for waste management activities
[234] Ibid s 14
[235] Ibid s 11
[236] Ibid ss 17 & 18 (1)
[237] Ibid s 17 (4) & (5)- including fines for the offending company and its officials; and s 18 (2)

relatively new regulatory approach which is characterized by interactive relationship between the regulator and the regulated, defined by agreement or covenant, whereby the overall policy or regulatory objectives are set by the regulator and the details are subject to negotiated agreement between the two parties.[238] The Bill also seeks to access to SWM information by imposing a duty of disclosure and dissemination on duty-bearers.[239] The Bill promote public participation by providing for guidelines on public consultations on waste issues.[240] The guidelines dwell on notification procedures within the context of public decision-making processes.

The Bill proposes incentive mechanisms for better compliance such as use of conditional grants to encourage County governments to adopt SWM laws and policies; whistle-blowing schemes; award schemes etc.[241] It also proposes adoption of public engagement strategy and incorporation of waste education in school curricular.[242] Significantly, the draft Bill provides for access to administrative justice as one may expect owing to the elaborate framework of obligations and enforcement measures spelt-out therein. The National Environment Complaints Committee is meant to provide redress for administrative complaints whereas the National Environment Tribunal (NET) set-up under EMCA as the mechanism is to provide access to justice at the first instance.[243]

However, the Bill fails to elaborate on the regulatory powers of County governments in SWM and thus appears to reinforce the rather anomalous situation where NEMA will continue regulating wastes within counties. This may undermine full devolution of SWM functions to counties. The draft law ought to have provided framework for improving intergovernmental relations on SWM issues. It should have rendered guidance on decentralization of SWM below the county levels. One way of achieving this is by

[238] Michael Kidd, 'Alternative to criminal sanction in the enforcement of environmental law' (2002) 9 *South African Journal of Environmental Law and Policy* 29
[239] SWM Bill 2019, s 15
[240] Ibid s 16
[241] Ibid s .22
[242] Ibid s 30 &31
[243] Ibid ss 25 & 28 respectively

referencing Urban Areas and Cities Act (UACA) and its structures (cities and municipal boards) as duty bearers at the sub-county levels. With regards to enforcement, the Bill provides for monitoring provisions to be enforced by NEMA, these appear repetitive of similar provisions under EMCA.[244] Perhaps the draft law should reference the relevant EMCA provisions on monitoring and inspection duties of NEMA which appear more elaborate.

The Bill nevertheless provides opportunity for adoption of an overarching laws which clarifies the roles of citizens, private sector as well as national and county governments in respect to SWM regulation, thereby providing opportunities for sectoral and inter-governmental coordination. The Bill significantly incorporates environmental considerations in waste management actions and integrates economic as well as social dimensions through marketization and inclusion of citizens, private sector and informal actors in waste decision-making and implementation actions. To this extent, the Bill embraces environmental integration.

3.5 County Legal Framework

The CoK (2010) vests legislative powers in County Assemblies and this empowers counties to enact laws and regulations on matters falling within their jurisdictional competence within the framework of Fourth Schedule to the Constitution.[245] Further, County governments are expected to develop legislative and policy frameworks for waste management as contemplated in the County Government Act.[246] Among the four counties targeted by this study, only Nairobi City County has enacted a comprehensive county law on solid waste management.

[244] Ibid pt VII; compare and contrast with EMCA, Part VII (environmental audit and monitoring) and Part X (inspection, analysis and records), which are rather elaborate on monitoring mandate of NEMA
[245] CoK (2010) art 185
[246] CGA Section 5 (2) (a)

3.5.1 The Nairobi City County Solid Waste Management Act (or NCCSWMA).[247]

The law was ostensibly enacted to provide a legal basis for implementation of a county integrated solid waste management plan while ensuring effective public participation in management of solid wastes and the environment.[248] The Act also provides for the right to clean and healthy environment and duty to safeguard and enhance the environment, which may be implied as a guiding principle for SMW regulation.[249] In this respect, the law has a good normative foundation for environmental integration.

The Act defines solid waste to include any waste in solid form which is deposited in the environment in such volumes or composition likely to cause an alteration of that environment.[250] The law vests the responsibility for implementation of the Act on the County Executive Committee Member (CECM) responsible for environment. The responsibility includes establishing frameworks for participation, setting of levies and charges and the promulgation of guidelines and regulations to govern broad aspects of solid waste management.[251] Licensing responsibilities on the other hand are vested with the Chief Officer responsible for environment in the county.[252] Significantly, the law does not reference the role of NEMA in regulation of wastes at the County level, and this probably lays basis for clashes between county authorities and the environmental agency on SMW regulation.

The Act emphasizes on a participatory and voluntary approach to solid waste management. It envisages a shared role for individuals, private sector and community organizations in solid waste management.[253] The Act also evinces a command and control approach in waste management as manifested by the imposition of charges and enforcement through

[247] Act No 5 of 2015
[248] Ibid s 4
[249] Ibid s 5
[250] Ibid s.2; the NCCSWMA adopts the EMCA definition and its imperfections as well
[251] Ibid See pt II
[252] Ibid ss 26 & 29
[253] Ibid ss 4 & 6

prohibitions and offences.[254] Disposal of wastes envisaged by the law includes land-filling, recycling, composting and incineration and therefore is rather holistic. [255] Disposal is preceded by environmentally-sound practices of clean production (waste minimization), collection (segregation and treatment) and transportation (prohibitions on scattering of wastes). [256] In this regard, the Act embraces the waste hierarchy approach and therefore lays a good basis for sustainable waste management and environmental integration.

The Act outlines various tools for regulating solid waste management. First, the Act promotes private-public partnerships in waste management through franchise system or management contracts.[257] Opportunities for partnerships are extended to individuals, private sector organizations and community/neighborhood associations. Franchise system is where the county government confers a privilege to private persons to undertake waste management services in return for specified incentives. On the other hand, management contract system would entail payment of contractual amounts for waste management services rendered by private persons.

Secondly, the financial instruments in the form of charges and levies are imposed to help meet cost of waste management and improvement of the environment.[258] These instruments provide a possibility of influencing waste generators' behavior if the charges and levies are linked to the amount of waste generated by households and other large-scale generators. Thirdly, the law imposes licenses (as explained previously) on waste operators in order to regulate persons involved in transportation, treatment and disposal of wastes. Fourthly, the law utilizes prohibitions and bans on certain waste generation activities.[259] Closely related to this, the Act establishes criminal offences which allow for coercive enforcement of its provisions. Lastly, the law provides for public education campaigns on

[254] Ibid See pts II & VII
[255] Ibid s 30
[256] Ibid s 14, pts III & IV respectively
[257] Ibid s 6 (2)
[258] Ibid s 7 & 8
[259] Ibid See for instance s 15 (1) of the Act, banning the use of carry bags of thickness less than 30micron.

solid waste management.[260] As a tool, public education is meant to enhance awareness among stakeholders and propagate among waste generators practices that protect the environment.

The law has several weaknesses that could undermine its effectiveness. First, the definition does not specify what should be categorized as (or excluded from) solid waste and hence may not be helpful. For instance, it is not clear of medical or hazardous wastes in solid form constitute what the Act defines as solid waste. Without clear definitions, enforcement is likely to be problematic. Secondly, the Act has limited focus on technical aspects of SWM which are critical for sustainability. For instance, the Act does not address the issue of waste planning. It is inconceivable how counties will achieve sustainability in SWM if they cannot effectively undertake proper waste planning. The law therefore should outline institutional responsibilities, define process and prescribe outcomes of the waste planning processes.[261] The law should also endeavor to link waste planning vertically (at national level with NEMA and sub-county levels-e.g. with city and municipality boards) and horizontally (with other county planning processes). Thus, opportunities for horizontal and vertical environmental integration are missed.

Related to this, the Act also does not provide for information management processes related to SWM. There is no obligation on research and collection of information related to wastes. There is also no corresponding obligation for access to waste management information and disclosures on the same. Without proper SWM information management, it is inconceivable that the City authorities will effectively plan, operate, monitor and report on SWM in a sustainable manner. The law does not provide for reporting on SWM. Reporting is critical for accountability and sensitization of the stakeholders. There is no obligation on development of SWM reports and submission of the said reports to authorities (NEMA and County Assembly) as a means of accountability. From the foregoing, it is evident that the

[260] Ibid s 35

[261] See for instance <http://ec.europa.eu/environment/waste/plans/pdf/2012_guidance_note.pdf> accessed on 18 November 18; for Guidance Note on EU Waste Planning framework

Act therefore has an inordinate focus on service delivery aspects of SWM to the exclusion of technical aspects that are critical for integrated and sustainable approach.

Thirdly, like the draft national SWM law, the Nairobi Act does not provide for involvement of stakeholders in the waste value chain in decision-making and governance processes. This obviates from the concept of co-regulation which emphasises involvement of self-regulatory organizations in policy process[262] and undermines public participation and accountability in waste management. Fourthly, even though the Act attempts to address issues of financial sustainability of SWM particularly through adoption of environmental levy, there is no special fund created where such levy is to be accumulated for better management. In the absence of such a special fund, it appears that the proceeds from the levy will revert to the County Revenue Fund from where such monies may be appropriated to finance county operations including SWM services. It is important therefore to ring-fence the proceeds of the levy by creating a special fund into which the same shall be deposited and managed to support SWM operations for sustainability.

Fifth, the law does not provide clear guidance on decentralization of SWM. It does not mention structures created by UACA at sub-county level. In the absence of such provisions, it is presumed that SWM will remain for now, a centralized function of the City County government. Sixth, even though the law has various financial incentives to promote participation in waste value chains, there is no clear provisions promoting marketization of wastes. For instance, the law lacks provisions establishing quota for procurement of products of recycling or waste valorization. In the absence of such provisions, those engaging in recycling may experiences difficulties finding markets for their products.

Lastly, the law lacks clear provisions on promoting inclusion of the poor and vulnerable in SWM operations and governance. Even though the law permits the CECM to facilitate

[262] Kidd, (n218) 29

participation of individuals and persons in all aspects of SWM, without clear mention of vulnerable groups there will be risk of exclusion.[263] The licensing regimes also appear to favour established companies and not informal sector operators, majority whom belong to disadvantaged groups.

3.5.2 Other County Laws

Machakos County has enacted the Machakos County e-Waste Management Act[264] to regulate disposal of electrical and electronic waste, that are considered harzadous in nature. But to the extent that these wastes interface with municipal solid waste through household wastes that bear insignificant amounts of hazardous elements, the Act merits consideration here. The Act recognizes the right to clean and healthy environment free of e-waste and imposes a corresponding duty on all persons to safeguard the environment.[265] The law references EMCA and other national laws on e-waste and which ensures synchronization with the framework law.[266] The grants licencing powers to the Director for environment and creates a committee headed by the County Executive Committee Member responsible for environment.[267] The Act inordinately focuses on disposal of e-waste, omitting other aspects of waste hierarchy approach (minimization, re-use, recycling and recover).[268] To this extent, the law is limited in its promotion of environmental integration and sustainability therefore.

The Machakos and Nairobi City counties have enacted public participation laws in line with requirement of County Government Act and the CoK (2010) on operationalization of public participation frameworks by respective county governments.[269] These include the Machakos County Public Participation Act,[270] the Nairobi City County Public Participation

[263] NCCSWMA, s 6
[264] Act No.4 of 2015
[265] Ibid s 5
[266] Ibid s 4
[267] Ibid pts II & III
[268] Ibid s 6-10
[269] CGA s 101 and Constitution of Kenya (2010) pt 2 of Fourth Schedule
[270] Act No 8 of 2014

Act (NCCPA)[271] and the Nairobi City County Neighbourhood Associations Act (NCCNAA).[272] The laws seeks to provide a framework for participation of the public in formulation of policy, legislation, budgeting, implementation of development plans and programmes as well as service delivery by the County government.[273] Both Kajiado and Kiambu counties have developed public participation laws, but these are yet to be adopted (since 2016). Public participation laws provide a normative basis for environmental interest groups to take part in decision-making process and hence influence the incorporation of environmental perspectives in the development process, consistent with the environmental integration imperative.

The Nairobi Neighbourhoods Associations law has the overarching goal of facilitating the participation of neighbourhood and community associations in service delivery, including waste management.[274] The law also provides a basis for granting of benefits and incentives for recognized neighbourhood associations as well as provisions of agency arrangements with the City county government.[275] Uniquely, the Act provides for a mediation committee appointed by the Governor from scheduled stakeholders as a dispute resolution mechanisms.[276] However, this law only focuses on neighbourhood associations and ignores community associations, yet these two may differ in meanings and operations. In most cases, community associations are to be found in low income and informal residential areas, whereas neighbourhood associations are associated with middle class and high income areas of the city. To the extent that this distinction is accurate, this law therefore serves the need of the upper strata of society, while appearing to ignore the disadvantaged and marginalized by denying community associations benefits and incentives to fully engage in MSWM processes.

[271] Act No.5 of 2015
[272] Act No 4 of 2016 (hereinafter referred to as 'Neighbourhoods Associations Act")
[273] See NCCPPA s 3 & MCPPA, s.3
[274] Preamble and S.3 of the Neighbourhoods Associations Act
[275] Ibid ss 13 &14
[276] Ibid s 15

3.6 Gaps in the Legal Framework

The legal framework at all levels incorporates provisions embracing the sustainable development principles and the right to clean and environment. To this extent, the framework provides norms for environmental protection and sustainability, which provide good anchorage for environmental integration in the MSWM framework. Because of the binding nature of sustainable development principle under Article 10 and right to clean and healthy environment under Article 42 of CoK (2010), this creates a normative thrust to ensure sectoral policies, laws and institutions created thereunder espouse sustainability and environmental protection obligations, that are essential for implementation of environmental integration. Case law as reflected in the *ACRAG* and *Martin Osano* case has further underscored the aforesaid normative thrust in alignment of MSWM framework.

However, the despite clear obligations imposed under international law, the national and county MSWM frameworks do not sufficiently incorporate the waste hierarchy approach in the obligations for waste generators and operators, thus significantly limiting entrenchment of environmental integration in waste regulation. It is noteworthy that the Sustainable Waste Management Bill, 2019 nevertheless incorporates the waste hierarchy and introduces the ambitious goal of zero waste policy the latest approach in advancing sustainability.[277] Secondly the legal framework demonstrates aspects of normative incoherencies that result in fragmentation which could undermine environmental integration. Viewed against the Luc Wintgen's theory of coherence of law, these incoherencies may effective consideration of environmental considerations, both vertically and horizontally. Ongoing efforts to review sectoral laws in MSWM sector therefore should strive towards elimination of the identified incoherencies. The drafting of the Climate Change Act of 2016 offers a good example in efforts to minimize such incoherencies.

[277] Sustainable Waste Management Bill of 2019, S.5 (f); the zero waste principle as defined in s 2 of the Bill incorporates the waste hierarchy approach

MSWM legal framework provides for multiplicity of mechanisms that facilitate stakeholder coordination in policy matters and administration of sectoral laws, in which NEMA is an integral part. These include: Cabinet secretary for Environment with to promote cooperation among state and non-state actors and as well, public participation in policy formulation processes;[278] County Environment Committees (CEC);[279] National Council on Occupational Safety and Health (NACOSH) under OSHA;[280] Physical Planning Liaison Committees under Physical Land use and Planning Act;[281] Climate Change Council under Climate Change Act.[282]However, the multiplicity of these structures may serve to fragment rather than reinforce coordination efforts unless NEMA leverages on its presence in these structures effectively. The proposal to have a Waste Management Council with similar coordination roles under the proposed national solid waste law may perhaps remedy this weakness.[283] The Council is structured as an intergovernmental and multisectoral body with representatives from the private sector. NEMA is part of the Council and thus could ensure sustained attention to environmental issues in decision making processes of the Council.

The National Environmental Action Plan (NEAP) binds all persons and public authorities and thus process promotes horizontal coordination of various institutions in development and implementation of the plan.[284] However, the County Environmental Action Plan (CEAP) is not undergirded by similar provisions in law that bind authorities to its contents and thus there is no normative link between CEAP process and other county decision-making processes (e.g. integrated development planning and budgeting) with direct impact on waste planning hence this could lead to fragmentation of planning processes with adverse consequences for environmental integration.

[278] EMCA s 5
[279] Ibid ss 29 & 30
[280] Ibid s 27
[281] PLUPA, s 75
[282] CCA s 5
[283] Sustainable Waste Management Bill 2019, s 6 (2)-(8)
[284] EMCA s 38 (l)

Thirdly, confusion over division of regulatory powers between the NEMA and County governments persists, following the rather inconclusive determination of the WEMAK case. Thus it is expected that both NEMA and County authorities will continue tussling over the mandate to licence waste operators at the County level. The Sustainable Waste Management Bill (2019) offers little possibility for resolution of this dispute, since it retains full regulatory powers of NEMA, without reference to those of County governments. This may promote overlaps and therefore regulatory fragmentation thus undermining opportunities for environmental integration.

Fourthly, the MWSM framework however evidently has few notable inter-governmental structures for coordination. These are to be found under the County Government Act (Inter-governmental Forum)[285] and Climate Change Act (National Climate Change Council).[286] Thus, opportunities for vertical environmental integration was undermined by the absence of robust inter-governmental coordination mechanisms. This challenge is largely attributed to the fact that most MSWM laws are yet to be amended to accord with the devolved system of governance as per CoK (2010). However, the Sustainable Waste Management Bill has provision for National Waste Council, which is modelled as an inter-governmental body for coordination and harmonization of policies, programmes and regulations on waste management for both levels of government.

Fifth, the MSWM framework provides good opportunities for entrenching voluntary approaches to waste regulation, with positive implication for enhanced private sector engagement and coordination. These include extended producer responsibility schemes, franchises system and management contracts among others and these have been credited for the dramatic reduction of waste problems in Western Europe in recent years. From an integration point of view, co-regulation is an important tool for ensuring community groups

[285] CGA s 54
[286] CCA s 5, the Chairperson of the Council of Governors is a member of the Council

and private sector perspectives are incorporated in environmental decision-making and in the regulatory process.

EMCA generally empowers NEMA to encourage voluntary environmental conservation practices and other such instruments,[287] whereas Waste Regulations of 2006 recognize aspects of extended producer responsibility under the clean production principles.[288] The Nairobi City County SWM law also recognizes solid waste management as a shared responsibility, identifies franchise and management contract systems and promises regulations to elaborate on recovery of waste materials by various actors hence anchoring aspects of co-regulation.[289] However, there is no framework for operationalizing the suggested co-regulation schemes with the requisite incentive structures and regulatory safeguards against free rider problems. There is no formal recognition of the role of private sector in decision-making relating to SWM governance at both national and county levels. This may explain the slow uptake of private sector responsibility in waste management. Equally important, the envisage co-regulation aspects under MSWM framework does not recognize informal sector actors such as waste pickers and petty recyclers. Excluding their perspectives in regulatory process could undermine sustainability of the whole system.

3.7 Chapter Conclusion

Kenya's MSWM legal framework has significantly grounded the principle of integration as well as the concept of environmental integration and provided a wide basis for its operationalization through articulation of the principle of sustainable development and environmental protection rights. However, numerous instances of normative incoherencies present persistent risks of regulatory and institutional fragmentation that may undermine the entrenchment of environmental integration in the sector. In the next chapter, the actual implementation of the normative framework of environmental integration is assessed,

[287] EMCA, S.9 (2) (q)
[288] Waste Regulations 2006, S.6
[289] NCCSWMA 2015, S.3, 6(2) and 9

through data collection and analysis as part of the field survey and key informant interviews that were conducted.

CHAPTER FOUR:
IMPLEMENTATION OF NORMATIVE FRAMEWORK FOR ENVIRONMENTAL INTEGRATION IN MSWM

4.1 Introduction

One important theoretical claim associated with the sociological school of jurisprudence is that a conceptual approach that treats law as a closed system of definitions, rules of operation and general postulates cannot sufficiently explain how the law functions in society.[1] It is therefore regarded as necessary to delve deeper and understand the interaction between the law and its subjects in reality in order to form a fuller picture of how law operates in society. This chapter proceeds from this theoretical premise and presents the key findings borne out of the field data collection and analysis in this study.

This chapter provides findings from the field study on the operation of the normative framework for environmental integration in MSWM. It provides an assessment on the extent to which norms of sustainability and environmental protection have been implemented to achieve environmental integration in MSWM framework. The challenges undermining or impeding the implementation of these norms and their implication on promotion of sustainability in MSWM are identified and discussed.

4.2 Incorporation of the principle of sustainable development in MSWM framework

Cognitive environmental integration which entails awareness and level of support of the principle of sustainable development is also critical for realization of environmental integration.[2] The survey therefore sought to assess aspects of cognitive integration among registered workplaces that were targeted by this study.

[1] G. Sawyer, *Law and Society*, (Clarendon Press, 1965) 17
[2] Buhrs *Environmental integration* (SUNY Press, 2009) 8-9

Survey respondents were generally moderately well-informed about the principle of sustainable development (61% agree to have the knowledge) and the fact that the Constitution of Kenya (CoK, 2010) recognizes the importance of sustainable development (59%). These moderate levels of knowledge could be attributed to the positions they hold at their establishments (mainly management) which would require possession of knowledge on issues of policy and sustainable development. Respondents from large scale establishments were more aware of sustainable development (73%) while those from small scale businesses had the least awareness (39%). Respondents from small businesses thus are not well- informed about the principle and hence more educational campaigns should target this group. By category of business, all respondents from the academic institutions were most aware of sustainable development.

Issue/Proposition	**Level of agreement (%)**
I am adequately informed about the principle of sustainable development	61
The Constitution recognizes the importance of sustainable development	59
National laws promote sustainable development	50
County laws promote sustainable development	48
Economic development considerations are prioritized over environmental protection issues at the national level	49
Economic development considerations are prioritized over environmental protection issues at the county level	55
Sustainable development is taken seriously in Kenya	30

Table 5:Sustainable development in legal framework

On the flip side, 3 out of 10 respondents felt that sustainable development is generally not taken seriously in the country especially amongst respondents from the manufacturing

sector (46%) and hotel and restaurant (44%). This points to evidence of cognitive dissonance[3] among the respondents i.e. failure to reconcile the apparent promotion of sustainable development in law and policy with evident poor sustainability practice and outcomes. The persistence of unsustainability trends such as continued environmental degradation and pollution may affirm the said cognitive dissonance.

The Constitution recognizes sustainable development as a principle of governance[4] and therefore binding upon the State in development, implementation and interpretation of legal and policy frameworks and actions.[5] The rather unfavourable perception on the seriousness with which authorities and the public take sustainable development could be interpreted as undermining the binding effect of this principle. Thus, relying of the principle of sustainable development as the basis of organizing practical measures to coordinate various stakeholders in ensuring environmentally-sound management of wastes is likely to be a challenge. Duty bearers therefore need to do more in terms of convincing the public that sustainable development is important and taken seriously in Kenya though positive actions aimed at balancing economic development with environmental protection and awareness campaigns as well.

Related to the foregoing, the study has revealed that a moderate proportion (54%) of respondents view the NEMA as being committed to addressing environmental protection challenges in the country. This reinforces the perception that there is limited commitment towards realization of sustainability at the national level. The study also revealed that a significant proportion of respondents (49%) felt that economic considerations trump over

[3] See for instance Joane Vining 'Emerging theoretical and methodological perspectives on conservation behavior' in R. Betchel & A. Churchman *New Handbook of Environmental Psychology*, (Wiley, 2002)541-558; who frames cognitive dissonance in similar terms of contradiction between strong prevalence of pro-environmental attitudes on one hand and poor conservation behavior on the other.
[4] CoK (2010) art 10 (2) (e); other principles include public participation, human rights, transparency, accountability, good governance, integrity, rule of law, devolution of power, inclusiveness, patriotism, national unity, social justice and equity
[5] In the *Center Trust & Others v the AG* Petition No 243 of 2011 Article 10 Principles were not simply hortatory in their effect but that policymakers and legislators were duty-bound to consider them when discharging their respective mandates

environmental protection imperatives in decision making on development at the national level. Recent actions by the National government point to prioritization of economic development agenda at the expense of environment protection considerations. The Cabinet Secretary responsible for environment by decree slashed EIA fees levied by NEMA ostensibly to ease the cost of doing business and investment in Kenya.[6] Within the same period, the NEMA authorized the construction of the standard gauge railway line over the Nairobi National Park, despite protests from environmental lobbies and a National Environmental Tribunal decision against the implementation of the project.[7]

Issue/Proposition	**Level of agreement (%)**
NEMA plays adequately its role in environmental protection in Kenya	54
NEMA plays adequately its role in environmental protection in my county	50
The County Governor takes seriously environmental protection in my county	49
My local MCA takes seriously environmental protection in my county	14
County department that deals with environmental protection adequately plays its role in environmental protection	38

Table 6: Commitment of National and County Government to environmental protection

[6] Gazette Notice No. 13211 dated 17 September 2013 which reduced the applicable fees from 0.1% of the total cost of the project to a minimum of Ksh 10,000 with no upper capping

[7] *Okiya Omtatah Okoiti & another v NEMA & others*, NET Appeal No. 200 of 2017 where the Naitonal Environmental Tribunal issued a stop order directed to the government over irregularities that were pointed out in the issuance of an EIA license for the project.

The survey also revealed poor favourable rating (39%) on the President's commitment towards improvement of MSWM. Yet Key informants acknowledged his role in the launch of the Nairobi Urban Regeneration Programme as a joint initiative between the National and City County governments which seeks to restore the urban landscapes and amenities to their former glory.[8] The programme is led by a multisectoral and intergovernmental team jointly chaired by the Cabinet Secretary responsible for Tourism and the Governor of Nairobi City County. MSWM is among the key areas of focus and the relocation of Nairobi's Dandora dumpsite has been prioritized. This demonstrates some level of will towards addressing the waste problem in a coordinated and multi-sectoral manner.

At the County level, 49% of respondents felt that County governors were committed to addressing environmental protection in their respective Counties. A significantly lower proportion of respondents (39%) felt that the County environment departments were committed to environmental protection issues. In the same vein, Members of County Assemblies in the target counties received the lowest ratings, with only 14% of respondents acknowledging their commitment to environmental protection. Overall, Counties were poor rated on this with 55% of respondents agreeing with the proposition that Counties prioritized economic considerations over environmental protection issues.

There is evidence to support the rather poor rating of Counties on environmental protection issues. The authorities in Nairobi County have allowed the continued operation of Dandora dumpsite, despite having exceeded its waste holding capacity and presenting myriad environmental and public health risks.[9] Nairobi City County Departments continue to sanction development projects in or around ecologically-sensitive areas, thus imperilling sustainability.[10] Even though noise pollution control was devolved to County governments,

[8] Interview with County Director, NEMA, 18 September 2018, Nairobi
[9] UNEP, UN-HABITAT, Republic of Kenya, City Council of Nairobi, *City of Nairobi environment outlook* (UNEP & CCN, 2006) <https://wedocs.unep.org/rest/bitstreams/15013>/ accessed 09 July 2020;
[10] See Mary Mwangi, 'An assessment of the challenges facing urban green spaces:a case of the City Park in Nairobi' (2019) 9 International Journal of Scientific and Research Publications, 159-165; author notes that encroachment of the City Park by developments approved by city authorities threatens biodiversity and sustainability of the unique habitat.

public entertainment spots and heavy industries continue to commit the nuisance.[11] In the four target counties, only Nairobi City County has enacted a solid waste management law.

In Machakos county, a draft Bill and policy were being developed at the time of the study as part of the ongoing Nairobi Integrated Metropolitan Programme.[12] However, the Machakos County government enacted an e-waste management law prior, ostensibly due to lobbying and financial support from an NGO that wanted to set-up a recycling plant within Mavoko sub-County.[13] The NGO successfully convinced the County officials that such a law was necessary to create an enabling investment environment for establishment of the e-waste facility. Thus, the e-waste law was enacted out of economic rather than environmental considerations, revealing fragmentation in decision-making. In Kajiado, a draft County Environment Management Bill is pending before the County Assembly and if enacted, it will provide regulatory framework for MSWM as well.[14] Thus, the slow pace of legislative development demonstrates low priority accorded to environmental issues in the legislative processes.

Limited commitment to sustainability by environmental authorities was also reflected in the poor ratings given by respondents to NEMA on facilitation of public participation in decision-making processes and operational aspects of environmental management generally (31%) and MSWM (33%) particularly.

Issue/Proposition	**Level of agreement (%)**
NEMA affords members of public and Private sector adequate opportunity to participate in environmental protection	31

[11] Interview with official of Syokimau Residents Association, 16 November 2018, Machakos County
[12] According to the Assistant Director of Environment, it is a requirement for participating counties in NAMSIP to have in place a regulatory framework for SMW and he was optimistic that the County will adopt the law and policy sooner rather than later.
[13] Interview with County official in charge of waste management, 08 October 2018, Machakos County,
[14] Interview with Director of Environment, 09 October 2018, Kajiado County Government

Issue/Proposition	Level of agreement (%)
NEMA affords the members of public and Private sector adequate opportunity to participate in regulation of solid waste management in my county	33
County government allows participation of residents associations (or local community-based organizations- whichever is applicable) to participate in waste collection and disposal	26

Table 7: Commitment of National and County government to promotion of public participation in environmental matters

Public participation is one of the constitutive principles of sustainable development,[15] and is essential in ensuring environmental perspectives of non-state actors are considered in the decision-making process to facilitate environmental integration.[16] However, even though there was acknowledgement of the efforts by NEMA and County governments to involve residents associations and business lobbies in public participation processes, there were concerns over the quality and outcomes of the process.[17] Often, public participation forums were poorly managed by County officials in terms of late notice, limited provision of information and poor time management, which in turn compromise the outcome of the process.[18]

[15] O. Pavlova, 'The legal basis of public participation in the international environmental governance as a requirement for sustainable development' (2017)6 European Journal of Sustainable Development, 267-271; also see *Communications Commission of Kenya & 5 others v Royal Media Services & 5 others* (2014) eKLR (also cited as Petition No.14, 14A, 14B, & 14C of 2014 (consolidated) at para 366-391

[16] David Humphreys, 'Integers, integrants and normative vectors: the limitations of environmental policy integration under neoliberalism' (2016) 34 Environmental and Planning C: Government and Policy, 438-440

[17] Interview with Kenya Alliance of Residents Association official, 25 September 2018, Nairobi County, who cited the involvement of residents associations and business community groups in the formulation of NEAP, Sustainable Solid Waste Management Policy and Nairobi City County Solid Waste Management Act among others.

[18] Ibid

4.3 Incorporation of right to clean and healthy environment in the MSWM legal framework

The Constitution lays down a fundamental obligation on the State to ensure environmental protection by enshrining the right to clean and healthy environment.[19] It is a composite and judicially-enforceable right which obligates the government to take legislative and other measures contemplated in provisions outlining State's environmental duties.[20] One such obligation pertinent to sectoral and inter-governmental coordination is the duty imposed on every person to cooperate with State organs and other persons in protection and conservation of the environment to ensure ecologically sustainable development.[21]

Generally, an overwhelming majority of the respondents (87%) agree that there is strong support for the right to clean and health environment in Kenya's legal framework; the Constitution of Kenya affords citizens the right to clean and healthy environment; national & county laws on MSWM promote right to clean and healthy environment and that; county laws promote right to clean and healthy environment. It is also important that a significant majority (79%) of citizens recognize the duty imposes on the State and non-state actors in promotion of right and clean environment.

Issue/proposition	**Level of agreement (%)**
Right to clean and healthy environment is enshrined in constitution	87
National MSWM law promotes right to clean and healthy environment	85
County MSWM laws promote right to clean and healthy environment	85
State has duty to promote right to clean and health environment under the constitution	79
Non-state actors have duty to promote right to clean and healthy environment under the constitution	79
State actors have duty to promote right to clean and healthy environment under national law	76
National authorities take seriously duties to promote right to clean and healthy environment	48

[19] Constitution of Kenya, art.42
[20] These duties are listed under Article 69 and extend to non-state actors as well.
[21] CoK 2010, art 69 (2)

Issue/proposition	Level of agreement (%)
County authorities take seriously duties to promote right to clean and healthy environment	55
Citizens have legal right to clean and healthy environment free of solid wastes	97

Table 8: Environmental protection rights in legal framework

There is near-universal acknowledgement (97%) of the right to clean environment free of solid wastes and this is reflected in the judicial thinking as per the case *ACRAG & 3 others v Municipal Council of Naivasha* [22] where the Court held that poor waste management and the attendant risks to human and environmental health constitutes an infringement of the constitutional right to clean and healthy environment.

The study also revealed readiness by citizens to safeguard their right to clean and health environment through court actions. In Machakos County for instance, Syokimau Residents Association has established a legal committee comprising of at least 40 lawyers who provide legal advice and services to members on a *pro bono* basis.[23]Indeed the Association on one occasioned sued the County Government of Machakos and NEMA over issuance of building approvals without taking into account public participation, residents' concerns over waste disposal and threats to the right to clean and healthy environment.[24] In the affluent residential area of Runda, the area residents association has entered into a recognition agreement with the Nairobi City County Government that allows the association to vet and make binding recommendations on building approvals within the area.[25] Through this arrangement, the residents association is able to maintain the overall environmental and aesthetic quality of the neighbourhood in a manner that promotes the

[22] (2017) eKLR
[23] Interview with official of Skyokimau Residents Association, 16 November 2018, Machakos County
[24] Syokimau Residents Association Ltd v County Government of Machakos & another (2019) eKLR (Civil Appeal 387 of 2017); The Court of Appeal however dismissed the petition, on grounds that orders sought by the Association to stop issuance of building approvals would paralyze the operations of the County Government.
[25] Interview with official of Runda Residents Association, 26 September 2018, Nairobi County

right to clean and healthy environment. This level of engagement over environmental rights however is attributed to middle and upper income neighbourhoods, which tend to have better level of self-organization and financial capacity to prosecute offending authorities.[26] In low income neighbourhoods where level of awareness on rights is low and residents lack self-organization, it is difficult for citizens to enforce the right to clean and healthy environment in courts, unless with intervention from public-spirited NGOs.[27]

It should raise concern that less than half of respondents (48%) felt that National authorities do not take seriously their obligations to promote realization of the right to clean and health environment. The survey also revealed poor perceptions on the ability of National authorities in discharging their key responsibilities on MSWM as shown below:

Authority	**Level of agreement (%)**
Ministry of Environment	49
NEMA	46
Directorate of Occupational Safety and Health	45

Table 9: Level of performance of National authorities in MSWM functions

Since the Constitution obligates citizens and stakeholders to cooperate with State authorities in protection of the environment, the rather poor rating of these institutions on their ability to deliver on environmental protection rights and effective waste management undermines their credibility and this could undermine potential for sectoral coordination. There is need for authorities at both national and county levels to take their environmental responsibilities seriously and engage the public very closely on the implementation of these responsibilities, in order to address these negative perceptions.

From the study, respondents raised the question of efficacy of enforcement of court orders as a challenge to realization of the right to clean and health environment.[28] Enforcement of

[26] Interview with official of Kenya Alliance of Residents Association, 25 September 2018, Nairobi County
[27] Ibid
[28] Interview with Skyokimau Residents Association official, 16 November 2018, Machakos County

such order relies on national or county governments, which in the first place stood accused of environmental violations. It is therefore not unusual for governments at both levels to ignore court orders. This causes disillusionment in the fight for environmental rights and further undermines realization of the right to clean and healthy environment.

4.4 Incorporation of the Waste Hierarchy in MSWM Framework

The adoption of waste hierarchy approach in MSWM normative framework is critical for realization of sustainability while at the same time, it imposes imperatives for sectoral coordination.[29] This sub-section sought to establish the extent to which the county-level legal framework on MSWM embraces the waste hierarchy in a manner consistent with environmental integration. The study yielded quite varied levels of satisfactions expressed by proportion of responses from respondents to various elements of waste management that are pertinent to the waste hierarchy approach. Each of these elements is further examined below:

4.4.1 Waste minimization and prevention

Waste prevention and minimization is accorded the highest priority in the waste hierarchy. In terms of composition of wastes, the following percentages represent proportion of respondents indicating that categories of waste generated from their firms:

Type of waste	Percentage
Paper	90%
Food	63%
Plastics	54%
Scrap metal	29%
Clothes	25%
Old chattels	17%

Table 10: Waste characteristics by composition

[29] Daniel Hoornweg & Pernaz Bhada-Tata, 'What a waste: a global review of solid waste management' (World Bank, 2012) 26

From the foregoing, paper constitutes the highest category of wastes generated by most respondents' firms followed by food and plastics. High volumes of organic and paper wastes ahead of other categories generated by establishments is consistent with results of previous study on Kenya and sub-Saharan African countries [30] and present a good opportunity for waste prevention and minimization through conservation and reuse of organic and plastic materials.

In terms of volumes of waste generated the following table indicates the percentages of categories of waste quantities churned-out on a weekly basis as disclosed by respondents:

Waste Quantities generated (Kg per day)	**Percentage (%)**
0-5	43
6-10	15
11-15	6
16-20	6
21-25	3
+25	26

Table 11:Waste quantities generated

In terms of waste quantities generated per size of the firm, the following was recorded:

Waste Quantities generated (Kg per day)	**Small firms**	**Medium firms**	**Large firms**
0-5Kg/day	67%	48%	33%
6-10kg/day	17%	18%	11%
11-15 kg/day	0%	5%	8%
16-20kg/day	6%	7%	4%
21-25 Kg/day	0%	3%	4%
+25Kg/day	11%	19%	40%

Table 12: waste quantities generated by firm size

[30] Karak, R.M. Bhagat R.M. & Pradip Bhattacharyya 'Municipal solid waste generation, composition and management: the world scenario*'* (2012) 42 Critical Reviews in Environmental Science and Technology 1574

The implication of the above is the need to target large size firms with waste prevention and minimization sensitization programmes, since these constitute a highest proportion of firms generate largest quantities of waste.

The County Government Act requires Counties to adopt tariff policy which ensures users pay for services in proportion to the use of that service.[31] Imposing user fees based on volume or weight of solid waste generated is a way of influencing environmental behavior consistent with waste minimization and prevention. However, only slightly above a half (54%) of the establishments were of the view that county authorities impose waste collection charges that take into account the volume/quantities of waste generated. The Nairobi City County waste authorities insisted that user charges are pegged on volumes of generated as per the provisions of the City SWM law.[32] Large scale businesses agreed with this proposition (62%) whereas small enterprises tended to disagree (22%). It could be true that waste collectors imposed higher charges on large scale enterprises, because of waste volumes involved. However, for small scale enterprises, it may be true that due to low volumes of waste generated, the entities are charged the minimum user fees which are perceived to be delinked for volumes since they rarely change.

The CGA imposes a requirement that Counties should establish tariff systems that are equitable.[33] Thus one would expect county authorities to impose user fees on waste collection that take into account the level of income of an establishment. However, only a third (or 33%) of the respondents felt that the user charges take this principle of equity into account. Small enterprises, who ordinarily should benefit from such an equitable tariff structure disagreed most with this proposition (7%). To promote therefore waste minimization and prevention, the City authorities should specify clearly the basis of imposition of waste collection charges and enforce volume-based user charges.

[31] CGA, 2017 s 120 (3) (b)
[32] Interview with Assistant Director, Environment Department, 20 September 2018, Nairobi City County
[33] CGA, 2017, s 120 (3) (a)

4.4.2 Waste Collection

Effective waste removal from households and collection from premises of waste generators is critical to the success of other elements in the waste hierarchy. Waste collection by waste collectors accounted for the highest observed level of satisfaction (83%) meaning respondents were happy with the way waste collectors gathered waste from the establishments. There was universal satisfaction with waste collection by hotels and restaurants and construction companies (100%) and this reflects to sensitivity of waste to these industries hence the need to ensure efficient collection from business premises.

Waste collection services in Nairobi metropolitan area is dominated by private sector, with the County authorities providing such services in the central business district and satellite towns.[34] The relatively high satisfaction rates are driven by corresponding collection rates within the neighbourhoods of registered workplaces targeted by these study. Registered workplaces are likely to be cited in neighbourhoods that are well serviced by private sector companies responsible for waste removals. Failure to collect wastes encourages illegal/unlawful dumping, unless environmentally sound methods of disposal (e.g. compositing and incineration). The study indicated that 65% of the respondents were satisfied with the methods of disposal of uncollected wastes, pointing to widespread use of incineration (due to stringent regulations against composting). However, a significant minority (34%) agreed with the prevalence of unlawful dumping within the neighbourhoods of registered workplaces.

The upshot of these findings is that considerable volumes of wastes are diverted away from the waste value chain through onsite disposal (incineration) and unlawful dumping. There is need therefore for effective measures to ensure universal coverage of collection services with a view to optimizing on recovery of value from generated wastes. It also emerged

[34] Alexandra Soezer, *Nationally appropriate mitigation action on a circular economy solid waste management approach for urban areas in Kenya* (Ministry of Environment & Natural Resources & UNDP, 2017), 28-29; the report notes that only 20 waste collection trucks belonging to the Nairobi City County government are functional at any time.

from the study that corruption undermines efficient collection services. In Kajiado for instance, it was observed that some unscrupulous waste collection companies colluded with County officials to inflate the number of tipping trips made per day, thus increasing the overall cost of collection to the County.[35] In Nairobi City County, procurement of waste collection services was tainted by strong perceptions of corruption thus undermining the competitiveness of the process and thus value for money considerations.[36] Indeed, the Nairobi City County government also formally admitted that corruption is one of the challenges undermining effective MSWM and reported the prosecution of three workers over the same.[37]

4.4.3 Waste segregation and transportation

Segregation of wastes is legal obligation under EMCA framework[38] and the Nairobi City County Solid Waste Management Act.[39] There is a very high level of awareness on the existence of a legal duty to segregate wastes at source with 81% of the respondents agreeing with this proposition. The rating for waste segregation scored a lower rating level with 55% of respondents expressing satisfaction with this element. It should be noted that segregation facilitates ease of reuse, recycling and recovery since the respective waste operators are able to collect the specific wastes required for their respective operations. At the premises level, half of the respondents indicated that they routinely sort and separate different kinds of wastes before collection.

There was fairly high level of satisfaction with transportation of waste with 71% of respondents expressing this sentiment. This is attributed to ongoing efforts by NEMA to ensure waste transporters make use of covered tippers to reduce the risk of waste spillage.

[35] Interview with anonymous key informant, Kajiado County
[36] Interview with anonymous key informants, Nairobi City County Government
[37] Nairobi City County Government, 'County Annual Development Plan (CADP) 2019/2020', (Nairobi City County, 2018) 52
[38] EMCA Waste Regulations, 2006, reg 6; the duty of waste generators is however limited to segregating harzardous from non-hazardous wastes
[39] NCCSWMA, 2015 S.25; duty to segregate extends to placing segregated wastes in approved containers for each sorted category (organic, plastic, paper, metals etc)

Counties have also modernized waste collection services through acquisition of new trucks which are covered and effective as well. The modest uptake of segregation is attributable to weak enforcement of the law and failure by the City authorities to obtain buy-in from stakeholders. In 2014, the Nairobi City County government initiated a pilot scale, an initiative on segregation of wastes in selected estates within the Nairobi city.[40] However, the initiative collapsed after the waste scavengers at the Dandora dumpsite blocked delivery of segregated wastes, accusing the transporters of diverting valuable waste categories to other markets thereby undermining their livelihoods. The City authorities had not consulted with the waste scavengers and agreed on modalities of their participation in the segregation initiative, thus precipitating the action. The authorities had also failed to reach out to formal waste recyclers to promote uptake of sorted wastes and hence diverting waste to the dumpsites.

Yet in the affluent residential areas of Runda in Nairobi, households have managed to institute waste segregation at source as a matter of practice.[41] This was made possible after enlisting a waste collection company, Takataka Solutions, that owns waste sorting and recycling facilities in Kiambu County. The demand for sorted waste by the company therefore sustains the practice at the household level to-date. There is need therefore to ensure broad-based consultations and design of segregation plan which taken into account the interests of all players in the waste value chain.

4.4.4 Waste Recycling and composting

The study revealed very low levels of satisfaction with recycling (28%), pointed to limited efforts towards making this a significant enterprise with visible impacts for the respondents. The respondents rate poorly efforts by the County governments in promoting recycling with 14% agreeing with this sentiment. Industry players pointed out that the County governments subjected to double taxation waste materials that could be utilized for

[40] Interview with Urban Planning official, 10 September 2018, Nairobi City County Government; also interview with NEMA County Director, 18 September 2018, Nairobi City County
[41] Interview with official of Runda Residents Association, 26 September 2018, Nairobi

production of secondary materials.[42] This served as a disincentive for recycling at the firm level.

Respondents rated efforts by County governments to promote composting rather poorly with 18% agreeing with this proposition. Residents pointed out that the County authorities had prohibited composting for households with adequate space to do so within the municipalities on grounds of public health concerns.[43] Yet, environmentally-friendly composting methods do exists that can be utilized at the household level. If County governments could procure compost for ongoing city streets beautification programmes, there would be considerable uptake of compositing of MSWs.[44] Unless the County governments reviews its regulations to allow for small scale composting, recovery of value from organic wastes will remain a challenge.

4.4.5 Waste disposal

Disposal through open dumpsite is the dominant method of MSW disposal in the target study areas. However, very few respondents (26%) expressed satisfaction with management of public dumpsite, an indication of poor disposal of wastes in target sites. NEMA officials explained that they had initiated procedures for licencing of Nairobi's Dandora dumpsite in 2008 but the process stalled after political interference.[45] It was further observed that the Dandora dumpsite was firmly in the clutches of cartels, who make millions out of selling wastes to recyclers and allowing illegal dumping at the site, and had overtime amassed political power to such an extent that they were capable of thwarting efforts to modernize the dumpsite.[46] In the absence of a licence, NEMA felt constrained to impose other regulatory measures on the dumpsite such as environmental audits. This could partly explain the continued operation of the dumpsite in a manner which is not

[42] Interview with official of Kenya Association of Manufacturers, 21 September 2018, Nairobi; plastic waste was targeted by County officials for taxation (cess)
[43] Interview with official of Runda Residents Association, 26 September 2018, Nairobi
[44] Ibid
[45] Interview with NEMA County Director, 18 September 2018, Nairobi
[46] Interview with anonymous key informants, Nairobi City County Government

environmentally-safe. In all other counties, NEMA was yet to licence existing dumpsite for more or less similar reasons. Doubts were expressed among participants over the use of environmentally-safe disposal methods by occupiers of registered workplaces, with 48% of respondents agreeing with a similar proposition for industries and 56% for occupiers of commercial buildings located within their neighbourhoods respectively.

A significant proportion of respondents (60%) felt that the law imposed adequate penalties for those who dispose waste illegally. Following the enactment of the Nairobi SWM law, the penalties for unlawful dumping have substantially been increased and this could explain this favourable perception. Thus, penalties alone may not suffice in addressing the problem of unsanitary and unlawful dumping, particularly in Nairobi where the law appears to many, adequate in this regard. Indeed, it was suggested that voluntary approaches are necessary to address this problem.[47] However, in other counties which currently rely on bylaws enacted by predecessor municipal authorities, penalties are substantially lower hence this perception could be justifiable. [48]

4.5 Gaps in the Normative Anchorage for Environmental Integration in MSWM

4.5.1 Inadequate Political will for environmental integration in MSW

Political will and enabling leadership are key factors for the promotion of environmental integration.[49] This study has revealed rather low to modest perceptions on the existence of political will to address environmental problems as well as SWM challenges at both national and county levels. Besides the measurement of perceptions, it is necessary to interrogate development frameworks and political structures that steer development with a view to assessing the challenges and prospects related to political will to support environmental integration in MSWM.

[47] Interview with NEMA County Director, 18 September 2018, Nairobi
[48] Interview with Director of Solid Waste Management Directorate, 08 October 2018, Machakos; who felt that low penalties in Machakos County actually encourage transboundary dumping from Nairobi residents due to weaker deterrence
[49] Andrew Jordan & Andrea Lenschow, 'Environmental policy integration: a state of the art review' (2010) 20 Environmental Policy and Governance 150-152

The country's long-term development plan, the *Vision 2030* envisages Kenya as a "*newly-industrialized, middle-income country providing a high quality of life to all its citizens in a clean and secure environment*" by the year 2030.[50] Noting the link between pollution and waste generation with envisaged economic growth, the document prioritizes improvements in the MSWM regulatory framework along with introduction of market-based instruments and private-public partnerships.[51]The Vision 2030 thus sought to introduce economic dimension to regulation of wastes, consistent with the environmental integration imperative. It is noteworthy that the Vision 2030 was adopted as a sessional paper by parliament and therefore at the time, enjoyed widespread political support. This means that on paper, MSWM enjoys political support as a key development priority.

The long-term ambitions of Vision 2030 are translated into practical and actionable strategies through the 5-year Medium Term Plans, which are usually developed immediately after general elections and therefore articulate key promises of the manifestoes of ruling party. In the First Medium Term Plan (MTP-I, 2008-2012), improvements in waste management were prioritized under the Social Pillar (Environment, Water & Sanitation).[52] The document identified as key the establishment of solid waste management systems that incorporate private-public partnerships in Nairobi and other municipalities, as well as the adoption of a solid waste management policy.[53] In addition, the MTP-I highlighted the need for integrated environmental planning, to promote the hitherto neglected economic and social values associated with the environment, hence environmental integration.[54] The MTP-I therefore followed through the promise of Vision

[50] Republic of Kenya, Sessional paper No. 10 of 2012 on Kenya Vision 2030, (Office of Prime Minister, Ministry of State for Planning, National Development and Vision 2030, 2012) ii
[51] World Bank Data Team, 'New country classifications by income level:2019-2020' <https://blogs.worldbank.org/opendata/new-country-classifications-income-level-2019-2020 on 07/07/2020> accessed on 11 July 2020; a lower-middle-income country has a Gross National Income (GNI) score of $1,026-3,995; according to Central Bank of Kenya, the average GDP growth rate between 2002 to 2018 was 5.28%, <https://www.centralbank.go.ke/annual-gdp/> accessed 11July 2020
[52] Republic of Kenya, *First medium term plan, 2008-2012* (Office of The Prime Minister, Ministry of State for Planning, National Development & Vision 2030, 2008) iii; The Planning Minister noted that the MTP-I incorporated the manifestoes of the political parties which constituted the Grand Coalition government alongside other longtem development priorities.
[53] Ibid, 107-108; 109-110; 112
[54] Ibid 108

2030 in prioritizing integration of economic dimensions in the framework of MSWM. However, it should be noted that the solid waste management policy was never adopted during the plan period, nor were new solid waste management systems adopted with private sector participation, as envisaged.

In 2013, the Government of Kenya adopted the Second Medium Term Plan (MTP-2, 2013-2017), the first under the 2010 Constitution and based on the ruling party-Jubilee Alliance-manifesto.[55] The MTP-2 identified increasing waste generation and poor disposal as a challenge and prioritized improvements in research, legislation, technologies and enforcement as the flagship strategies alongside the finalization of a national urban policy.[56] The promise of enlarging private sector involvement in MSWM regulation fell through, signalling a policy-shift back to treating waste management as purely an environmental problem requiring better enforcement and innovation. It is also noteworthy that the national solid waste strategy, rather than the envisaged national urban policy and ban on single-use plastic bags were adopted within the plan period. However, there was no major structural shift towards integration in the design and implementation of MSWM systems in Kenya.

The Third Medium Term Plan (MTP-3, 2018-2022) was adopted in 2018 and was aligned with the Jubilee Party manifesto, designed to achieve four of the key flagship priorities of President Uhuru Kenyatta's administration.[57] Priorities for MSWM were outlined under the population, urbanization and housing thematic area and highlighted the need for integrated urban planning to delivery better on services and amenities.[58] The key flagships identified were development of integrated urban plans, initiation of urban renewal programmes embracing *inter alia* better waste collection and disposal and improvements

[55] Republic of Kenya, *Second medium term plan, 2013-2017, transforming Kenya: pathway to devolution, socio-economic development, equity and national unity* (The Presidency, Ministry of Devolution & Planning, 2013),ii
[56] Ibid, 83 & 86.
[57] Republic of Kenya, *Third medium term plan, 2018-2022, transforming lives: advancing socio-economic development through the "Big Four"* (The National Treasury & Planning, 2018),iv.
[58] Ibid 77-78

in MSWM infrastructure.[59] The improvements in infrastructure include building treatment plants, transfer plans, collection network infrastructure and promotion of waste separation at source. These priorities are consistent with the promotion of waste hierarchy approach and if followed-through, could lay the foundation for radical improvements in MSMW. It is also noteworthy that the MTP-3 identifies external funding (through the World Bank) under the Nairobi Metropolitan Services Improvement Project (NaMSIP) and the Kenya Urban Support Programme (KUSP).[60]

However, MTP-3 does not prioritize the involvement of private sector in MSWM, a key plan of the Vision 2030 commitment, which is critical for promoting financial sustainability of MSWM systems beyond donor funding. The MSWM priorities are infrastructure- heavy, motivated by the President's Big Four Agenda that includes construction, but lacking in software components such as improvements in the regulatory framework and promotion of public participation. Without striking the appropriate balance between the hardware and software components of MSWM, attaining sustainability will prove elusive under MTP-3.

The analysis of the MTP framework demonstrates inconsistent political commitment towards full implementation of environmental integration in MSWM, evidenced by missed key targets related to improvement of policy and regulatory frameworks but also failure to incorporate key economic dimensions of MSWM. The MTP-3 commitments offer promise, but these should be accompanied by the necessary regulatory reforms to ensure sustainability.

Studies show that countries with high level of collective ministerial responsibility rather than individual ministerial autonomy tend to promote environmental integration.[61] The

[59] Ibid 78-79
[60] Ibid 79
[61] Ibid 151; Germany is pointed out as a case of high level of ministerial autonomy which reinforces sectoral thinking leading to horizontal fragmentation, whereas Sweden & UK have high level of ministerial

Kenyan constitution upholds collective responsibility as a principle of running Cabinet.[62] Government is organized into ten sectors with environment falling under environment protection, water and natural resources sector.[63] Sectoral inter-ministerial committees exist and are supposed to ensure policy coordination within the respective sectors. At the County level, the notion of collective ministerial responsibility is constitutionally- mandated.[64] County governments are organized in sectors as outlined in the county integrated development plan (CIDP). In Nairobi for instance, the environment falls under Environment, Energy, Water and Natural Resources sector.[65]

Organization of government into sectors could potentially cause fragmentation unless there are effective structures to facilitate cross-sectoral coordination. For instance, under the Medium Term Expenditure Framework (MTEF), solid waste management projects under NaMSIP are captured in the budget of Department for Housing and Urban Development[66] whereas there is provision for construction of waste water and sanitation facilities as part of waste management and pollution control programmes are captured under Department for Environment (sub-sector).[67] Even though the MTEF documents speak of cross-sectoral linkages, they do not spell out the institutional mechanisms for achieving this. The absence

collective responsibility which facilitates individual ministries to incorporate common objectives (e.g. environmental integration) in policy and actions.

[62] Constitution of Kenya 2010, Art.153 as read with National Government Coordination Act (NGCA) No.1 of 2013 S.9

[63] The National Treasury & Ministry of Planning, *Guidelines for finalization of the financial year 2018/9 and medium-term budget estimates* (Circular No 2/2018, 9 March 2018); sectors include Agriculture, rural and urban development; Energy, infrastructure & ICT; General economic and commercial affairs; Health; Education; Governance, justice, law and order; Public administration & international relations; National security; Social protection, culture & recreation.

[64] Constitution of Kenya 2010, Art 179

[65] Nairobi City County, *County Integrated Development Plan (CIDP) 2018-2022*, (2018) < https://cog.go.ke/media-multimedia/reportss/category/106-county-integrated-development-plans-2018-2022?download=325:nairobi-county-integrated-development-plan-2018-2022> accessed 8 July 2019; others include Public works, roads and transport; health services; Education, children, youth, sports and social services; Urban planning and lands and urban renewal & housing; commerce, tourism and cooperatives; Devolution, public service and administration, ICT & e-Government; Finance and economic planning; Agriculture, livestock, fisheries and forestry.

[66] Republic of Kenya, Sector report for energy, infrastructure and information communication technology (EII) sector MTEF budget report FY2018/19-2020/21 (January 2018) 108 <http://www.treasury.go.ke/component/jdownloads/send/194-2018/707-energy-ict-and-infrasctructure-sector.html> accessed 8 July 2019

[67] Republic of Kenya, 'Environmental protection, water and natural resources sector report on Medium term expenditure framework (MTEF) budget for the period 2018/9-2020/21' (November 2018) <http://www.treasury.go.ke/component/jdownloads/send/194-2018/708-environmental-protection-water-and-natural-resources.html> accessed 8 July 2019

of such cross-sectoral linkages undermines the efficacy of the cabinet system of government as a mechanisms for harnessing political will by creating risk of fragmentation of government programmes.

It is noteworthy that in Nairobi City County, there is a proposal to create a county planning, monitoring and evaluation units at the Governor's office and cascaded down to the ward level to facilitate sectoral coordination in implementation of CIDP.[68] These coordination units could play the envisaged role effectively, if they have direct link to the Governor. However, the terms of reference of these units is not clearly spelt out. Without a mandatory requirement for consideration of environmental impacts of projects by the unit and involvement of environmental policy experts as part of their staff, an opportunity for enhancing environmental integration will be lost.

The study revealed very low rating of members of County assemblies (MCAs) in promotion of environmental protection, indicating perhaps limited political will for integration at the legislature level.[69] This is a critical finding, considering that adoption and oversight of implementation of SMW laws is a function of County assemblies. Thus, the presumed low commitment to environmental protection could explain why majority of the Counties examined in this study lack effective legal frameworks for sustainable management of MSW. The legislatures at both national and county levels are mandated to establish oversight departmental committees which mirror the respective governments' sectors.[70] These committees are tasked to review legislative and policy proposals from the respective executives, interrogate performance of departments under their respective sectors and discharge general oversight.[71] Departmental Committees of National parliament and County assembly are under obligation to observe public participation in

[68] Nairobi City County *County Integrated Development Plan (CIDP) 2018-2022* 179
[69] 14% if respondents agreed with proposition that the local MCA takes environmental protection seriously
[70] Standing Orders 127 of the National Assembly and Standing Order 134 of the Senate as read with Standing Order 66 of the Nairobi City County Assembly
[71] See for instance Parliament of Kenya, 'The Committee system of the National Assembly' (National Assembly of Kenya, Fact Sheet No 22, 2017) 108; The Departmental Committee on Environment and Natural Resources is responsible for pollution and waste management among other issues

their deliberations. An opportunity therefore exists for legislatures at both levels of parliament to foster effective participation of environmental interest groups in deliberations on legislations that may have significant environmental impacts, in order to promote environmental protection and sustainability in MSWM as well.

4.5.2 Weak Support for Public Participation in MSWM governance processes

Participation is an important factor contributing to environmental integration through aggregation of different perspectives from various sectors and stakeholders to facilitate balancing of interests in the development process.[72] However, the study has established poor perceptions of participation of target groups (occupiers of work places) in MSWM decision-making processes led by NEMA and County governments.[73] This militates against established constitutional and statutory obligations of public authorities to facilitate adequate and meaningful participation in public policy processes, including on environmental governance matters.[74] These obligations are now reflected in the Nairobi City County Solid Waste Management Act as well.[75]

In the case of *Mui Coal Basin Local Community & 15 others v Permanent Secretary Ministry of Energy and 17 others*, the Court had occasion to elucidate standards or thresholds for facilitating meaningful and adequate public participation by public authorities within the context of environmental governance processes.[76] The Court held that the government agency must: 1) have in a place a programme with modalities for ensuring public participation; 2) ensure the programme is malleable and contextualized to local needs and culture; 3) facilitate access to and dissemination of relevant information; 4) in line with principle of subsidiarity, ensure those affected by a decision get reasonable opportunity to air their views;5) ensure views are considered in good faith during decision-

[72] Anna Paavola, Oliver Fritsch & Ortwin Renn, 'Rationales for public participation in environmental policy and governance:practioners' perspective' (2011) 43 Environment and Planning A 2688-2704; the authors point out as well that environmental integration efforts may also undermine participation, by placing heavy demands on policymakers to engage stakeholders beyond their capacity.
[7373] 52% of respondents agreed that NEMA had allows participation whereas 48% agreed that County governments do likewise.
[74] CoK 2010, art 10 & 69 as read with EMCA, Cap 387 S. 3;
[75] Nairobi City County Solid Waste Management Act (No 5 of 2015), s 4&6
[76] (2015) eKLR; also cited as Petition 43 of 2014 (Consolidated)

making; 6) ensure public participation enriches the process with diverse views but does not lead to usurpation of decision-making mandate of officials/authority.[77]

Yet County governments are required to establish institutional mechanisms and programs on civic education by law.[78] Among the objectives of civic education programme is enhancing awareness and mainstreaming of Bill of Rights and national values as well as increasing demand for service delivery.[79] Challenges in facilitation of effective public participation in MSWM governance processes should also be viewed within a wider context of weak culture of citizen participation and engagement in governance processes. A study by AFRICOG[80] revealed that 40% of Nairobi residents were not satisfied with public participation process undertaken by county governments, whereas another study by UNDP[81] also revealed that 42% of Nairobi residents felt that they had not been consulted at all in county decision-making processes. This is compounded further by a finding that an overwhelming majority find it difficult to participate in county planning and budgeting (73%); influence county decisions (76%); access information on county budgets, laws and projects (74%) and; amendment of laws (78%).[82] Civic education is key to enhancing demand for and quality of public participation.[83] However, a previous study indicated only few (8%) of residents of Nairobi had received civic education on devolved functions from the County government.[84]

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[77] Ibdi, para 97
[78] County Government Act, 2012 (Rev 2017), pt X
[79] CGA 207, s 99 (2) (f) & (g)
[80] Africa Center for Open Governance & Infotrak Research & Consulting, 'AfriCOG citizen perception surveys (AfriCOG 2016), available at <https://africog.org/wp-content/uploads/2016/08/AFRICOG-INFOTRAK-CITIZENS-SURVEY_MEDIA-RELEASE-PART-2-ON-CONSTITUTION11.pdf> accessed 06 March 2019
[81] UNDP, "*Baseline survey for Phase II of Amkeni Wakenya Programme (2015-2018)*" (UNDP April 2017) prepared by Infotrak Research and Consulting, at 97 available at <http://www.ke.undp.org/content/dam/kenya/docs/AmkeniWakenya/Baseline%20Survey%20Amkeni%20Wakenya%20Phase%20II.pdf> accessed on 06 March 2019
[82] Africa Center for Open Governance, 'AfriCog citizen perception survey 2016' 2016 access from https://africog.org/wp-content/uploads/2016/08/AFRICOG-INFOTRAK-CITIZENS-SURVEY_MEDIA-RELEASE-PART-2-ON-CONSTITUTION.pdf on 12 March 2019
[83] Cleophas Kaseya & Ephantus Kihonge, "Factors affecting effectiveness of public participation in county governance in Kenya: a case study of Nairobi county' (2016) 6 International Journal of Scientific and Research Publication 476-487
[84] UNDP, "*Baseline survey for Phase II of Amkeni Wakenya*, 103.

Weak support for public participation is attributable to poor prioritization of such processes in terms of adoption legislative and policy frameworks, establishment of infrastructure, deployment of skilled personnel and adequate budgeting by responsible authorities; inherent risks of elite capture of participation processes; poor societal attitudes towards participation.[85] In the target counties, only Nairobi[86] and Machakos have so far established civic education departments, but were understaffed and lack resources to undertake this mandate.[87]

This notwithstanding, the Directorate of Environment in Nairobi County alluded to conducting some form of civic education on key aspects of MSWM. NEMA also reiterated their mandate in conducting similar education programmes on MSWM in the target counties. However, there was no indication of coordination between these agencies in the provision of this vital service in the target counties and therefore this may present a challenge of fragmentation of initiatives to foster residents knowledge on SWM issues.

The rather limited civic education offered on MSWM issues by NEMA and County authorities inordinately focused on public and environmental health dimensions of the wastes and less on economic dimensions. This can be discerned from findings of this study which show dissatisfaction by respondents with efforts by NEMA and County governments to promote recycling of wastes. To this extent therefore, such educational efforts are substantively fragmented. There is need to highlight on the economic importance of wastes in order to stimulate uptake of wastes for valorization through re-use, recycling and recovery of energy and materials. A good starting point is to aggressively promote recycling through these educational campaigns to enhance prospects for waste

[85] Intergovernmental Relations Technical Committee, T*he status of public participation in national and county governments* (IGRTC, 2018), 19
[86] Republic of Kenya, 'Nairobi City County Government: Annual capacity & performance assessment (ACPA)report' (The Presidency, Ministry of Devolution & ASALS, 2018), 42-46 < https://nairobi.go.ke/downloads/ > accessed 31 October 2020.
[87] Interviews with official of Kenya Alliance of Residents Association (KARA), 25 September 2018, Nairobi County and; with official from the County Department for Devolution and Administration, Machakos County.

valorization. It is noteworthy that in Kajaido County, the Governor's wife has initiated a campaign to promote economic value of wastes, which presents a good opportunity.[88] Without this knowledge, residents of the target area will be constrained to effectively participate in decision-making processes and provide perspectives that could effectively influence environmental integration in MSWM.

Once challenge encountered in promotion of citizen participation and engagement is the existence of multiplicity of stakeholder engagement and coordination mechanisms in the environmental sector, which could be employed in fostering public participation in MSWM planning and implementation processes. These include the Physical Liaison Committees & Forums (under Physical Planning & Land Use Act), National Council for Occupational Safety (Under OSHA), County Environmental Committee (EMCA), Climate Change Council (under Climate Change Act) among others. Unless these structures are coordinated in their approach towards engaging stakeholders, the risk of fragmentation of participation and engagement processes would be high. NEMA's presence in these structures by virtue of its central role in environmental management could be leveraged to foster coordination among these structures.

4.5.3 Corruption and environmental rule of law deficits in MSWM

In the previous section, the study highlighted findings that point to the risk of corruption as a political problem that may compromise sustainable management of wastes. In academic literature, link between corruption and environmental management has been established through resource curse research, where corruption is presented as the main reason why natural resource-rich countries perform badly in economic terms, leading to further degradation of environmental resource base.[89] Empirical research has also established link between high levels of corruption perceptions and declining environmental

[88] Interview with Director of Environment, 09 October 2018, Kajiado County; the campaign is popularly known as "*taka taka ni mali*" or "waste is a wealth/valuable resource". However, the respondent notes that the campaign is not properly institutionalized and therefore its sustainability cannot be ascertained for now.
[89] Ivar Kolstad & Tina Soreide, 'Corruption in natural resource management: implications for policymakers' (2009) 34 Resources Policy 214-226

sustainability in countries.[90] It has been noted though that even though corruption is not in itself environmentally destructive, poor governance associated with the phenomenon adversely impacts on policy process and enforcement, which manifests in declining environmental sustainability.[91]

The concept of environmental rule of law has emerged to provide nexus between strengthening rule of law and achieving sustainable development. The concept is defined as " *the legal framework of procedural and substantive rights and obligations that incorporates the principles of ecologically sustainable development in the rule of law*."[92] The concept is underpinned by four pillar: enactment of clear and enforceable normative frameworks; respect for human rights (especially environmental protection rights); effective enforcement measures; effective to information, participation and access to justice; environmental auditing and reporting and; use of best available scientific knowledge.[93] These pillars have also been conceptualized as; effective pollution source management; faithful local implementation of national environmental policies and reliable judicial access to environmental harm.[94] Anti-corruption measures are considered as some of the key mechanisms for pursuing environmental rule of law.

Corruption in Kenya is a serious governance challenge, with almost high level of acknowledgement by the public that the vice is rife in the country.[95] However, among the institutions in National government cited for high prevalence of corruption, the Ministry

[90] Stephen Morse, 'Is corruption bad for environmental sustainability? A cross-national analysis' (2006) 11 Ecology and Society 22
[91] Ibid
[92] IUCN & World Commission on Environmental Law, The IUCN World Declaration on Environmental Rule of Law, (adopted at the IUCN World Congress on Environmental Law in Rio de Janeiro, 26-29 April 2016)
<https://www.iucn.org/sites/dev/files/content/documents/world_declaration_on_the_environmental_rule_of_law_final_2017-3-17.pdf> accessed 24 September 2019
[93] Ibid
[94] Erin Ryan, 'The elaborate paper tiger: environmental enforcement and the rule of law in China' (2013)24 Duke Environmental Law and Policy Forum, 183-239
[95] Ethics and Anti-Corruption Commission, 'National ethics and corruption survey, 2017' (EACC Research Report No.6 May 2018) 48 < https://www.eacc.go.ke/wp-content/uploads/2018/11/EACC-ETHICS-AND-CORRUPTION-SURVEY-2017.pdf > accessed 23 Sept 2019; perceptions that corruption was widespread stood at 73% in 2017 down from 87% in 2017

of Environment and NEMA did not feature at all.[96] At the County government level, the Department responsible for environment (and therefore MSWM) did not feature among the Departments perceived as corrupt.[97] This does not however preclude the prevalence of corruption in these agencies, but rather could reflect limited contact or dealings between these agencies and members of the public which would make it difficult for citizens to form measurable perceptions of corruption.

From this study, it is emerging that corruption in MSWM weakens regulatory capacity of institutions to effectively formulate and implement environmental policies and predisposes them to elite capture. The stranglehold by cartels in waste management procurement process at Nairobi City County headquarters and in the running of the Dandora dumpsite alludes to risks of capture of local authorities by business and political interest which lack regard for environmental sustainability. Nairobi City County spends more than Ksh1.billion annually on procurement of waste management services (collection and disposal), which represents 50% of the annual budget for the concerned department.[98] Therefore it is inconceivable that the County will make any meaningful transition to MSMW model which reduces expenditures for collection and disposal services without surmounting stiff resistance from vested interests.

In the same vein, it is also improbable that Dandora dumpsite will transit to a modern landfill model that embraces stringent environmental protection safeguards without offending deeply entrenched interests that have benefitted from the current chaos and disorder prevailing at the dumpsite. Corruption also undermines credibility of implicated waste authority officials and therefore ability to handle trade-offs necessary for balancing

[96] Ibid 52-3; Ministries of interior, health and land topped the list of national government departments whereas Environment ministry ranked 18 out of 25 categories; Among national government agencies, the Police, Police Service Commission and Public hospitals ranked the top whereas NEMA did not feature among the 23 ranked agencies.
[97] Ibid 54; the top 3 departments included Finance, Heath and Transport; Environment did not feature
[98] Kenya National Bureau of Statistics *Economic survey 2018*, (KNBS 2017: Nairobi) 145

environmental and economic considerations hence promoting fragmentation in decision-making with adverse consequences for sustainability.

In the duration of the study, the National government instituted some bold measures to address corruption and impunity. Buildings that had been built on riparian land and road reserves with doubtful legality were brought down and officials involved in approvals arrested and prosecuted. Among the assets recovered by the Ethics and Anti-Corruption Commission (EACC) in FY 2018/9 include land meant for sacred grove within the marine park in Kilifi County valued at Ksh100million.[99] These actions demonstrate existence of political will to address corruption within the public sector and with some benefits accruing to environmental management realm.

However, there is no evidence to suggest that these actions are being pursued within a coherent strategy to address environmental rule of law deficits. For instance, whereas the National Solid Waste Strategy (2015) lists grabbing of disposal sites and political interference as challenges facing the sector,[100] there are no specific interventions formulated to address these forms of corruption and impunity. The sustainability of the aforesaid enforcement actions is therefore doubtful, in the absence of such a coherent framework to address rule of law deficits.

4.5.4 Policy incoherence in implementation of waste hierarchy norms

This study has established that whereas the waste hierarchy is mandated by international laws on MSWM, it not sufficiently legislated nor it is adequately embraced in actual practice. Yet, incorporation of waste hierarchy is critical to entrenchment of environmental integration. One explanation for weak adoption of waste hierarchy is the predominance of "waste as disposal" paradigm in MSWM regulation, despite sustainability imperative of

[99] Ethics and Anti- Corruption Commission, Public assets recovered in 2018-2019 financial year, <http://www.eacc.go.ke/wp-content/uploads/2019/09/EACC-RECOVERIES-FROM-2018-TO-2019..pdf> accessed 23 September 2019

[100] NEMA, *National solid wastes management strategy*, 21-22

embracing ‘waste as a resource’. This is reflected in various ways. First, expenditures of local authorities is focused on waste collection and disposal at the dumpsites in line with ‘waste as a problem’ paradigm. For instance, the Nairobi City County in the FY2016/7 spent Ksh1.067billion[101] on waste removal services out of the total Ksh2,153billion that was allocated for the environment department in that particular year.[102] Thus MSWM operational expenditures represent 50% of the total departmental budget. Studies indicate that cities in low income countries spent 80-90% of their MSWM budgets on operational aspects of collection and disposal, whereas cities in high income countries with advanced MSWM systems (incorporating waste hierarchy) spent less than 10% on the same.[103] In this regard, though Nairobi City fares better than cities from low income countries, it is still far behind cities that have embraced waste hierarchy.

The high operational costs are attributed to costs of procurement of trucks, fuel, labour and payments made to private contractors. Increased focus on other aspects of waste hierarchy either shifts to cost of waste management to households (prevention and re-use) and to private sector (recycling and recovery). The shifts also results in lower costs of waste treatment borne by municipalities. For instance it is estimated that in lower middle income countries (including Kenya), the cost of collection and transfer of waste is $30-75 per tonne whereas the costs of recycling and composting drastically drops to between $5-30 and $10-40 per tonne respectively.[104] If the transition to waste hierarchy approach is made in Nairobi, this would be reflected in lower budget allocations for waste collection and transfer costs.

Secondly, lack of effective waste planning in Counties undermine the process of translating waste hierarchy norms into practical actions/strategies to guide policymakers in budgeting

[101] Nairobi City County, Annual financial report, FY 2016/7, < https://nairobiassembly.go.ke/ncca/wp-content/uploads/paperlaid/2018/Annual-Financial-Report-FY-2018-19.pdf> accessed on 2 November 2020
[102] Office of the Controller of Budget, *Annual County governments budget implementation review report, FY 2016/17* (OCOB, 2018) 207
[103] Rachael Marshall & Khosrow Farahbakhsh, ‘Systems approaches to integrated solid waste management in developing countries’ (2013) 33 Waste Management, 994
[104] Silpa Kaza, Lisa Yao, P Bhada-Tat & Frank Woerden *What a waste 2.0: a global snapshot of solid waste management to 2050* (World Bank, 2018) 104

and implementation. In Kenya, budgeting follows planning as a requirement of law as was held in the case of *Ngetich v Bomet*.[105] However, waste planning is not strictly a legal requirement for Counties and therefore, County budgets are not necessarily informed by such planning. Nairobi does not have a waste plan in place and therefore budgeting for waste management lacks a sound paradigmatic basis. Analysis of the Nairobi City County Annual Development Plans for the last 3 financial years shows that the priorities for waste management which not aligned to the waste hierarchy approach have largely remained unchanged,[106] thus pointing to the use of historical or incremental budgeting model. It would therefore be unreasonable to expect waste hierarchy interventions in a County budget, where there was no intention to have such in the absence of a sound waste plan. Indeed, in a clear case of policy incoherence, the waste as disposal paradigm indeed dominates the budgeting process as demonstrated above, in absence of clear normative guidance based on the waste hierarchy approach.

Thirdly, the analysis of levies imposed on waste collection and transfer reveals charges which do not take into account volume of waste.[107] Levies of restaurants and hotels is based on seating and bed capacity respectively, rather than the tonnage of waste.[108] There is no incentive therefore for restaurants to minimize waste generation since the cost of collections remains fixed. Yet waste minimization and prevention constitute the highest priority in the waste hierarchy approach, and this policy incoherence persists due to lack a normative basis for entrenching waste hierarchy in Nairobi County's tax framework.

The Ministry of Environment and Forestry has published the Sustainable Waste Management Bill which seeks among other things to promote the waste hierarchy approach through the zero-waste principle. The Ministry has also developed a draft national solid

[105] (2015) eKLR
[106] These include- sweeping contracts, purchase of equipment (trucks, loaders, backhoes), maintenance of access roads in the dumpsite
[107] Nairobi City County Finance Bill, 2019, Kenya Gazette Supplement No.9, 28 June 2019
[108] Ibid Part III; restaurants with 1-20 seats pay between 2,500-5000/= whereas those with 21-50 pay 3,000-6,000/= and those with over 50 seats pay 4,000-10,000/=.

waste management policy,[109] which would complement the implementation of the Sustainable Waste Management Bill upon enactment. The draft policy outlines as its goal, "*to protect public health and environment as well as to create wealth and prosperity in the country by providing an enabling environment for integrated waste management and minimization of waste generation to contribute to a circular economy*".[110] The draft policy priorities the promotion of waste hierarchy, transition to Zero Waste status and creating an enabling environment for Counties and other actors to play their rightful roles as some of the key objectives. To the extent therefore that the strategies contained in the policy address aptly these stated goals and ambitions, it can be said that the policy lays a good normative basis for implementation of a sound legal framework on MSWM which engenders environmental integration.

It is also instructive that the Council of Governors (CoG) in partnership with the Kenya Law Reform Commission has developed model county solid waste law and policy to guide legislative efforts in this direction.[111] The model waste law incorporates environmental protection rights and sustainable development principles.[112] It also provides for regulation of wastes in line with the waste hierarchy and introduces novel tools such as solid waste management spatial plans, waste research & data management, economic instruments besides the traditional tools such as waste planning, licensing and regulatory enforcement. However, there is need to review the organizational framework suggested therein to avoid duplication of structures and redundancies.[113] Otherwise, the Model law therefore could provide non-compliant Counties with a good template for customizing it to their peculiar

[109] Ministry of Environment and Forestry, *National Sustainable Waste Management Policy: Revised Draft*, (Ministry of Environment and Forestry, April 2019) <http://upops.environment.go.ke/consultancy_reports> accessed 07 July 2019
[110] Ibid p18
[111] Interview with official from Kenya Alliance of Residents Association, 25 September 2018, Nairobi County; the key informant shared copies of the model policy and law with the author.
[112] County Solid Waste Management Model Bill 2018, S.3 & 4
[113] Ibid s 6-12, the Bill provides for County and Ward SWM Committees which may duplicate the work of the County Environmental Committees (CEnC). The envisaged functions of these committees could be referenced to CEnC

needs. These instruments thus present good prospects if enacted, for promoting the waste hierarchy in law and practice.

4.5.5 Limitations of Courts in promotion of Environmental Integration

The Judiciary plays an important role in implementing the principle of integration at the domestic level through judicial interpretation and review of official actions.[114] In the *Peter Waweru* case, High Court also noted that "*The Judiciary is also a crucial partner in promoting....a fair balance between environmental, social and developmental consideration through its judgements and declaration*."[115] In the reviewed literature on environmental integration, the role of judiciary has not been brought out as much as that of the executive and legislative branches of government.

In both *ACRAG* and *Martin Osano* cases, it has been demonstrated in this study that Kenyan courts have endeavored in interrogating and balancing environmental protection considerations in development process in general and waste management specifically. Indeed, in the *ACRAG* case, the Judge rightfully noted, "*the role of the courts, especially, the Environment and Land Court is to be a part of the solution and not of the problem in so far as tackling environmental challenges is concerned*".[116] However, the orders which the Court issued against the offending County government basically entailed such end-of pipe measures as the collection of plastic waste around the pit, creation of a green buffer zone around the dumpsite, incineration of waste and compliance with licensing requirements. Even though the County government took some of these measures, the pollution from the dumpsite continued, forcing the residents to file contempt of court proceedings.

[114] See Collins Odote 'The role of the Environment and Land Court in governing natural resources in Kenya' in Patricia Kameri-Mbote, et al *Law environment Africa* 335-355; the author shows instances where courts have considered application of sustainable development principles in development process but also inquired into relationship between NEMA and sectoral agencies.
[115] *Peter K Waweru v R*, Misc Civil Application No. 118 of 2004
[116] *ACRAG* case, supra para 42

Yet, the Court could have ordered more suitable actions informed by the waste hierarchy such as waste minimization and prevention as well as segregation at the point of source that would have been more appropriate. Since the prevailing legal framework at the time did not engender these options, the judge seemingly focused on what was permissible-enforce better disposal of waste at the dumpsite. In a comparable Indian case of *Tapesh Bhardwaj v UP State Pollution Control Board & Others,*[117] the court ordered the offending regulatory authority and municipality to "*issue complete and comprehensive directions in relation to collection, transportation, **segregation** and dumping of wastes at the site in question in accordance with the SWM Rules of 2016.*.". It can be argued that where the MSWM laws provides for measures consistent with the waste hierarchy approach, the Courts and other supervisory authorities would have better enforcement capacity in ensuring offending Counties address waste problems holistically.

Inadequate enforcement of progressive court decisions on right to clean and healthy environment within the context of MSWM was cited a big challenge that may undermine sustainable waste management. This challenge however should be understood within the broader context of a growing culture of disregard of court orders in Kenya.[118] The County Government of Nakuru disregarded the decision of the Court in ACRAG case, by failing to apply for licence of dumpsite complained of, thereby precipitating contempt of court proceedings.[119] The Judge noted with distress "*..I have not been shown any evidence of compliance with the judgement of 31 May 2017, and it is not disputed that the respondent is still dumping waste (in the dumpsite), despite the judgement of this court. That to me constitutes an utmost act of impunity, which must be checked by this court*."[120]If this culture is allowed to thrive, errant policy actors will consistently disregard prioritization of

[117] Application no 596 of 2016
[118] *Council of Governors & 47 others v Attorney General & 3 others (interested parties; Katiba Institute & 2 others (Amicus Curiae)* (2020) eKLR (also cited as Reference No.3 of 2019); In the concurring judgement of D. Maraga, C.J. (Para 101-153), he notes with distress, numerous instances where State organs and officials flagrantly engage in disobedience of court orders.
[119] *Africa Center for Rights and Governance (ACRAG) & 3 others v Naivasha Municipal Council* (2018) eKLR
[120] Ibid at Para 5

environmental protection and sustainability considerations in MSWM, with the impact of fragmenting decision making with adverse consequences for sustainability.

Where administrative disputes arise in relation to waste management, different tribunals could potentially assume jurisdictions over the same matter. If the disputes emanates from physical planning decision on a dumpsite, the matter would go to the respective Physical Liaison Committee under the Physical and Land Use Planning Act, whereas if the dispute is on cancellation of licence to run a dumpsite by NEMA, it would end up at the National Environmental Tribunal. Even on the same subject matter such as licencing of solid waste transporter, an aggrieved transporter could elect to go to the High Court to challenge the decision of the Nairobi City County Government or go to NET to challenge the decision of Director-General of NEMA. The upshot of the foregoing is a risk on fragmentation of environmental law decisions as a result of conflicting decisions by different tribunals or courts over the same subject-matter. This situation could also potentially encourage forum-shopping by aggrieved parties leading to higher litigation costs.

A related concern regards the absence of a specialized appellate environmental court to hear disputes emanating from decisions of the ELC. Instead, such disputes now go to the Court of Appeal which is part of the mainstream structure of the Judiciary. Members of the Court of Appeal are not required to have special qualifications in environmental law, unlike the case for ELC judges. It is therefore possible that some judges of the Court of Appeal may be ill-equipped to adjudicate over complex environmental disputes and this might lead to incoherent decision-making approaches and outcomes.

4.5.6 Perverse role of external funding in promotion of environmental integration

As the study has revealed, external funding continues to play a significant role in reforming the MSWM sector. Literature however indicates the external funding may undermine

environmental integration.[121] This is due to the fact that some development partners may choose to deploy development aid as leverage for effecting economic reforms, thereby improving the business environment for their home-country companies.[122] To this extent therefore, donor funding may actually undermine environmental protection initiatives, if the predominant policy objective is improving economic or investment climate.

According to the national budget documents for the FY 2018/9, the Environment ministry was expended Ksh3,232,474,000, out of which Ksh401,480,000 (or 13%) comprised grants from foreign governments and international organizations.[123] At the national level, the Environment Ministry has been funded by the Danish Government to develop the national policy and law on solid waste.[124] The initial orientation of the early drafts of the law and policy initially focused on marketization of wastes interventions and less on environmental and social considerations.[125]This reflected the promotion of business interests of the Danish government, whose domestic industry is an acknowledged global leader in trade of waste management equipment and technologies. However, after opening-up of the process to public participation, the draft law incorporated other sectoral perspectives that ensured due prominence to environmental and social dimensions of waste management.

The study revealed the influential role played by the NGO which financed the process of development of the e-waste law of Machakos County, even before a solid law was conceptualized. The resultant e-waste law was more oriented towards promotion of

[121] Asa Persson, 'Environmental policy integration and bilateral development assistance: challenges and opportunities with an evolving governance framework' (2009) 9 International Environment Agreements, 409-429

[122] Marshall & Farahbakhsh (n103) 994-5

[123] See Republic of Kenya, *2019/2020 Programme based budget of the Naitonal Governement of Kenya for the year ending 20th June 2020* (National Treasury, June 2019) 390-415; Republic of Kenya, *2019/2020Estimates of revenue, grants and loans of the Government of Kenya for the year ending 30th June, 2020* (National Treasury, June 2019) 27

[124] Interview with Legal officer, NEMA, 16 November 2018, Nairobi

[125] The National Solid Waste Management Bill of 2017; the draft had concentrated waste regulatory functions in the proposed National Waste Management Directorate thus weakening county's role; there were limited stakeholder engagement involvement in decision-making; inadequate inter-governmental coordination mechanisms; omitted National Environmental Tribunal as the access to justice mechanism for disputes under the Bill

business model of e-waste recycling than entrenchment of environmental protection safeguards. For instance, the law focuses more on licencing of e-waste operators but says little in terms of environmental management responsibilities of producers and distributors of products which generate e-waste as well as e-waste operators [126] The ongoing development of waste infrastructure under the NaMSIP and KUSP projects funded by the World Bank is more focused on delivery of heavy infrastructure outputs than consolidation and evolvement of the regulatory framework on MSWM for sustainability.

The upshot is that weak domestic funding of waste reforms predisposes the process to undue influence from foreign interests. The opening up of the reform process to other sectors (particularly environmental interest groups) provides opportunity for promotion of environmental and social considerations in the reform process, thus promoting environmental integration.

4.6 **Chapter Conclusion**

This chapter has revealed a high level of awareness and appreciation by respondents of principle of sustainable development and environmental protection rights as normative anchors of environmental integration. However, actual support for sustainability and environmental protection considerations by County and National authorities is doubtful and this undermines the effective implementation of environmental integration in the MSWM. With such limited appreciation by waste authorities of sustainability and environmental protection imperatives, it is doubtful that these two principles can help the relevant decision-makers overcome the problem of normative coherencies, which provoke fragmentation, in line with Luc Wintgen's theory of coherence of law. The study has also revealed that despite mandating of the waste hierarchy approach under international law, there is limited adoption of the same in the country's laws and in practice in the target counties.

[126] Machakos County E-Waste Management Act, Part III; cf with Part I

The prevailing state of affairs is attributable to inconsistent and inadequate political will for promotion of sustainability, corruption and environmental rule of law deficits and weak support for public participation in MSWM governance. The persistence of policy incoherence in the promotion of waste hierarchy is as a result of the predominance of the 'waste as a problem' paradigm at the expense of 'waste as resource' paradigm, that has delayed a transition to sustainable and integrated waste management. Even though courts play significant role in promotion of environmental integration in MSWM, there is a real risk of fragmentation of judicial decision-making due to weak incorporation of norms of waste hierarchy and structural gaps in the court system. Over-reliance on foreign funding for ongoing MSWM reforms is precipitating fragmentation, due to inordinate consideration of economic dimensions of MSWM at the expense of environmental and social dimensions. In the next chapter, the actual implementation of the horizontal environmental integration through sectoral coordination mechanisms and practices will be examined.

CHAPTER FIVE:
IMPLEMENTATION OF HORIZONTAL & VERTICAL ENVIRONMENTAL INTEGRATION IN MSWM

5.1 Introduction

This chapter presents the findings of the field survey and key informant interview on horizontal and vertical environmental integration in MSWM framework. In analysing horizontal integration, this chapter basically interrogates sectoral coordination at both national and county levels. At the national level, the role of NEMA sectoral coordination of lead agencies[1] and environmental initiatives relating to MSWM management is considered. Sectoral coordination at the county-level is examined in terms of inter-departmental coordination. Vertical environmental integration (VEI) is analysed in terms of intergovernmental coordination. The key factors impeding and facilitating HEI as well as VEI are identified and the relevant conclusions made at the end of the chapter.

5.2 Current Status of Sectoral Coordination for Horizontal Environmental Integration

5.2.1 Role of NEMA in MSWM

According to EMCA, NEMA is the general supervisor, coordinator and principal implementer of government policies relating to environment.[2] As explained in previous Chapters, regulatory capacity of NEMA is critical in realization of sectoral coordination and therefore integration. This subsection therefore sought to assess the capacity of NEMA as the prime agency responsible for environmental protection and sectoral coordination in Kenya.

[1] EMCA, s 2; EMCA defines lead agency as any government ministry, department, parastatal, state corporation or local authority in which any law vests functions of control or management or any element of the environment or natural resources.
[2] EMCA, s 9.

The study found that there is near-universal recognition of the agency primacy of NEMA in Kenya's environmental management, with 86% of respondents agreeing with the statement that "*NEMA is the most important government agency in protection of the environment*". This acknowledgement is quite important because literature points out that lack of recognition of agency primacy for the apex environmental regulator encourages fragmentation.[3] In such a case where there is no single institutions enjoying regulatory primacy, the regulated entities will present the same problem(s) to different regulators leading to fragmented decisions and actions. NEMA therefore stands a good chance to prevent such fragmentation from happening because regulated entities perceive that it is the most important environmental regulator, as mandated by EMCA.

With regards to MSWM, NEMA officials identified the following are the roles of the Authority:[4]

- Development and enforcement of regulations
- Supervision and monitoring of county authorities responsible for MSWM
- Approval of EIA reports and environmental audit reports and follow-up on environmental management plans (with focus on MSWM issues)
- Assist entities in achieving compliance through issuing guidelines (Minimum requirements for solid waste management by Counties)[5]
- Licencing of transporters, treatment facilities, incinerators and dumpsites (landfills)
- Receiving and attending to complaints on MSWM from residents and taking relevant actions
- Enforcing EMCA and international law on hazardous wastes
- Rendering policy advice to the parent ministry
- Acting as link between stakeholders and the parent ministry

[3] William Buzbee, 'Recognizing the regulatory commons: a theory of regulatory gaps' (2003-2004) 89 Iowa Law Review, 23
[4] Interviews with NEMA officials in all the 4 counties and at the HQ
[5] NEMA, *National solid waste management strategy,* (NEMA, 2015) 18.

The above identified roles largely conform to the statutory duties of EMCA in relation to MSWM. This indicates that NEMA officials at both national and county levels are well aware of their legal obligations. However, none of the key informants mentioned technical responsibilities of NEMA in research, promoting public awareness and participation in MSWM issues. This indicates a problem of prioritization of goals which mostly afflicts organizations that pursue multiple goals.[6]

Literature indicates that where such agencies face difficulties in pursuing multiple goals, then tend to privilege those that are easily measurable than conflicting goals that are hard to measure.[7] In this regard, assessing the impact of technical responsibilities of NEMA is difficult to assess, since the success also depends on willingness of other stakeholders to accept technical advise or participation. This therefore creates a disincentive on NEMA officials to cognitively prioritize such goals, even though they are critical for ensuring and sustaining improvements in MSWM systems in Kenya. Incentives therefore are necessary to promote cognitive prioritization of the above-stated technical responsibilities of NEMA on MSWM.

The study sought to establish respondents' perceptions on efficacy of NEMA in discharging its core responsibilities in MSWM. According to Table 13, the highest approval of NEMA's work was on enforcement actions, where 54% of respondents agreed that NEMA under extreme circumstances shuts down establishments that do not observe sound waste management practices. Respondents provided moderate assessments of NEMA in actual arrests and prosecution of persons engaging in illegal dumping of waste (36%); inspecting neighborhoods (42%). Strong action is required for NEMA to convince regulated entities that it is playing its supervisory role adequately. Considering that there is near-universal recognition of the cardinal role played by NEMA in environmental protection, the relatively lower assessment of performance in critical enforcement functions points to existence of rather significant disappointment or discontents over the

[6] NEMA is indeed a multi-goal agency given that it is not only the apex environmental regulator but also regulator for sectoral environmental media such as waste management and wetlands.
[7] Eric Biber, 'Too many things to do: how to deal with the dysfunctions of multiple-goal agencies' (2009) 33 Harvard Law Review 7.

same. NEMA therefore should strive towards bridging the gap in expectations among its stakeholders through enhancing its performance or communicating clearly on the same.

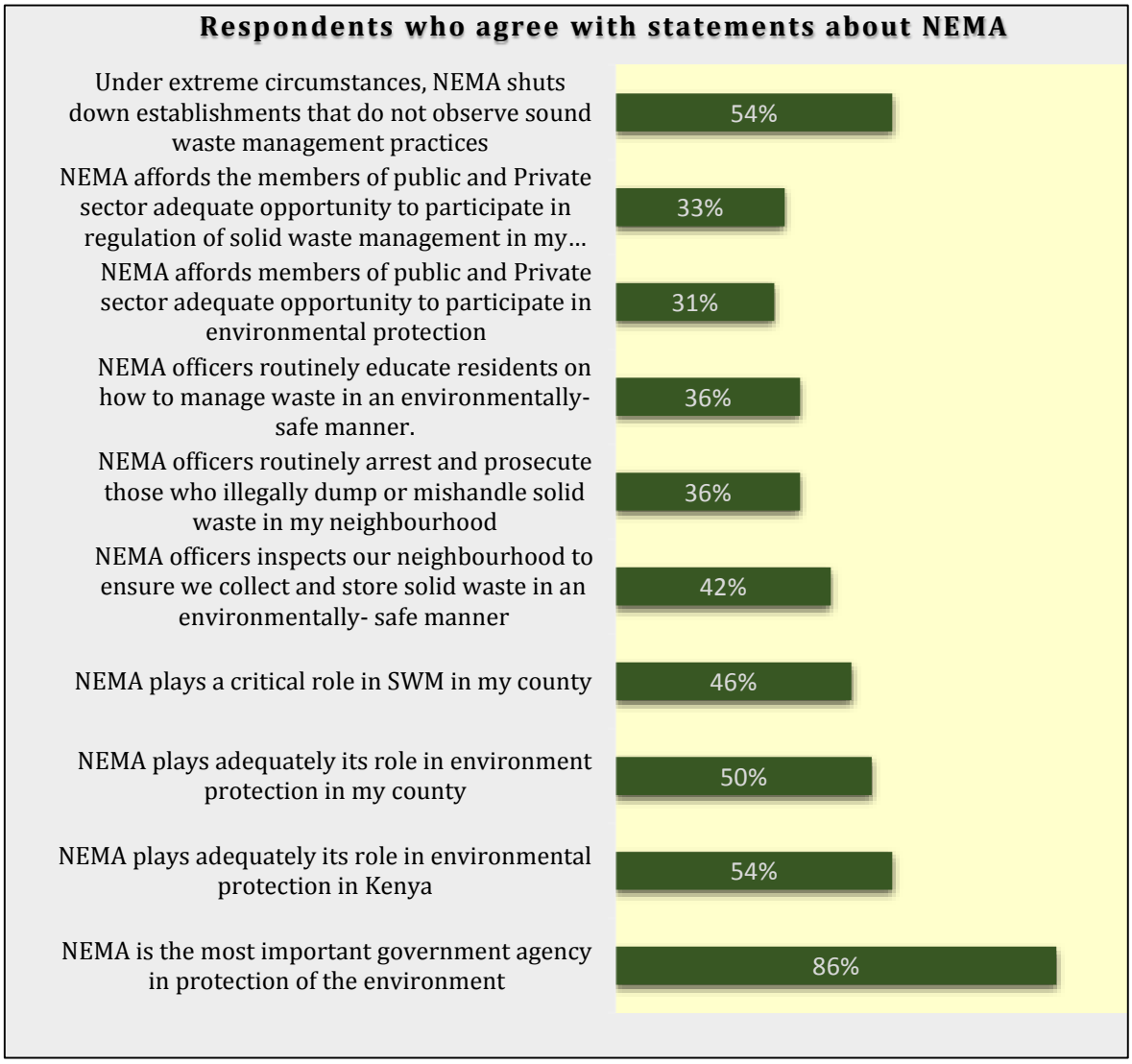

Table 13: Regulatory capacity of NEMA

In six out of the 10 areas of regulatory capacity which NEMA was assessed by respondents (in Table 13), the rating of the agency was below average. Thus, the perception of weak regulatory capacity may undermine NEMA's convening power and authority vis-à-vis the other lead agencies and non-state actors. This will potentially undermine NEMA's sectoral

coordination role and hence weaken horizontal environmental integration in the MSWM sector.

The respondents attributed the ratings of NEMA to several key challenges facing regulator. First, NEMA has been experiencing inadequate funding, particularly after the abolition of EIA fees in which took effect in 2016/7 financial year (FY).[8] A review of financial and audit reports of NEMA for the period between 2014- 2017 corroborates this view as indicated below:

Year	**EIA income (000)**	**Revenue receipts**	**% of EIA Income: Revenue receipts**	**% increase in revenue receipts**
2013/4	INA*	332,307,758	n/a	n/a
2014/5	INA*	431,225,853	n/a	30%
2014/5	469,788,000	684,967,000	69%	58%
2015/6	524,803,000	662,113,000	79%	-3%
2016/7	269,829,000	404,171,000	66%	-38%

*- Information not available from records Source: NEMA Annual Report and Auditor General Reports

Table 14: Income from EIA licence fees from 2013-2017

In FY 2015/6, NEMA witnessed a 58% increase in revenue which was attributed to increase in EIA fees from 0.05% to 0.1% of project cost without an upper ceiling.[9]

[8] NEMA official based at headquarters

[9] Gazette Notice No. 13211 dated 17 September 2013 which reduced the applicable fees from 0.1% of the total cost of the project to a minimum of Ksh 10,000 with no upper capping

However, the revenue drastically fell in 2016/7 FY after the revenue plummeted following the scrapping of EIA fees on 23 January 2017.[10] This was done through a cabinet decision, was meant to ease the cost of doing business in Kenya.[11] However, the statistics on EIA applications before and after the decision appear to tell a different story:

Year	EIA Licences	% change
2012	1084	n/a
2013	856	-27%
2014	1219	30%
2015	1654	26%
2016	1874	12%
2017	1842	-1%
2018	2456*	25%

**provisional* *Source: KNBS & NEMA*

Table 15: Number of EIA licences issues between 2012-2018

In FY 2015/6 when the EIA licence fees were raised, there was a notable increase (26%) in EIA licences issued, notwithstanding the risk that the fee increment portended for ease of doing business.[12] When the EIA licence fees were drastically reduced in FY2016/7, there was decline (-1%) in EIA licences that were issued, indicating limited impact of the increment on accrued benefits of ease of doing business. However, one might argue that

[10] Office of Auditor-General, '*Report of the Auditor-General on the financial statements of the National Environment Management Authority for the year ended 30 June 2017*, (OAG, 2018) xi

[11] Also see Kenya Private Sector Alliance, 'Business reforms: waiver of levies environmental impact assessment and construction levy' < https://kepsa.or.ke/business-reforms-waiver-of-levies-environmental-impact-assessment-and-construction-levy/ > accessed on 20 October 2020; the private sector lobby credits the scrapping of the EIA levy to its lobbying efforts to promote ease of doing business.

[12] John Mutua, 'Taxpayers pay sh362m environmental fees for rich investors' *Business Daily* (Nairobi, 21 November 2018) < https://www.businessdailyafrica.com/economy/Taxpayers-pay-Sh362m-environmental-fees/3946234-4862928-format-xhtml-oxegab/index.html> accessed 26 September 2019

during election years (2013 and 2017), the number of EIA licences issued declined due to political uncertainty which disrupts the investment climate around election period. This notwithstanding, the increase (26%) in EIA licences in 2018 is largely within the range of increments recorded in previous years. The upshot is that, by reducing the EIA fees the National government forced NEMA to incur a deficit of close to Ksh 174million. At the same time, it is doubtful if the intended benefit of ensuring ease of cost of doing business was achieved by scrapping the EIA licence fees since there has not been a dramatic rise in EIA licences issued since 2016.

It was noted that prior to scrapping of EIA fees, NEMA has the financial muscle to establish collaborative and coordination mechanisms with other legal agencies and with considerable success.[13] In the absence of funding, NEMA relies on coordination spaces convened by other agencies where it has limited clout or authority. NEMA also has to rely on donor funding to establish coordination mechanisms (e.g. on oil and gas issues), which depend on goodwill of the funders. NEMA also relies on generosity of private sector actors and this makes NEMA vulnerable to capture. It was also noted that due to its diminished revenue base, NEMA was resorting to enforcement (arrests and fines) as revenue raising initiatives at the expense of on sectoral coordination initiatives.[14] This further alienates NEMA from stakeholders it ought to be coordinating. Redressing this policy incoherence by restoring the EIA licence fees could be a necessary consideration informed by the weak financial position which NEMA currently endures.

Secondly and related to the foregoing, respondents pointed out that NEMA faced chronic staff shortage and this impaired its ability to discharge its regulatory functions. Due to this challenge, NEMA relies on interns to complement the rather few staff holding technical positions.[15] The interns are students drawn from local universities and usually serve for

[13] According to NEMA official, NEMA successfully established joint taskforces with lead agencies to deal Jatropha controversies in Kilifi county and with conservation problems in the Mara Game Reserve with demonstrable success.
[14] Interview with official, KAM, 21 September 2018, Nairobi
[15] Observation of the researcher; in all the NEMA offices visited, there was a large presence of interns.

limited periods as part of their academic requirements. Without disclosing statistics, NEMA acknowledges in its strategic plan (2013-2018) that staff shortage and high staff turnover rank high among the challenges facing the agency.[16] In the current strategic plan (2019-2023), NEMA still acknowledges the persistence of the same problem, despite noting that the staff establishment expanded from 369-417 between 2013-2018 period.[17]

Thirdly, NEMA has to contend with political interference, albeit with difficulties, as it discharges its regulatory mandate. It was noted that waste management is politically sensitive and hence the work of NEMA, particularly at the county level is curtailed by adverse actions of local leaders.[18] The establishment of County governments has further complicated NEMA's role, in the sense that because of the relative autonomy and institutional strength of county authorities, the scope of political interference at the local level is greater than before. Failure by County governors in the counties targeted by this study to operationalize County environmental committee and to have dumpsites licensed due political considerations indicates the capacity of local authorities to ignore NEMA's regulatory functions.

Fourth, failure by NEMA to leverage on existence of self-organized citizen groups and good will from the public complicates efforts towards ensuring regulatory compliance on waste issues. Respondents noted that NEMA has not undertaken public outreach adequately, nor has the Authority effectively engaged residents associations and community groups on waste management issues.[19] Residents associations raised concerns

[16] National Environment Management Authority, *Strategic plan 2013-2018,* (NEMA,2013) 9 & 11, <http://www.nema.go.ke/images/Docs/Awarness%20Materials/NEMA%20strategic%20plan%202013-2018.pdf > accessed on 24 September 2019

[17] National Environment Management Authority, *Strategic plan 2013-2018,* (NEMA,2013) 7& 9, < https://www.nema.go.ke/images/Docs/Awarness%20Materials/NEMA%20Strategic%20Plan%202019-2024%20Final-min.pdf > accessed on 29 October 2020.

[18] Interview with Waste Management Officer at NEMA Headquarters, Nairobi County

[19] Interview with County Environmental Committee member, Kajiado County and officials of Kenya Alliance Residents Association, 25 September 2018, Nairobi County and; Runda Residents Association, 26 September 2018, Nairobi.

regarding NEMA's ability to manage its relations with stakeholders.[20] As a consequence, failure to communicate effectively and address concerns sufficiently creates an environment of suspicion and loss of confidence which undermines NEMA's coordination role. Against a background of prevalent poor public attitudes towards sustainable waste management practices, reliance on coercive instruments to yield compliance is not only expensive but further alienates NEMA from the public it is expected to cooperate with.[21]

5.2.2 Role of Lead agencies in MSWM

The National Waste Management Strategy of 2015 recognizes the Ministry of Environment, The National Treasury and NEMA as the key national institutions with a role to play in MSWM.[22] In this regards, these entities qualify the designation of "lead agency" within the meaning of EMCA.[23] The Ministry of Environment is expected to provide policy guidance, financial support to NEMA whereas the National Treasury is expected to provide budgetary resources to government agencies (including NEMA) and County governments. The role of National Treasury is not significant to this study and thus the Ministry of Environment, Directorate of Occupational Safety and Health (DOSH) were investigated as lead agencies.

The Ministry of Environment & Forestry (or simply "the Ministry') essentially plays a policy coordination role and fosters intergovernmental relations in matters relating to environmental management, including MSWM.[24] Management and regulation of hazardous wastes however remains an exclusive mandate of the Ministry. The Ministry is currently spearheading the process of drafting and approval of National Solid Waste Management Bill and the National Solid Waste Management Policy. At the time of the study, the two documents were subject to mandatory public participation and consultations,

[20] Interview with official KARA
[21] Interview with County Director, NEMA, Nairobi County
[22] NEMA *National waste management strategy, 2015*, 48-49.
[23] EMCA s 2; a lead agency includes a government ministry, department, parastatal, state corporation or local authority.
[24] Interview with Director in the Ministry of Environment, 29 November 2018, Nairobi.

before adoption by Cabinet and onward transmission to Parliament. Besides, the Ministry was also steering the development of a national strategy and regulations on e-Wastes. These regulations are normally drafted by NEMA and transmitted to the Ministry which then proceeds to subject the same to stakeholder scrutiny before formal adoption. Even though the Ministry plays largely an oversight role, 6 out 10 of the respondents however feel that it plays a critical role in MSWM within their respective neighbourhoods.

The Directorate of Occupational Safety and Health (DOSH) is a national government agency which is responsible for ensuring safety and health in all workplaces in Kenya as per the Occupational Safety and Health Act (OSHA).[25] Though unrelated to this study, DOSH has the mandate to assess claims submitted by workers under the Work Injuries Benefits Act. Matters relating to MSWM fall under the Division of Occupational Hygiene within DOSH. Officers under this division routinely inspect workplaces for occupational hazards based on exposure to contaminants including wastes. Safe disposal of wastes is an obligation imposed on occupiers of registered workplaces and therefore DOSH has a mandate to enforce the same with a view to limiting exposure of workers to unlawful occupational hazards.

DOSH has regulatory mandate on various wastes- solid as well as liquid; organic and chemical; domestic and hazardous wastes. Enforcement powers of DOSH are confined to matters within the workplace and therefore are limited in the sense that wastes disposed outside the workplace or into the sewerage system falls beyond DOSH's jurisdiction.[26] DOSH regulates county authorities as occupiers of workplaces and for this, county governments are required to obtain registration from DOSH for their respective premises and facilities. DOSH has decentralized its operations with offices in all of the four counties targeted by this study.

[25] Interview with Director, Division of Occupational Hygiene –DOSH, 07, November 2018, Nairobi
[26] The Director notes that unlawful dumping of wastes outside the workplace is the purview of the County authorities and NEMA.

The role of DOSH seems to be recognized by significant proportion of respondents since 62% of them agreed with the statement that the agency plays a critical role in MSWM in their respective neighborhoods. A relatively higher number of respondents (77%) agreed with the statement that DOSH considers compliance with waste management regulations by businesses and firms an important consideration before issuing registration to workplaces. This suggests a correlation in terms of perceptions, between the licencing powers of DOSH and its role in MSWM regulation among registered workplaces in the target area. Thus an opportunity exists for DOSH to affirm or strengthen its MSWM role through its licencing powers.

However, it should be noted that DOSH experiences several gaps in its mandate. First, DOSH has only managed to register 0.6% of the 1.7million registered workplaces in Kenya, and is only able to inspect annually about 0.3% of the said registered workplaces.[27] Thus the ability of DOSH to regulate wastes in all workplaces is doubtful. Secondly, DOSH is not able to undertake adequate training on safety and health to occupiers of workplaces, with the OAG Report indicating that between 2011-2015, the directorate was only able to reach 43,729 workers, representing a paltry 0.3% of the entire workforce.[28] Thus, it should be expected that awareness on occupational hygiene is low among occupiers of workplaces and this undermines optimal behavior and practices for managing wastes in a sustainable manner in workplaces. Thirdly, DOSH has conducted limited prosecutions in magistrates courts over OSHA violations, and this was attributed to limited number of technical staff (capable of prosecuting cases) and the legal technicalities which preclude DOSH officers from prosecuting and acting at witnesses simultaneously in trials.[29]

[27] Office of Auditor General, *Performance audit on protection of safety and health of workers at workplaces*, (OAG, 2018) 9 < http://oagkenya.go.ke/Audit-Reports?path=Performance%20Audit> accessed 16 August 2019
[28] Ibid 11
[29] Ibid 12; during the period 2011-2015, DOSH only managed to prosecute 113 cases.

The above capacity gaps are attributed to shortage of staff,[30] with the OAG report indicating that out of the required 247 staff complement, DOSH had only managed to hire 66, leaving out a gap of 183 staff.[31] Even though DOSH is able to raise adequate resources for its mandate, it nevetherless experiences inordinate delays in disbursement of funds from its parent ministry for its activities and this undermines its ability to undertake operations in an efficient manner.[32]

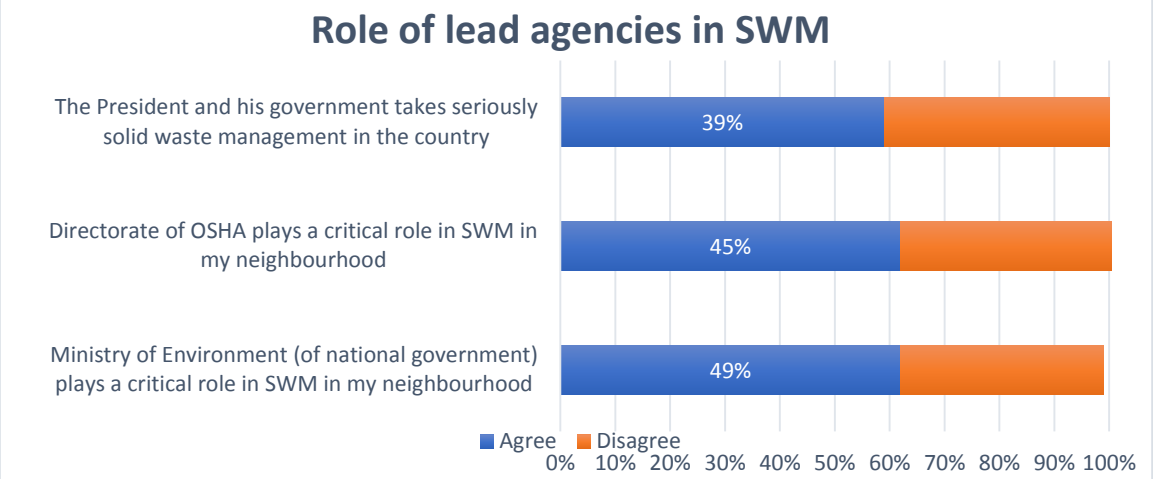

Table 16: Role of lead agencies in SWM

5.2.3 Coordination between NEMA, other lead agencies

5.2.3.1 Coordination between NEMA and DOSH

The study revealed the existence of coordination mechanisms between NEMA and DOSH. These mechanisms are either formal (regulated by law) or informal (ad hoc). Formal mechanisms include the National Council for Occupational Safety and Health (NACOSH) which is a statutory forum that brings together DOSH and other key stakeholders for policy

[30] Interview with Director of Occupational Hygiene, DOSH, 07 November 2018, Nairobi; he observed that DOSH has 27 County offices which are staffed by one or two officers who unable to cover all workplaces within their area of jurisdiction.
[31] Office of Auditor General, *Performance audit* 7; failure to recruit staff is attributed to red tape at the parent ministry.
[32] Ibid.

formulation and strategic oversight on OSH matters.[33] NEMA is among the organizations represented in NACOSH. The DOSH representative confirmed that NEMA regularly attends the NACOSH meetings and therefore has opportunity to contribute to the agenda of NACOSH and therefore integration of environmental concerns in the mandate of DOSH.[34]

Secondly, NEMA coordinates with DOSH within the framework of EIA and EA processes. NEMA county officials routinely share with DOSH officers EIA and EA reports submitted for approval by project proponents.[35] This allows for institutionalized consultations between the two agencies over EIA matters. Through this process, DOSH is also able to input in the approval processes of EIA. A NEMA official was quoted as saying that DOSH licensing requirements for workplaces are rather stringent (compared with other lead agencies) and therefore makes compliance of EIA licensing requirements fairly easy and therefore this simplifies the approval process on the part of NEMA.[36] However, after an EIA license is issued, there is minimal cooperation between NEMA and DOSH over enforcement of EIA licence conditions because there is no legal obligation related to the same and further that NEMA does not usually share environmental audit reports with lead agencies for comments.[37]

Both NEMA and DOSH have on certain occasions established *ad hoc* task groups to undertake investigations and joint actions. One example given was the case of lead poison at Owino Ouru village in Changamwe area of Mombasa County in 2014.[38] The two agencies established a joint team which visited the lead battery recycling factory and inquired into the claims of pollution through emissions and improper waste disposal. As a

[33] OSHA, s 27
[34] Interview with Director, Division of Hygiene, DOSH, 07 November 2018, Nairobi
[35] Interview with County Directors in Nairobi 18 September 2018 and Kiambu, 23 July 2018, Kiambu
[36] County Director, NEMA , 23 July 2018, Kiambu
[37] Interview with Director for Occupational Hygiene, DOSH, 07 November 2018, Nairobi.
[38] Ibid

result, some enforcement actions were taken against the offending factory.[39] Currently, NEMA is also collaborating with DOSH in a donor-funded project which is examining the regulatory framework and operations of the emerging extractives (Oil and Gas) industry.

5.2.3.2 Coordination between NEMA and Ministry of Environment

NEMA considers the Ministry a lead agency within the meaning of EMCA.[40]On the other hand, the Ministry took the view that NEMA was an implementer of its policies and therefore subordinate to its mandate.[41] This is attributed to changes in CoK 2010 which gave the Cabinet secretaries broad policy oversight powers in relation to departments and agencies falling within their respective ambits. In practice, it is the Ministry which supervises NEMA. Therefore, it is highly unlikely that NEMA can feasibly exercise powers over the Ministry of Environment (or any other ministry for that matter) as a lead agency under Section 2 of EMCA with success. The definition of Lead Agency perhaps should be amended to exclude the Ministries.

The above notwithstanding, NEMA has been engaging with the Ministry, through an inter-ministerial committee established to spearhead the formulation and adoption of the National Solid Waste Bill and policy as well as another taskforce on eradication of polyethylene terephthalate (PET) plastics.[42] NEMA avers that the agency currently enjoys a good relationship with the Ministry of Environment but also singled out the Ministry of Interior which has been approached to cascade information on waste management to the grassroots through the provincial administration structures. [43]

[39] See The Parliament of Kenya "*Report of the Standing Committee on Health on the Owino Ouru Public Petition*" March 2015 accessed from https://centerforjgea.com/assets/SENATE_REPORT_2015.pdf on 04-03-2019; The report indicts NEMA for issuing EIA licence to the offending lead factory in 2008 without engaging other lead agencies and conducting mandatory public consultations.
[40] Interview with NEMA HQ official, 16 November 2018, Nairobi
[41] Interview with Director in Ministry of Environment , 29 November 2018, Nairobi
[42] Ibid
[43] Interview with NEMA HQ official, 16 November 2018, Nairobi

The Climate Change Council was identified as an institutional mechanism that can promote integration through its mandate of setting standards across sectors.[44] The fact that the President chairs the Council and the Ministry provides secretariat services, the Council is viewed as enjoying political support at the highest levels, which could prove critical for its success. This was contrasted with the defunct National Environmental Council (NEC), which lacked standard-setting powers and was chaired by a Minister. It was observed that the NEC had limited convening clout and thus never met at all during its existence apparently due to busy schedules of its members.[45]

5.2.4 Coordination with Non-state actors

NEMA has collaborative relations with the major private sector players such as Kenya Private Sector Alliance (KEPSA) and Kenya Association of Manufacturers (KAM). KAM has received from NEMA an invitation to join a technical committee on EIA process. Besides these structured initiatives, NEMA has been engaging private sector on a needs/ ad hoc basis.

There exists robust self-regulation mechanisms among waste actors in the private sector as exemplified by the formation and continued operation of the Waste Management Association of Kenya and Kenya Association of Waste Recyclers and the Kenya PET Recycling Company (PETCO).[46] Through these organizations, waste actors are able to set their own norms and standards of operations for mutual accountability as they pursue their collective interests in the MSWM sector. The actors however feel that the current regulatory framework however does not formally recognize the role of these bodies in decision-making processes related to waste management.[47] In fact, the litigation instituted

[44] Interview with Director in the Ministry of Environment, 29 November 2018, Nairobi
[45] Ibid
[46] Interview with official of KAM, 21 September 2018, Nairobi; KAM is one of the stakeholders involved in formation of PETCO as a producer responsibility organization for recycling plastic waste from beverages
[47] Ibid

by WEMAK against waste authorities (NEMA and Nairobi City County) was partly based on complaints of non-involvement in key decisions related to waste governance.[48]

With regards to engagement with residents' association, NEMA has entered into a memorandum of understanding (MoU) with the Kenya Association of Residents (KARA), thus denoting a structured collaboration.[49] The MoU provides a good basis of collaboration on a wide array of environmental issues including MSWM. However, NEMA is yet to exploit opportunities for collaboration on promoting public education on wastes with community groups and residents' association.

5.2.5 Instruments for Horizontal Environmental Integration

5.2.5.1 Environmental assessments

Environmental impact assessments are perhaps the best known tools for environmental integration.[50] Developers of projects specified in the Act likely to have significant impacts on the environment are required to undertake prior an environmental impact assessment (EIA) study and acquire a licence from NEMA to that effect.[51] The EIA decision-making process requires NEMA to consult with other lead agencies and stakeholders (likely to be) affected by the project hence creating an imperative for sectoral coordination. Upon issuance of an EIA licence, the project proponent is required to develop an environmental management plan which incorporates waste management considerations and form the basis of subsequent environmental audits.

Respondents' ratings of the EIA and audit process was very positive. Significant majority (72%) of respondents whose establishments are subject to EIA requirements felt that the

[48] *Waste Environment Management Association of Kenya (WEMAK) v Nairobi City County* (2016) eKLR (also cited as Petition 210 of 2015)
[49] Interview with official KARA, 25 September 2018, Nairobi
[50] Hens Runhaar & Peter Driessen, 'Sustainable urban development and the challenge of policy integration: an assessment of planning tools for integrating spatial and environmental planning in the Netherlands' (2009) 36 Environment and Planning B: Planning and Design, 418
[51] EMCA s 58

environmental management plans developed pursuant to EIA licence requirements adequately prioritize MSWM issues. More respondents (80%) acknowledged that their establishments focus on MSWM issues when conducting respective environmental audits and that 68% of respondents also felt that NEMA prioritizes MSWM issues in approving EAs carried out by respective establishments. These rather high approval ratings for the EIA and EA processes may be construed as satisfaction with the suitability of EIA and EA tools in MSWM regulation. Residents associations were however critical of EIA approvals rendered for projects within the counties. They felt that the EIA licences were issued in disregard of views of the communities.[52] KARA also expressed concern that NEMA in the past arrived at rather dubious decisions to issue EIA licences in circumstances where the environment was obviously imperilled.

The environment impact assessment (EIA) is the most widely used instrument of integrating environmental considerations into development projects. This study established that most respondents positively rated NEMA's performance on management of EIA processes, particularly incorporation of SWM issues in approved environmental management plans. However, the legitimacy deficits of EIA decision-making arising from dubious decisions made in the past could undermine credibility of the tool. One such deficit is the inadequate consultation of stakeholders affected by an EIA decision, which invariably leads to unwarranted litigation.[53] This speaks further to the need for NEMA to enhance its capacity in facilitation and promotion of public participation and stakeholder consultation generally.

[52] Interviews with official of Runda Residents Association, 26 September 2018, Nairobi and Syokimau Residents Association, 16 November 2018, Machakos

[53] See *Save Lamu* Case (n83) Chapter 4 for instance; The Tribunal aptly noted at para 73 that ..”*public participation in an EIA study process is the oxygen in which the EIA study and the report are given life, in the absence of public participation, the EIA study process is a still-born and deprived of life, no matter how voluminous or impressive the presentation and literal content of the EIA study is*.”

5.2.5.2 National environmental action plan process

Environmental planning is also another important tool for horizontal environmental integration.[54] NEMA is mandated to formulate a National Environmental Action Plan (NEAP) every 6 years with the participation of various stakeholders including lead agencies and non-state actors at the national level.[55] Of note, the plan proposes guidelines for integration of standards of environmental protection into development planning and development and binds all persons and public authorities.[56] In the absence of a legally-mandated waste planning process, the NEAP is serves such purpose and it is noteworthy that the previous Plan (2009-2013) dedicated a section on MSWM.[57]

KAM and KARA acknowledged having been engaged by NEMA through consultations in the development of the National Environmental Action Plan in 2018.[58] MSWM issues were tackled in the NEAP consultative processes. However, stakeholders had concerns over the rather long duration of the NEAP process, which led to delays in publication of the document. The efficacy of NEAP was also an issue of concern with doubts expressed over commitment of governmental authorities towards its full implementation.

It should be noted however that at the time of the writing of this thesis, the Government had not published the draft NEAP. It is therefore worrying that Kenya has not had in place a NEAP since 2013. Thus, the government has operated without any clear guidance on necessary environmental actions required to promote sustainability across sectors. It should also be noted that the MTP-1 made reference to NEAP, making a commitment to utilize the framework in promoting integrated environmental planning.[59] The NEAP prioritized

[54] Runhaar & Driessen, (n50); Karl Hogl & Ralf Nordbeck, 'The challenge of coordination: bridging horizontal and vertical boundaries' in Karl Holgl, Eva Kvarda, Ralf Norbeck, Michael Pregernig (eds) *Environmental governance: The challenge of legitimacy and effectiveness* (Edward Elgar,2012)119
[55] EMCA s 37
[56] EMCA s 38 (1)
[57] Government of Kenya & NEMA, 'National environment action plan framework, 2009-2013' (NEMA, 2009) 18-19; MSWM issues are outlined under the section titled 'Human settlement and pollution'.
[58] Interview with official of Kenya Association of Manufacturers (KAM), 21 September 2018, Nairobi
[59] Republic of Kenya, *First medium term plan, 2008-2012* (Office of The Prime Minister, Ministry of State for Planning, National Development & Vision 2030, 2008) 108.

promotion of public-private partnerships, research and development of value-added products (from recycling and recovery operations) among other issues.[60] The MTP-1 reflected prioritization of promotion of public-partnerships in its waste management flagship initiative, demonstrating linkage between the two documents.[61]

Indeed, the NEAP (2009-2013) was developed through a bottom-up process, where issues were identified at the district level and cascade up through the provincial to national level, within public involvement through grassroots meetings (Barazas) and stakeholder validation meetings.[62] Through such process, perspectives of environmental interest groups were incorporated into the framework. To incentive public officers to ensure completion of the NEAP, a relevant target was incorporated in the performance contract for the year 2007/8.[63]

From this study, it is evident that the ongoing NEAP process will significantly depart from previous frameworks. Since all counties are yet to develop county environmental action plans (CEAPs), the ongoing process will not embrace the bottom-up approach used in previous NEAP and hence the comprehensiveness of the Plan is doubtful. Even though KARA and KAM alluded to involvement in the consultative process at the national level, the engagement of county-level actors was missing and this may undermine the full consideration of all viewpoints necessary to enhance the comprehensiveness of the document. The MPT-3 process is already complete and it is unlikely that the priorities of the NEAP, once approved by Parliament, will reflect in the overarching development priorities of the country, like the previous NEAP did under MTP-1. Perhaps the national government should consider incentivizing public officers to complete the process by linking the same to their performance targets in their respective performance contracts for the current financial year.

[60] Government of Kenya & NEMA (n53) 19.
[61] Republic of Kenya, *First medium term plan* 109
[62] Government of Kenya & NEMA (n53) 6
[63] Ibid

One may argue that the publication of the national waste management strategy by NEMA in 2014 mitigates the absence of a substantive NEAP. However, unlike NEAP, the NEMA waste strategy is not binding upon authorities and therefore could be ignored in order development planning processes. Indeed, the national waste strategy is not referenced in MTP-3, and most of its priorities on strengthening capacities of Counties towards implementation of waste hierarchy are not reflected in the Plan. The need therefore to have the NEAP process concluded cannot be overstated.

5.3 Horizontal Environmental Integration at the County Level

As a distinct and autonomous level of government and with specific mandate on MSWM, County governments are organized as departments and therefore a sectoral coordination approach is permissible. Under EMCA, County authorities are required to establish county environmental committees, and these may serve a sectoral coordination purpose. In discharging their respective functions, County governments are under obligation to promote public participation and therefore this creates an imperative of engaging private sector and non-state actors as part of sectoral coordination.

5.3.1 County inter-departmental coordination

The study found that at the county level, the departments responsible for environment, physical planning, public health and trade/public administration had the most significant regulatory responsibilities over MSWM. The department of environment (except in Machakos county) is responsible for licensing and operational aspects of MSWM; Department of physical planning is responsible for approving land use (including siting of waste facilities) and building approvals; department of public health enforces the law on wastes (as nuisances) and participates in rendering building approvals; department of trade/public administration renders business/trading licences to business (targeted by this study).

However, the study found strong coordination and collaboration between public health and physical planning departments ostensibly due to their shared mandate of rendering building approvals. However, these two departments have weak coordination and collaboration with the department of environment and trade/public administration. On the other hand, there is strong collaboration and coordination between the department of environment and trade/public administration and this may explains why (as pointed out earlier) most business felt that MSWM matters were considered in the licencing of business.

In all counties, the departments of health and physical planning complained of being left out in key decisions and processes led by the Department of environment e.g. the process of development of solid waste legislations and licencing of operators. On the other hand, Departments of environment maintained having good working relations and collaboration with the two departments.

Given the unequivocal and unanimous responses, there is strong evidence to suggest that inter-departmental coordination is weak at the county level. County departments appear to have inherited the silo approach that is prevalent in national government.[64] Thus, there is high likelihood that important considerations (public health, land use) are not adequately incorporated in key decisions relating to MSWM regulation at the county level.

5.3.2 Efficacy of County Environmental Committees (CEC)

As explained in Chapter 3, the CEC provides an important mechanism for fostering sectoral coordination at the county level as it brings together the government departments, NEMA and non-state actors. In the study counties, Machakos and Kajiado had established County Environment Committees, whereas in Nairobi and Kiambu, NEMA had forwarded the names for promulgation by the respective Governors.

[64] Martin Oulu & Emmanuel Boon, 'Environmental mainstreaming in development policy and planning in sub-saharan Africa: a case study from Kenya' in W. Leah Filho (ed) *Experiences of climate change adaptation in Africa* (Springer, 2011) 225.

The Kajiado CEC was appointed in February 2015 and ranks as the first so appointed in Kenya.[65] The CEC has since developed a County Environment Action Plan and took part in the development of the first generation CIDP. This perhaps gave opportunity for integration of the two planning processes (CEAP and CIDP). Following the election of a new Governor in Kajiado in 2017, the CEC was reconstituted following departure of some key county officials. However, the new names gazetted by the Governor were found to have violated the format and hence the Department of Environment has advised the same be reviewed. For this reason, the Kajiado CEC remains inoperative.

The Machakos CEC was appointed in September 2018 but is yet to formally meet, after the appointment process was also found to have been defective in the same manner as the Kajiado one.[66] This points to weaknesses in the appointment process. The reasons for delays in the appointment of CECs in Kiambu and Nairobi were attributed to reluctance by the Governors to endorse the names forwarded by NEMA owing to political considerations.[67] Consistent with the foregoing, the respondents gave a rather poor assessment of CECs with 28% aware that the respective County government had established a CEC and that the 26% agreed CECs were active and visible in the respective counties.

The following challenges affected the Kajiado CEC:

- **Financial constraints**: due to limited budget, the CEC was constrained to hold its meetings and conduct outreach activities
- **Lack of clarity on the institutional home of CEC:** Whereas EMCA provides for the establishment of CEC and gives NEMA the role of secretariat, there lacks clear understanding as to which of the institutions (County government or NEMA) has budgetary responsibility over CEC. The counties appear to have taken the view that

[65] Interview with Director, Environment Department 09 September 2018, Kajiado County
[66] Interview with Senior Administrative Officer, Department of Environment, 08 October 2018, Machakos County.
[67] Interviews with County Directors of NEMA, Kiambu and Nairobi City Counties.

since CEC is a creature of EMCA, then NEMA should sustain the committee with adequate resources. NEMA takes the view that CEC is the responsibility of Counties. Owing to this, there appears to be diffusion of responsibility over CEC

- **Heavy government representation:** The CEC has limited non-state actors and hence is top-heavy with government representatives. This undermines the strength and effectiveness of civil society voice in the committee.
- **Centralization of the CEC:** The CEC only operates at the county level, yet environmental challenges are encountered and dealt with at the sub-county levels. Moreover, the Constitution envisages further decentralization below the county levels.
- **Failure to adhere to the appointment process**: Governors disregard the nomination criteria and insist on gazetting names outside the law. For political expediency, Governors wish to have their supporters appointed. The law perhaps should resolve this dilemma, which is undermining the process of establishing CECs

The County Environmental Committee (CEC) provide potentially a useful mechanism for facilitating horizontal environmental integration at the County level owing to their mandate on environmental planning and composition which includes responsible County government departments, NEMA and non-state actors. Functional CECs could also help alleviate the weak inter-departmental cooperation and coordination on MWSM matters identified in this study at the County level. However, CECs are yet to become fully institutionalized in Kenya. In a study conducted by the Office of Auditor General covering the FYs 2012/3 to 2017/8, it was established that in the 11 target counties (including Nairobi, Machakos and Kajiado), only one county (Embu) had established a functional CEC.[68] The study also found that as a result of this situation, Counties were unable to effectively coordinate with other stakeholders on environmental protection measures.

[68] Office of the Auditor-General, 'Performance audit report on Land conservation and restoration of quarries in Kenya' (OAG, 2020) 7 < http://oagkenya.go.ke/Audit-Reports?path=Performance%20Audit> accessed on 28 October 2020; NEMA reported to the OAG that out of the 47 counties, 39 had gazetted CECs.

There is need therefore for National government, through the requisite intergovernmental structure (The Summit and Council of Governors) to encourage County governments establish and operationalize the CECs. Without adequate funding and capacity building however, CECs will struggle to discharge their obligations effectively and decentralize their work.

5.3.3 Engagement with Non-state Actors

In all the four counties targeted by the study, there existed vibrant residents' association which operated under the umbrella of the Kenya Alliance of Residents Associations. The role of residents associations in providing common services (including MSWM) to their members (and non-members) which otherwise should be provided by the County government has legal basis.[69] However, the residents associations exhibited different levels of engagement with the county governments. In Nairobi, the residents' associations had established formal engagement mechanisms with the County government through entering into recognition agreements.[70] These agreements provided scope for collaboration on MSWM matters, particularly in relation to consultations over service delivery. However, in the other three counties, engagement between residents' associations and county authorities was through informal structures organized through *ad hoc* consultations. In all cases residents' associations did acknowledge having been consulted over decision-making on county matters but to varying degrees of engagement. These engagements where also characterized by adversarial relations that manifested in litigation of urban management issues such as disputes over change of user approvals.

[69] See *Kiriinya M Mwendia v Nairobi City County and 2 others* (2018) eKLR (also cited as Petition No 44 of 2016); The applicant had sued the Runda Residents Association for who holding provision of water and garbage collection services on account that he had declined paying charges levied by the Association, claiming that he was not obliged to do so as a non-member and that he was entitled to similar services from the County government. The Court found that it was proper and legitimate for the Association to levy charges for services provided to the Applicant.

[70] Interview with officials from KARA and Runda Residents Association, 26 September 2018, Nairobi County.

Engagement between county authorities and private sector was mediated through apex private sector bodies and their respective county chapters such as Kenya Association of Manufacturers, the Kenya Private Sector Alliance and the Kenya National Chamber of Commerce and Industry.[71]The lobbies had organized informal engagements through the Governor's Roundtable with Private Sector, an consultative forum organized periodically to provide platform to sharing of views and concerns on business climate in Nairobi County.[72]

However, engagements with waste management actors from the private sector was characterized by tensions which invariably led to litigation. The Nairobi County viewed the Waste Management Association of Kenya (WEMAK) officials with suspicion, following disagreements over the rolling out of the franchise system for waste collection in Nairobi.[73] The County authorities lacked formal and informal engagement mechanisms with informal waste actors (waste traders, brokers and pickers). It is noteworthy that the Integrated Solid Waste Plan for Nairobi (2010) had envisaged a role for community associations in the service delivery and decision making on MSWM.[74] However, the Plan did not specifically identify a role for the informal waste actors, who normally do not associate in formal groups and therefore cannot be equated to community associations.

[71] Interview with official from KAM, 21 September 2018, Nairobi
[72] See Kenya Private Sector Alliance, 'Report on breakfast meeting with the Nairobi County executives and the kenya private sector alliance (KEPSA) on 12 August 2015 at sarove Panafric hotel, Nairobi' https://kepsa.or.ke/nairobi-county-governors-forum/ > accessed on 29 October 2020
[73] Interview with Assistant Director, Waste Management Section, Nairobi City County Government, Nairobi.
[74] Office of Deputy Prime Minister, Ministry of Local Government & City Council of Nairobi, *Preparatory survey for integrated solid waste management in the Nairobi city in the Republic of Kenya* (City Council of Nairobi & JICA, 2010) Section 5.8 < https://openjicareport.jica.go.jp/pdf/12005443.pdf > accessed on 09 July 2020.

5.4 Challenges and gaps in Horizontal Environmental Integration

5.4.1 Declining primacy of NEMA

In a regulatory setting characterized by presence of multiple regulators, regulatory agency primacy serves as a bulwark against fragmentation by reason that the preeminent regulator will not hesitate to take necessary regulatory action if others neglect or fail to do so.[75] In the same vein, where different regulators compete over the same subject matter, the preeminent regulator will step-in and ensure harmony. NEMA as the preeminent environmental regulator and coordinator of sectoral lead agencies as per law. Respondents in this study also perceive NEMA in similar terms.[76]

However, recent legal and political developments have undermined the preeminent place of NEMA. Key among these was the abolition of the Standards and Enforcement Review Committee (SERC) which enabled NEMA exercise a mandatory convening power over lead agencies in relation to standard-setting and norm development in the environment sector[77]. The SERC was therefore a critical forum for facilitating substantive environmental integration, through involvement of different sectors in norm-setting and its subsequent abolition is a missed opportunity. The decision to recentralize environmental policymaking processes in the Office of Cabinet Secretary with limited or no role for NEMA reflects political decision to side-line the Agency.[78]

Secondly, because of chronic underfunding by National government, NEMA's regulatory capacity has declined over the time. The table below shows the funding levels of NEMA from government and donor grants since FY 2013/4:

[75] See for instance, Dave Owen, 'Mapping, modelling and the fragmentation of environmental law' (2013) 1 Utah Law Review 236-238
[76] See text to Chapter 4 (4.4.2)
[77] EMCA, s 43
[78] Ibid ss 5-6

Year	Donor grants	% of total grants	Govt grants	As % of total grants	Total Grant revenue	Total Revenue
2013/4	92,767,859	14%	573,659,038	86%	666,426,897	1,003,788,545
2014/5	214,202,965	29%	526,935,994	71%	741,138,959	1,192,646,931
2015/6	116,459,000	21%	433,166,000	79%	549,625,000	1,236,084,000
2016/7	224, 478,000	46%	268,532,000	54%	493,010,000	1,159,616,000
2017/8	195,475,000	24%	633,328,000	76%	828,803,000	1,235,672,000
Total	843,382,824	Av.27%	2,435,621,032	Av. 73%	3,279,003,856	5,827,807,476

Table 17: Sources of Funding for NEMA

Source: Office of Auditor-General & NEMA

The NEMA strategic plan which covered the above period (2013-2018) projected that the Agency would require a total of Ksh 14.72billion to meet its obligations, translating to Ksh2.94billion per year.[79] Within the strategic plan period, NEMA realized as revenue, Ksh 5.82billion, thus registering a shortfall of Ksh 8.9billion (or Ksh1.78billion). It should also be noted that the previous strategic plan (2010-2013), NEMA had anticipated to spend approximately Ksh5B over the period but only managed to received approximately Ksh1B.[80] If the costing of the strategic plans was accurately done, then NEMA has over the years operated well below its funding requirements and this has definitely impaired its capacity to perform its full breadth of regulatory functions.

Over the years, foreign donors have contributed on average 27% of NEMA funding from grants according to Table 13. In the various audit reports, donor funding is captured as development funding whereas, government grants goes to recurrent expenditure. Thus, NEMA totally depends on donor funding for its programming. This predisposes NEMA to capture by foreign donors, further weakening its independence and therefore regulatory capacity. This situation should therefore concern the government, as a matter of national

[79] National Environment Management Authority, *Strategic plan 2013-2018,* (NEMA,2013) 34-56, <http://www.nema.go.ke/images/Docs/Awarness%20Materials/NEMA%20strategic%20plan%202013-2018.pdf > accessed on 24 September 2019

[80] Ibid 9.

interest. Yet without adequate funding, it is doubtful that NEMA can undertake its statutory functions, including sectoral coordination of environmental management, including on MSWM.

5.4.2 Political interference and NEMA's lack of independence

The institutional design of NEMA and the control of the selection and appointment process by the President and Cabinet Secretary places NEMA under complete control by the National government.[81] This makes NEMA vulnerable to politicization and political interference in its decisions, thus undermining its sectoral coordination role. The past two chairmen of the Board of NEMA have had political inclinations with no background in environmental management whatsoever.[82]

The case of *Save Lamu & 5 others v National Environmental Management Authority (NEMA) & another*[83] is instructive. This was an appeal by and NGO and group of residents of Lamu filed at the National Environment Tribunal, against the decision by NEMA to grant Amu Power Company (APC) ltd an EIA licence for establishing a coal-fired power plant, on grounds that there was no adequate public participation among others. The proposed plant had been prioritized under Kenya's Medium Term Plan (III) which sought to increase power generation capacity from 1,606MW to 5,538MW in the period between 2013-7.[84] The proponents of the project, APC is associated with powerful business and political players in Kenya.

[81] EMCA s10; The Chairperson of the Board is appointed by the President while other members of the Board who are not ex-officio (including the Director General) are appointed by the Cabinet Secretary
[82] See OAG, *Report of Auditor-General 2016,* vi; OAG, *Report of Auditor-General 2017,* vi; Maluki Mwendwa and John Konchellah have academic backgrounds in financial management and banking respectively;
[83] (2019) eKLR; also cited as Tribunal Appeal No. NET 196 of 2016
[84] Government of Republic of Kenya, *Second Medium Term Pan, 2013-2107*, (The Presidency & Ministry of Devolution & Planning, 2013), 20; In the preamble, the Presidents states that the Plan outlines the electoon promises contained in the Jubilee Coalition Manifesto of 2013, and thus, the flagships identified therein bear high political significance

In its decision, the Tribunal found that NEMA had issued the EIA licence to APC, without ensuring mandatory public participation requirements were upheld, despite having initially outlined to the project proponent the statutory modalities for undertaking the same. In doing so, NEMA failed to ensure among other things that; the ESIA study report was subjected to meaningful and adequate participation; deadlines for submission of reports were not adhered to; public consultations of the ESIA report proceeded despite objections from lead agencies over appropriateness of locality and timing; the licence was issued hurriedly. NET also observed that during the public consultations process, NEMA appeared to have abdicated its responsibilities and allowed the project proponent to *run the show* as it were.

From this decision, it is possible to infer that by hurriedly issuing the EIA licence, NEMA capitulated into making an unlawful decision, in the face of severe pressure from government and other interests behind the Lamu power project. In disregarding strong technical views from lead agencies pointing out flaws in the process, NEMA may have undermined its credibility as a sectoral coordinator. This may adversely affect NEMA's position in future engagements with sectoral agencies. Unfortunately, this is a problem of institutional design, rather than leadership capacity and therefore perhaps, re-designing NEMA as an independent regulator may provide a long-term solution.

Strengthening sectoral coordination would entail better clarifying NEMA's roles and obligations vis-à-vis the other lead agencies and sectoral bodies. From this study, it is evident that it is highly unlikely NEMA can feasibly exercise powers over the Ministry of Environment (or any other ministry for that matter) as a lead agency within the scope of powers provided under Section 12 of EMCA with any success. In the course of the study, it emerged for instance that the Ministry of Environment had taken over licensing of hazardous wastes, a regulatory function hitherto played by NEMA. This creates a rather anomalous arrangement where the Ministry plays a dual role of policymaker and regulator. The rather tenuous relationship between NEMA and the Ministry requires resolution, either

by changing the definition of lead agency to exclude Ministries of national government or recreating NEMA as an independent regulator.

Lastly there is need for NEMA to enhance its credibility by improving performance on areas where it is regarded as weak. This study revealed poor rating of NEMA in regulation of dumpsites, provision of education on waste management and inspection of business premises and neighbourhoods for compliance and enforcement. This is consistent with the Courts finding in the *ACRAG* and *Osano* cases. NEMA appears to heavily rely on its policy of assisted or negotiated compliance,[85]which reinforces the perception that the agency is a weak regulator.

5.4.3 Weak culture of cooperation among regulatory authorities

The study has revealed gaps in cooperation and collaboration necessary for coordination between NEMA and lead agencies. This is attributable to several factors. First, the use of performance contracting as a public service performance management tool forces public officers to tends to preclude the pursuit of collaborative initiatives, which fall outside scope of KRAs of a particular organization. For instance, the performance reports of the Water Resources Authority for the FYs 2013/4 to 2015/6[86] list stakeholder participation and networking as a key indicator of performance, derived from the statutory mandate of the lead agency in the water sector.[87] However, the report identifies private sector, civil society and development partners as the stakeholders targeted under this KRA, to the exclusion of other regulatory authorities including NEMA. Hence the report does not assess the interactions between WRA and NEMA during the reporting periods. This underlines the fundamental flaw in the performance contract process in this regard. Incorporating KRAs

[85] This approach deemphasizes use of coercive instruments to secure compliance but rather seeks to encourage regulated entities to work towards achieving compliance to the extent their respective circumstances allow

[86] < https://wra.go.ke/wp-content/uploads/2019/07/WRA-Performance-Report-6.pdf> accessed 24 September 2019

[87] Water Act, 2016 s 12 (h); to coordinate with oth er regional, national and international bodies for better regulation of the management and use of water resources

that foster cooperation among officials and synergize the mandates of regulatory authorities (including NEMA) could address this gap.

Secondly, public officers tend to cling on to what their enabling statute requires them to do. If statute does not command them to cooperate and collaborate with others, there is little incentive to do so.[88] Cross-referencing EMCA with other sectoral statutes where obligations of sectoral coordination are provided for may inculcate a sense of legal obligation to cooperate among sectoral officials. Thirdly, the rigidity of budgeting frameworks precludes the possibility of ad hoc sectoral (multi-agency) collaborative initiatives which may invariably require resources.

5.4.4 Inadequate co-regulation in MSWM framework

Co-regulation is viewed as a new regulatory approach which is characterized by interactive relationship between the regulator and the regulated, defined by agreement or covenant, whereby the overall policy or regulatory objectives are set by the regulator and the details are subject to negotiated agreement between the two parties.[89]The concept arose out of acknowledged failure of over-reliance on public regulation in the form of command and control instruments in dealing with complexities and costs of pollution control on one hand and the overreliance of market-based instruments owing to problems of incompatibility with public interest and conflict with long-term approaches to environmental protection.[90]

Co-regulation in MSWM is implemented through such measures as extended producer responsibility schemes, franchises system and management contracts among others and these have been credited for the dramatic reduction of waste problems in Western Europe in recent years. From an integration point of view, co-regulation is an important tool for

[88] Interview with Head of Waste Management Unit, NEMA, Nairobi
[89] M Kidd, 'Alternative to criminal sanction in the enforcement of environmental law' (2002) 9 *South African Journal of Environmental Law and Policy* 29
[90] Helen Michaeux & Franck Aggeri, 'The emergence of hybrid co-regulation: empirical evidence and rationale in the field of e-waste management' (EGOS Conference, Naples, July 2016) 2

ensuring community groups and private sector perspectives are incorporated in environmental decision-making and in the regulatory process, thus promoting integration of their perspectives in environmental (and especially waste) governance.

EMCA generally empowers NEMA to encourage voluntary environmental conservation practices and other such instruments,[91] whereas Waste Regulations of 2006 recognize aspects of extended producer responsibility under the clean production principles.[92] The Nairobi City County SWM law also recognizes solid waste management as a shared responsibility, identifies franchise and management contract systems and promises regulations to elaborate on recovery of waste materials by various actors hence anchoring aspects of co-regulation.[93] However, there is no framework for operationalizing the suggested co-regulation schemes with the requisite incentive structures and regulatory safeguards against free rider problems. There is no formal recognition of the role of private sector in decision-making relating to SWM governance at both national and county levels. This may explain the slow uptake of private sector responsibility in waste management, beyond provision of waste collection services.

Equally important, the envisaged co-regulation aspects under MSWM framework does not recognize informal sector actors such as waste pickers and petty recyclers. Yet informal waste actors in developing country cities are credited for impressive recycling rates (on average 26%) with limited costs and resulting in significant savings (at least 20%) to municipalities' waste expenditures.[94] In The recycling rates in Nairobi city are estimated at between 5-10% and informal actors play a large role in the process.[95] Excluding their perspectives in regulatory process could undermine sustainability of the whole system.

[91] EMCA, s 9 (2) (q)
[92] Waste Regulations 2006, reg .6
[93] NCCSWMA 2015, ss 3, 6(2) and 9
[94] David Wilson, Costas Velis & Ljiljana Rodic, Integrated sustainable waste management in developing countries' (2013) 166 Waste and Resource Management 60
[95] Nairobi City County Government, '*County Annual Development Plan (CADP) 2018/2019*', 55

Until recently with the enactment of the Nairobi City solid waste law, waste picking was hitherto prohibited under the defunct Nairobi City Council Bylaws (2007) and this could have provided a disincentive for informal waste pickers to organize and engage effectively with City authorities.[96] It is noteworthy that the Nairobi City County Neighbourhood and Community Associations Act (2016) provides for recognition of community associations involved in waste management and provides for measures to incentivize their actions. However, the law does not define what community associations are and regulations to provide for its operationalization are not in place. Perhaps with advocacy, an opportunity could arise for the formal recognition of informal waste actors as urban communities and incentivize their efforts under this law when fully operationalized.

5.4.5 Limited repertoire of sectoral coordination instruments

The weaknesses associated with EIA process invites the suggestion that policy actors within MSWM should look beyond and utilize other existing tools for foster sectoral coordination. Strategic environmental impact assessment (SEA) is an emergent tool in the repertoire of assessment tools provided under EMCA, which is relevant for this discussion. EMCA defines strategic assessment (SEA) as the formal or systematic process to analyse and address the environmental effects of policies, plans, programmes and other strategic initiatives.[97] It is a therefore a policy analysis or assessment tool which seeks to integrate environmental concerns in the policies, plans and programmes (policy interventions) proposed by public authorities and at their own expense.[98] The application of SEA is not only at national and county levels but also extends to regional policy interventions pursued collaboratively by both levels of government at regional levels.[99]

[96] David Kuria & Rina Muasya, 'Mapping waste pickers and organizaitons supporting waste pickers in Kenya' (WIEGO, September 2010) 8
[97] EMCA s 2
[98] Ibid s 57A (1)
[99] Ibid s 57A (2) (a)

Like the EIA, NEMA regulates and drives the SEA process. An assessment of the SEA methodology contained in the NEMA Guidelines[100] shows the process is quite rigorous, requiring collection of baseline information, situational analysis, policy context analysis, impact analysis, alternatives analysis and trade-offs. To this extent therefore, the process benefits from scientific methods and therefore is substantially rational. It is also substantially a participatory process, which gives stakeholders a reasonable opportunity to comment on the findings of the policy intervention appraisal. This opens up possibilities for environmental interest groups and other stakeholders to provide an input to the process. NEMA is empowered to convene a technical advisory committee (TAC) comprising other lead agencies to undertake an expert review of the report before a final SEA report is produced (incorporating stakeholders' comments) and submitted by the proponent to NEMA for approval. SEA is therefore a tool for sectoral coordination as well.

The practice of SEA is slowly emerging with not more than 20 assessments of that kind approved in Kenya so far.[101] However, it should be noted that SEA is a legal requirement for large scale projects or policy initiatives such that failure to undertake the same prior to commencement could lead to invalidation as was held in *Mohamed Ali Baadi and others v Attorney General & 11 others*.[102] In this case, the petitioners challenged the legality of the conceptualization and implementation of the Lamu Port, South Sudan, Ethiopia Transport Corridor (LAPSSET) project. Among the issues raised was that no SEA had been conducted prior to the ESIA studies that were done and formed the basis of issuance of EIA licenses for the initial phases of the project (construction of 3 berths of Lamu port). The Court agreed with the petitioners, noting that the requirement for SEA was backed the Environmental (Impact Assessments and Audit) Regulations of 2003 as well as the constitutional provisions (Art 10, 69 & 70), which "*require a proactive approach to integrate environmental considerations into the higher levels of decision-making for projects with potential to have significant inter-linkages between economic and social*

[100] NEMA, *National guidelines for strategic environmental assessment in Kenya*, (NEMA, 2011)
[101] Based on review of 7 SEA reports at various stages of completion disclosed by NEMA at <https://www.nema.go.ke/index.php?option=com_content&view=article&id=131&Itemid=290> accessed 9 July 2019
[102] (2018) eKLR; also cited as Petition 22 of 2012

considerations." In essence therefore the Court underscored the importance of SEA as a tool for environmental integration, well grounded in the Constitution and EMCA framework.

The draft national solid waste management policy ought to be a candidate for SEA and this will give stakeholders in the sector a fresh opportunity to scrutinize again the contents of the policy and its wider impacts on society and environment. However, the SEA process is not perfect and immune from the problems associated with EIA decision-making process. It has been noted that the SEA suffers from such weaknesses as inadequate notification, limited access to vital information, lack of feedback and communication by proponents to stakeholders and late analysis of alternatives.[103] NEMA should address these weaknesses in order to make SEA a transformative sectoral coordination tool.

The Regulatory Impact Assessment (RIA), is considered a tool for environmental integration, in that it is meant to facilitate consideration of environmental concerns in the process of policy implementation.[104] RIA emerged as an instrument of public policy analysis for identifying costs of regulation on certain business sectors with a view to promoting efficiency (easing of regulatory burdens) and preventing regulatory failure.[105] However, the concept has now broadened to include appraisal of positive and negative impacts of any proposed or actual regulatory change, including economic, environmental and social consequences on sustainable development.[106] RIA is also important for ensuring coherence of proposed laws and regulations to with medium term and long-term policy goals and hence plays a role in sectoral coordination.[107] Globally, 92 out of 185 countries

[103] Heidi Walker, John Sinclair & Harry Spalin, 'Public participation in learning through SEA in Kenya', (2014) 45 Environmental Impact Assessment, 1-9
[104] Jacob & Volker (n77) 297
[105] Joseph Lemione, Global indicators of regulation governance: Worldwide practices of regulatory impacts assessments' (World Bank Group, 2016) 1 accessed from
[106] Colin Kirkpatrick & David Parker, 'Regulatory impact assessment and regulatory governance in developing countries' (2004) 24 Public Administration and Development, 334; the broadening of this concept was as a result of realization that regulation was an important instrument that could support market-led, pro-poor growth and development, particularly in developing countries and not just a tool for promoting market efficiency as was the case in developed countries.
[107] Lemione (n105) 4

survey by the World Bank had adopted RIA policies whereas in Africa, only a quarter of the countries had in place these mechanisms in 2016.[108]

In Kenya, RIA process is applied to statutory instruments (regulations, guidelines, orders etc) presented to Parliament or County assembly as part of the enactment process is another potential tool for environmental integration.[109] Essentially, the RIA entails conducting a cost-benefit analysis (CBA), to determine the economic, environmental and social impact, cost of administration and compliance of the statutory instruments and resource allocation cost. It also includes an analysis of alternative regulatory and non-regulatory measures that could be instituted to achieve the objectives of the proposed instrument.

The Cabinet Secretary (or County Executive Member) is required draft and subject RIA statement to independent review and thereafter issues a certificate of compliance, which must accompany the proposed instrument before tabling in the legislature. It is also a requirement that the RIA statement should be made accessible to stakeholders through publication in the Kenya Gazette and newspapers, as well as on requisition with or without cost from the concerned regulatory body.[110] However, not all proposed instrument are to be subjected to RIA procedures as the Act provides for exemptions. The exemptions relate to proposed instruments whose contents do not have much bearing in terms of costs and burdens to stakeholders.

Through underutilized in Kenya, the RIA presents a good opportunity for various sectors to contribute to development of regulations and other subsidiary legislations that may have an impact on the environment and therefore may be can be considered as a tool of sectoral coordination. As such, NEMA should consider making representations to both National parliament and County assemblies whenever regulations that may have an impact on

[108] Ibid
[109] Statutory Instruments Act (No. 7 of 2013) s 6
[110] Ibid s 8

environment are presented for consideration. Since NEMA is also a regulatory body, it should ensure its regulations are subjected to RIA before submission to parliament. In this regard, NEMA should set exemplary standards on how a good RIA should be conducted.

NEMA could also leverage on the mandatory public participation requirements attaching to the RIA and consider convening other sectors and stakeholders to analyse these regulations as a matter of routine as part of the RIA process. The mandatory nature of these two processes was underscored by the court in the case *British American Tobacco Ltd v Cabinet Secretary for the Ministry of Health & 2 others*. [111] In this case, the petitioners successfully obtained conservatory orders against the imposition of regulations on the Tobacco industry after the Ministry of Health failed to show that public participation and RIA were undertaken before the proposed instrument was deposited in parliament for scrutiny. In upholding the aforesaid processes, the court observed that "*..public interest demands that laws and processes that are laid down for the enactment of legislation and regulations to control industry should be followed*." [112]

5.5 Assessment of Vertical Environmental Integration in MSWM

The devolved government set-up and division of responsibilities in environment management and MSWM in particular creates an imperative for vertical environmental integration, which this study sought to investigate. Intergovernmental coordination provides the means to which VEI is to be achieved. To assess VEI in MSWM therefore, it is necessary to inquire into how various institutional mechanisms and instruments mediating the relationships between county governments and national government entities to achieve optimal consideration of environmental issues within the context of intergovernmental coordination on MSWM. Central to this inquiry is also the interrogation of the capacity of County governments to handle MSWM function.

[111] (2015) eKLR
[112] Ibid at para 53

5.5.1 Capacity of County Authorities in promoting integrated MSWM

County governments have the constitutional mandate to regulate and operate MSWM systems. To effectively engage in intergovernmental coordination, County governments must possess the requisite capacity and competence in this area. Using responses from survey respondents and key informants, the study sought to assess the capacity of the target county governments on core regulatory areas related to delivery of their respective mandates on MSMW as indicated below:

Issue/proposition	**% of Respondents who agree**
County Govt ensures timely collection of wastes in my neighbourhood	37%
CountyGovt officers routinely arrest those who illegally dump wastes in my neighbourhood	24%
County Govt officers routinely inspect our neighbourhood to ensure residents collect and store solid waste in an environmentally- safe manner	30%
County Govt manages public dumpsites in an environmentally-safe manner	17%
County Govt officers educate residents on how to manage waste in an environmentally-safe manner	17%
County Govt allows participation of residents/community associations to participate in waste collection and disposal	26%
County Govt under extreme circumstances has issued notice of closure to establishments that fail to observe sound waste management practices	32%
County Govt in extreme cases shuts down commercial and industrial establishments that do not observe sound SWM practices and relevant law	33%
County Govt considers compliance with waste management regulations of my business establishment before issuing us with an annual business/trading licence	43%

Table 18: Performance of County governments in Integrated Waste Management

Integration of waste considerations in licensing of businesses by County authorities received the best assessment as majority of the respondents (43%) agreed with statement that county governments consider compliance with waste management regulations of businesses before issuing establishments with annual business licences. Given that this is a legal requirement, it could explain the rather higher percent of respondents who agree with it. Small and medium scale businesses mainly agreed with this statement compared to the large-scale businesses. By category of business, respondents from all categories except retail and wholesale mainly agreed with this statement.

The lowest assessment was on the role of County government in educating residents on how to manage waste in an environmentally safe manner with 17% agreeing with a statement to that effect. It would be important for county governments to consider prioritizing education campaigns for residents on proper waste disposal to promote cognitive environmental integration. Other low performing areas were management of county public dumpsites in an environmentally friendly manner (17%). A slim majority of respondents disagreed that county authorities carried out their enforcement duties effectively. In this regard, 24% of respondents agreed that county government officers arrest those who are found to illegally dump waste in the neighbourhoods; routinely inspects neighbourhood to ensure that residents collect and store solid waste in an environmentally friendly manner (30%) and; that under extreme circumstances issues notice of closure to establishments that fail to observe sound waste management practices (32%). The perception that unlawful dumping was prevalent in the study area appears consistent with the rather poor perceptions on discharge of enforcement responsibilities.

The upshot is that these perceptions may point to weak regulatory and operational capacity of County governments in discharging their MSWM responsibilities. If indeed Counties are experiencing challenges with discharging this function, it may have key implications for environmental integration. First, Counties would lose credibility and therefore ability to convene stakeholders at the county level for coordination on MSWM issues. This would therefore undermine effective consideration of other sectoral perspectives in regulation of

waste activities at the county level. Secondly, Counties would attract closer scrutiny and supervision from NEMA leading to conflicts and thus undermining effective vertical coordination with the agency. Thirdly, Counties would constantly require support from National authorities to address gaps and therefore inter-governmental relations on MSWM would be characterized by asymmetrical power relations.

Respondents pointed out several factors that explain the perceived weak capacity of Count governments in MSWM. The first key issue is inadequate funding.[113] However, review of planning and budgeting documents from the Nairobi City County government could not yield a cogent annualized estimate of the desired level of funding for MSWM function in the County. For instance, the Strategic Plan (2013-2017) estimated the costs flagships in MSMW to be at Ksh33 billion, even though this figure was not properly itemized nor annualized and hence its difficult to appreciate the basis of the estimates.[114] The JICA-sponsored integrated solid waste management master plan (2010-2020) estimate the cost of managing wastes for the entire plan period at the of Ksh20.4Billion, but the same lacked annualized targets.[115] Without an updated waste plan with annualized estimates, it is therefore difficult to establish what would be the benchmark for adequate resources to finance MSWM operations for budgeting purposes.

The analysis of budget documents also revealed difficulties in desegregating actual estimates for the MSWM function. The costs for MSWM are usually captured under sector encompassing environment management initiatives. However, the budget drafters only began separating MSWM costs from other categories under the environment management sector for FY2016/7. In the annual financial report for that particular financial year, the total allocation for MSWM (under solid waste management section) was Ksh1,763,415,622, for which Ksh1,245,951,622 (or 71%) was allocated to recurrent

[113] Interviews with officials responsible for MSWM in all 4 counties
[114] Nairobi City County, *Nairobi county integrated development plan, 2014* (Nairobi City County, 2014), 175-178
[115] Office of Deputy Prime Minister & City Council of Nairobi (n74) 40

expenditure, whereas Ksh517,464,000 (or 29%) was earmarked for development expenditure.[116] Within the same financial year, actual expenditure on recurrent costs was at Ksh 1,223,211,485 (or 98% of approved budget) whereas actual development expenditures were recorded as Ksh370,038,979 (or 72% of the approved budget) of the total actual expenditures of Ksh1,507,847,392 (representing absorption rate of 85% of the total budget). Despite complaints about inadequate budget, the MSWM department was unable to absorb funds to maintain infrastructure for wastes. In that year, the absorption rate for the entire vote on development projects was at 33.4% an issue flagged by the Office of the Controller of Budget.[117] This was attributed to delays in release of County revenue share by the National Treasury.[118] Such delays ultimately disrupted delivery of services to residents and thus undermined the capacity of the County to discharge its MSWM services.

Secondly, respondents pointed that the County governments lacked adequate technical capacity to run the waste management functions.[119] Of the 3 officials responsible for waste management sections that were interviewed in the survey, none possessed technical qualifications on solid waste management. Due to the predominance of the linear "waste as a problem" paradigm which emphasizes on collection and disposal of MSWs, waste management function is viewed by policymakers more as a logistical functional area.[120] Thus, County governors showed inclination to appoint trusted people who could deliver on logistical aspects of waste operations.[121] Transition to the desired "waste as a resource" paradigm would necessarily require having personnel with requisite technical qualifications running waste management departments.

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[116] Nairobi City County, 'Annual financial report FY 2016/7, (Nairobi City County, 2017) 4 < <https://nairobiassembly.go.ke/ncca/wp-content/uploads/paperlaid/2018/Annual-Financial-Report-FY-2018-19.pdf> accessed 30 October 2020

[117] Office of the Controller of Budget, *Annual County governments budget implementation review report: Fy2016/7* (OCB, 2017) 208

[118] Interview with Assistant Director in charge of Waste management, Nairobi City County

[119] Interview with Director of Occupational Hygiene, DOSH, Nairobi; Interview with Physical Planner, 28 August 2018 Kiambu County Government, Kiambu and; Interview with Public Health Officer, 05 September 2018, Nairobi

[120] Interview with expert in planning and EIA, Nairobi City County & Interview with Physical Planner, Kajiado County

[121] Ibid; invariably, these appointees were considered close political associates of the Governor.

Thirdly, even though waste management is considered politically-sensitive, investments in optimal MSWM systems has over the years attracted low prioritization by political decision-makers.[122] Decisionmakers are content with allocating just enough resources to facilitate collection and disposal of wastes. This was attributed to the inclination by political leaders to focus on highly- visible infrastructure projects (construction of roads, classrooms, street lighting etc) which are considered good for "development track record" of leaders in the eyes of the electorate.[123] Analysis of the development budgets for waste management from FY2014/5 to 2018/9 reveal that the County Assembly of Nairobi consistently reduced the allocations for the Waste Management Section in three out of the five years surveyed. This may explain why members of county assembly (MCAs) received very poor ratings from.

FY	Performance Based Budget Allocations (Ksh)	Appropriations Act Allocation (Ksh)	% reductions
2014/5	361,000,000	135,600,000	-62.4%
2015/6	347,400,000	688,000,000	98.0%
2016/7	518,700,000	517,464,000	-0.2%
2017/8	540,000,000	390,327,519	-27.7%
2018/9	547,500,000	589,500,000	7.7%

Table 19: PPB estimates v/s Appropriations Act Allocations

Fourthly, at the time of the study, County governments had not fully operationalized sub-County structures of decentralization that were supposed to discharge MSWM functions. These included urban area, town and municipality boards. In the absence of these structures, MSWM was centralized at the County headquarters and this put significant

[122] Interview with Assistant Director, Waste Management Section, Nairobi City County
[123] Ibid

strains on the respective waste management departments because their presence at the sub-County was rather lean.[124]

5.5.2 Relationship between NEMA and County Authorities

Within the meaning of Section 2 of EMCA, County governments indeed are designated as lead agencies, thereby falling under the supervision and coordination ambit of NEMA. NEMA's responsibilities towards Counties in respect to MSWM include:[125]

- Capacity building
- Licensing of transporters, incinerators and dumpsites
- Complaint handling and joint enforcement
- Supervision
- Coordination

Some key informants acknowledged the capacity building role played by NEMA and they pointed out occasions where NEMA invited county officials for training activities at the County-level. NEMA had also organized training activities in conjunction with the Council of Governors at the national-level targeting County governments. In Machakos, the environment department had been seconding its staff and interns to NEMA for skills development.

NEMA's role in licencing transporters was controversial especially among county officials in Nairobi. The county officials interviewed felt that NEMA should devolve this function to county authorities. County government officials were constrained in enforcing regulatory actions against errant waste transporters because they were not privy to basic

[124] Interview with Assistant Director, Waste Management Section, Nairobi City County; the official expressed the daily strains of coordinating waste collection in all the 85 wards of Nairobi City County
[125] Interviews with all County Directors of NEMA, Counties of Kiambu, Nairobi, Machakos and Kajiado

licensing conditions imposed by NEMA.[126] This was attributed to the fact that NEMA did not share with relevant county departments, licence data and conditions imposed on transporters. On the other hand, NEMA insisted that licencing of transporters was a legitimate mandate of the Authority, given the immense public interest involved in ensuring transporters met their environmental protection obligations in full.[127] NEMA also pointed out that County governments were nascent and lacked capacity to licence and enforce the same and in any case, this would amount to conflict of interest.[128] County governments were under obligation to have their waste transport vehicles licenced by NEMA and this further justified the continued need for NEMA to play this role. However, others saw NEMA's continued hold on to this role as revenue raising strategy owing to declining revenue base of the Authority.[129]

There were many occasions where County governments received complaints and channelled the same to NEMA for remediation or enforcement and vice-versa. This was viewed as important for effective environmental protection as the county-level since NEMA has better institutional capacity and had a more solid regulatory framework than counties to rely on for enforcement.[130] NEMA still had supervisory role in respect to county governments as lead agencies. NEMA played this role through issuing guidelines and enforcement notices to Counties. However, the limited presence of NEMA at the county level undermined the efficacy of this supervisory power. Perhaps due to this reason, only 26% of the respondents surveyed agreed that NEMA adequately supervises county governments in matters relating to solid waste management specifically and a slightly large proportion (28%) felt NEMA supervised counties adequately on general matters of environmental protection. This points to displeasure with NEMA's capacity in this area.

[126] Interview with Assistant Director, Waste Management Nairobi City County, 20 September 2018; the official pointed out the NEMA did not disclose licencing information to relevant county authorities and this undermined their capacity to enforce the same.
[127] Interview with NEMA official, 18 September 2018, Nairobi
[128] Ibid
[129] Interview with official of Kenya Alliance of Residents Association, 25 September 2018, Nairobi County
[130] Interview with Director, Waste Management Section 08 August 2018 Machakos County. He opined that most counties lacked modern solid waste management laws and therefore, rather than invoke outdated bylaws, they felt compelled to rely on NEMA's MSWM law for enforcement.

With regards to coordination, NEMA is required to foster collaborative and cooperative relations with county authorities in order to achieve better environmental management goals. This is one area that received positive assessment by respondents, with 40% agreeing that both institutions cooperate well on environmental protection matters. However a slightly lower proportion (38%) of respondents felt NEMA and Counties had effective cooperation over MSWM issues.

The upshot of these findings is that the regulatory province of NEMA at the county level is indeed contested by County authorities, owing to the lingering ambiguity over division of roles on licensing of MSWM actors. The normative coherence on this aspect of MSWM framework has produced adverse effects on cooperation and coordination between NEMA and County governments. The need for ensuring normative coherence therefore in division of regulatory authority in a devolved government context cannot be overstated.

Formal structures for intergovernmental coordination play an important role in improving cooperation between national and sub-national authorities, especially where their is concurrency of roles.[131] Delay in full operationalization of county environmental committees (CECs) as formal mechanisms of coordination has undermined effective interaction between NEMA and County governments over environmental issues. Even though interactions between NEMA and County governments are also characterized by numerous informal engagements on capacity building and complaint handling processes, these are not enough to overcome the prevalent perception of poor collaboration and cooperation. In the absence of effective formal mechanisms, NEMA and County governments relapsed to their respective silos, an inference that was also made in relation to regulation of quarries.[132] Hence, the need to strengthen CECs is evident.

[131] John Phillimore, 'Understanding intergovernmental relations:key features and trends' (2013) 72 Australian Journal of Public Adminstration 229.
[132] OAG, *Performance audit report on land conservation* 7.

5.5.3 Coordination between County governments and other National authorities

The study revealed limited interaction between County governments and the Directorate of Occupational Safety and Health (DOSH) on MSWM matters. Indeed, DOSH viewed County governments are licensees, because as occupiers of workplaces, counties were under obligation to seek registration from the directorate. Limited cooperation was reinforced by the fact that MSWM deposited outside workplace was beyond the jurisdiction of DOSH, whereas handling of MSWM within premises was not a key preoccupation of County authorities. In all, few respondents alluded to existence of any level of cooperation between the two entities. However, opportunity for DOSH to leverage on County government licensing regimes was underscored, given the fact that the Directorate was thinly spread out at the County level.[133] Thus, an integrated licensing regime as well as joint enforcement strategies could enable DOSH expand on its coverage of workplaces for registration and compliance on occupations hygiene issues, through collaboration with County governments.

According to the County Government Act, an intergovernmental forum chaired by the Governor and County Commissioner is to be established in each and every county.[134] The committee is meant to foster collaboration and coordination between county government departments and the national government departments and agencies located in the counties on service delivery matters. In all the four counties targeted by this study, only Kajiado had operationalized the committee.[135] The committee meets at least thrice a year and discusses matters of mutual concern between the two levels of government. Environmental conservation and MSWM have featured in some of the deliberations of the committee.

Other non-statutory coordination mechanisms exist at the county level. The County governments target by the study are participating in the Nairobi Metropolitan Services Improvement Project (NAMSIP) which is a $300 million project seeks to strengthen urban

[133] Interview with Director, Occupational Hygiene, DOSH, 07 November 2018, Nairobi
[134] County Government Act, s 54
[135] Interview with key informants, NEMA and Nairobi City County Government, Nairobi

services infrastructure to support the expansion of the metropolitan area.[136] Among the key infrastructure targeted is MSWM facilities, which constitutes 25% of the project resources. The project is funded by World Bank and is steered by the Ministry responsible for urban planning in the National Government. This project routinely brings together the respective county governments to discuss progress of the project. [137] The project has also afforded numerous capacity building opportunities for staff (particularly planners) in the target counties. In this regard therefore, the NAMSIP project brings together county and national government officials to discuss MSWM issues within the context of project implementation and this serves as a coordination mechanism. Even though the project began before the rolling out the devolved system of government, it has since aligned its work and structures accordingly.

There is also a technical committee established in Nairobi City County which comprises the County government and key national government agencies and parastatals involved in service delivery.[138] The committee is chaired by the County Secretary and NEMA is represented. The committee is tasked with the responsibility of ensuring essential services are delivered and that Nairobi maintains its competitiveness as a regional hub. Issues relating to solid wastes routinely feature in the deliberations of the committee.

5.5.4 Assessment of Vertical Environmental Integration Instruments

5.5.4.1 Environmental Assessments

Counties are designated as lead agencies and therefore are part of the EIA process. NEMA officials confirmed that they routinely shared EIA reports for scrutiny and comments by respective County departments. However, a key findings is that EIA approvals were largely overlooked as the first level of approval of development projects contrary to provisions of

[136] See The World Bank Group, "The project appraisal document for the Nairobi metropolitan services improvement project" April 9,2012
[137] Responses from Planners from Nairobi, Machakos, Kajiado and Kiambu interviewed in this study
[138] Ibid; key agencies represented include Kenya Power and Lighting Co, Kenya Urban Roads Agency, Kenya National Highways Agency, Kenya Airports Authority among others.

EMCA which require a developer or project proponent to obtain EIA as the first step before implementing a development project.[139] Rather, County authorities gave precedence to Change of User approval (under Physical Planning Act) instead of EIA. In justifying this position, a physical planner pointed out the PPA authorizes Planning authorities to issue Change of User approval without any order of precedence (vis-à-vis EIA approval) but subject to conditions as a matter of practice.[140] Depending on the environmental impacts as stake, the Planning authority may issue approval conditional to the developer obtaining an EIA licence from NEMA. This policy incoherence undermines the efficacy of EIA as a tool for environmental management and integration.

5.5.4.2 County Environmental Action Plan (CEAP) Process

All the counties targeted by this study had developed a CEAP during the first tenure of devolved governments (2013-2017). In the absence of County Environmental Committees, the CEAP process was largely undertaken by technocrats in the respective environment departments of the target Counties. By the time Counties embarked on CEAP, there was no NEAP in place at the National level. The CEAP drafters therefore had no reference document from the national government to facilitate vertical integration of environmental protection concerns and priorities at the County level. However, in all the target Counties, NEMA played a technical role in the formulation of the CEAP. To this extent, an opportunity for vertical integration of national environmental concerns into CEAP may have been afforded to the process.

From the foregoing, it is doubtful that CEAP process has optimized on promotion of both horizontal and vertical environmental integration in the target counties. There is need for NEMA and County departments of environment to take greater interest in CEAPs and as well for County level environmental interest groups to push to formal adoption of the plans by respective County Assemblies.

[139] Interview with Urban planning officials from the 4 counties
[140] Interview with Planning official, 05 October 2018, Machakos County

5.5.5 Challenges and gaps in Vertical Environmental Integration

5.5.5.1 Persisting ambiguity in division of regulatory roles between national government and county government

The devolved government set-up and division of responsibilities in environment management and MSWM in particular creates a framework for vertical integration. However, this is undermined by lack of clarity in division of regulatory responsibilities between the national and county government, particularly in regards to licensing of waste actors. This is the case in many African countries, where there are no clear responsibilities for national governments and municipalities enshrined in law.[141] The *WEMAK case* provided opportunity for judicial interpretation of licensing roles and powers of national and county governments but this case was never concluded on its merits.

In a comparable case, of *Africa Rafiki Ltd & 2 others v Nairobi City Government & 3 others*,[142] the High Court was invited to consider the legality of a county law enacted to regulate gaming businesses in Nairobi County. The applicants had contended that the county law attempted to take over regulatory roles of the national government over the same matter. The Court however examined the report of the (now defunct) Transition Authority over assignment of functions between the two levels of government, and decided that the County law was valid, since division of regulatory powers has been clarified since. It is significant that the Transition Authority had assigned the role of licencing of waste transporters to County governments,[143] and that the successor Intergovernmental Relations Technical Committee has subsequently affirmed this position.[144] Should County governments challenge NEMA over the licensing role, courts will have a good basis to rule in favour of devolved governments on this matter.

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[141] Alex Wabunoha, 'Environmental law in Africa' in Patricia Kameri-Mbote & Collins Odote (eds), *Blazing the trail: Professor Charles Okidi's enduring legacy in development of environmental law* (School of Law University of Nairobi, 2019) 231

[142] (2015) eKLR (also cited as Petition Nos 295 of 2014, 1 of 2015 & 315 of 2014 (Consolidated).

[143] Transition Authority & Commission on Revenue Authority, *Costing of government functions: Final report* (TA& CRA, November 2015) 19.

[144] The Intergovernmental Relations Technical Committee, *Emerging issues on transfer of functions to national and county governments* (IGRTC, November 2017) at 32.

Assigning exclusive regulatory responsibilities to Counties necessarily invites concerns over fusion of regulatory and service delivery functions in county governments. Fusing these two roles could lead to conflict of interest situation, particularly where the county government is expected to license its own transport vehicles involved in waste removal services or treatment plants.[145] To avoid such conflicts, the county governments should be required to disperse the regulatory functions away from the entities that controls operational aspects of waste service delivery functions. In this regard, licensing functions can be undertaken by department responsible for public health, while the department responsible for environment continues to discharge service delivery functions. For this to work, County governments should either privatize waste management services or established special purpose vehicles (SPVs) to undertake this service and therefore be liable for licensing by the relevant County department.

Maintaining status quo where both National and County governments share the licensing powers will sustain the current confusion, unless these powers are sufficiently differentiated. One option is for the National government to focus on licensing county departments or County entities (SPVs) involved in operational solid waste management activities. County government could in turn enjoy exclusive powers of licensing private actors providing MSWM services within their jurisdictions. This option would not only clarify roles but also eliminate the potential for conflict of interest arising from fusions of these aforesaid powers at the county level.

5.5.5.2 Incoherencies in decentralization of MSWM below the County

MSMW remains centralized at the county levels and this has obstructed the pursuit of vertical environmental integration below the county level. It is encouraging that County

[145] See South African case *Dumpit Waste Removal v The City of Johannesburg & Pikitup Johannesburg Ltd*(2004) ZACT 1 (also cited as Case Number 21/IR/Apr02), an anti-trust tribunal held a similar view, noting that where a local authority had power to license its own entities alongside independent companies for waste services, this could amount to violation of fairness under the Constitution and administrative law.

governments have embarked on establishing municipalities and urban areas together with their mandated governance (Boards) structures as per the UACA. This process is therefore likely to create new duty bearers in MSWM at sub-county levels with responsibilities for VEI at that level. However, there is no clarity on how these new structures will relate with the respective County governments and the already-existing sub-county structures that have service delivery functions such as the offices of Sub- County, Ward and Village administrators County Government Act.[146].

Unless there is clarification of roles, service delivery functions of municipalities and urban area Boards would present normative and policy incoherence and thus suffer fragmentation leading to inefficiencies and services disruptions. It may be necessary to ensure clarity of roles by giving the new structures exclusive service delivery authority in areas under their jurisdiction. This may require abolishing the pre-existing sub-county administrative structures in areas where municipal or urban area boards have jurisdiction to avoid any confusion or subjecting these structures to the control of these boards. The political feasibility of this option is doubtful, given the role which existing sub-county administrative structures play in supporting the political and administrative agenda of the Governor.

It may also be necessary to maintain a dual administrative system, with the municipalities and urban areas boards handling municipal services, while the existing sub-county administrative structures separately running administrative services within the same jurisdiction in a manner which avoids overlaps and conflicts. The sub-county administrations could also be empowered to monitor and report on service delivery functions of the respective Boards. This option is more political feasible but would require enormous political will to shield the new Boards from interference by the existing administrative structures.

[146] County Government Act 2012 (217 Rev) s 48

5.5.5.3 Inadequacy of Inter-governmental relations structures

Environment management generally is a concurrent function and therefore subject to intergovernmental relations hence the need for an inter-governmental structures to enable national and county governments harmonize and coordinate their policies.[147] The county environmental committee is evidently the only notable inter-governmental structure for coordination to ensure vertical environmental integration in MWSM framework as discussed in this Chapter. However, is highlighted weaknesses of the CEC are amplified by the fact that there no effective intergovernmental coordination mechanisms within the broader environmental management realm.

Under the Intergovernmental Relations Act, the Natural Resource Forum was established in 2013 as a consultative forum by the Cabinet Secretary responsible for intergovernmental affairs, which brought together departments responsible for environment docket in the two levels of government.[148] The Forum met only twice between 2013-8 period but was able to facilitate discussions on the forestry and wildlife conservation matters.[149] The Forum fizzled out thereafter and little has been heard about it since.

It is noteworthy that the CoG has established sectoral working groups to promote cooperation and synergies among counties.[150] These sectoral working groups mirror the respective Departmental committees established by the National parliament, which in turn mirror the sectors of the National government. These working groups operate like informal structures and depend on the convening power and efficacy of the CoG.

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[147] Phillimore (n131); author notes that positive and negative spill overs of environment regulation create imperative of intergovernmental coordination

[148] Intergovernmental Relations Technical Committee, *Status of sectoral and intergovernmental forums in Kenya 2018* (IGRTC, 2018) 13

[149] Ibid, 41

[150] See <https://www.cog.go.ke/cog-secretariat/technical-committees> accessed on 9 July 2019

Under the Public Finance Management Act, the Inter-governmental Budget and Economic Council (IBEC) has been established with the responsibility of dealing with budgeting, funds disbursement and sharing of revenue concerns between the two levels of government.[151] The IBEC chaired by the Deputy President and comprises the National and County treasuries heads among other officials. Absence of a similar structure in the environmental domain may be a lost opportunity for promotion of vertical environmental integration.

However, it is noteworthy that the Sustainable Waste Management Bill, 2019 has provision for National Waste Council, which is modelled as an inter-governmental body for coordination and harmonization of policies, programmes and regulations on waste management for both levels of government.

5.5.5.4 Fractitous intergovernmental relations

Article 6 (2) of the CoK (2010) prescribes that the two levels of government shall conduct their mutual relations on the basis of consultation and cooperation. This creates the basis for what is known as cooperative government meant to promote cohesion and harmonious co-existence while avoiding competition and wasteful duplication in the functions of the two levels of government.[152] Thus, both levels of government are expected to observe as duties, the functional and institutional integrity of each level; engage in dialogue when conceiving and implementing policies and legislations and; work together especially when undertaking shared functions and; assist and support each other in a non-hierarchical manner.[153]

Where disputes arise between the two levels, the first recourse should be to resolving the same through alternative dispute resolution mechanisms in a manner that affirms the spirit

[151] The Public Finance Management Act (No18 of 2012- Rev.2016), s 187
[152] John M. Kangu, *Constitutional law of Kenya and devolution*, (Strathmore University Press 2015) 318-9
[153] Ibid 320-8

of cooperative governance.[154] According to the Council of Governors, the organization was embroiled in 30 court cases in FY 2014/5, related to intergovernmental disputes, out of which it had initiated 9 suits.[155] The number rose to 41 in FY2015/6,[156] and reduced to 30 in FY2016/7.[157]The CoG attributed the court actions to failure by the two levels of government to consult and resolve the disputes in an amicable way. Structures meant to ensure this was done had not performed adequately as evidenced by delayed appointment of the Inter-Governmental Relations Committee (IGTRC) which is required to follow-up on resolutions of the Summit.[158] It was also noted that the Summit had not met as required by law (i.e. twice per year) as shown below:

Year	No of Summit meetings held
2013	1
2014	1
2015	1
2016	1
2017	0

Table 20: Summit meetings *Source: CoG Annual Reports*

Thus, CoG observed that some of the court disputes could have been averted, had the Summit effectively deliberated on the issues raised by Counties and the same effectively follow-up. This problem was also attributed to the delays in adoption of a framework for alternative dispute resolution as required under the Intergovernmental Relations Act and inadequate political will to foster the spirit of cooperative government.[159]

5.5.5.5 Inadequate VEI instruments

This study indicates that even though the County Environmental Action Plans (CEAP) are the foundational instruments for promoting environmental integration at the County level,

[154] Intergovernmental Relations Act, s 31; also affirmed in *Okiya Okoiti Omtatah & others v Attorney General & 6 others* (2014) eKLR at Para 74
[155] Council of Governors, 'Statutory Annual Report 2014-2015' (Council of Governors, 2016) 22
[156] Council of Governors, 'Statutory Annual Report 2015-2016' (Council of Governors, 2017) 48
[157] Council of Governors, 'Statutory Annual Report 2016-2017' (Council of Governors, 2018) 40-3
[158] Council of Governors, '*Statutory Annual Report 2014-2015*, 15; the IGTRC was appointed in March 2015, more than a year after expiry of the term of the Transition Authority
[159] Council of Governors, *Statutory Annual Report 2016-2017* 36

there is no linkage with the National Environmental Action Plan(NEAP). Unlike NEAP, CEAP is not binding on the county government and its institutions and this further undermines its authoritativeness in County policymaking processes.[160]

Waste planning is not a strict legal requirement nor is the same applied as a tool for waste management in target counties. There exists inadequate waste data with which counties could effectively undertake rational waste planning. Without adequate and effective waste plans, Counties are not able to come up with rational interventions to address the waste challenge using innovative strategies, including the waste hierarchy approach. There is inadequate normative guidance on how a waste plan is to be developed by a county, and the linkage between county and national waste planning processes. It is notable that the Sustainable Waste Management Bill (2019) seeks to address this gap with a requirement that counties should adopt waste management plans and produce quarterly monitoring reports for urban areas within their localities.[161] Failure to observe this requirement may lead to withholding of national allocation for waste management to the defaulting County until compliance is met[162] and this may promote observance of waste planning requirements.

Green procurement has the potential of promoting marketization of wastes. The analysis of the Kenya's procurement law revealed possibilities for exploiting existing provisions to promote uptake of recycled products through national and county government procurement processes. Despite allocating significant level of resources to public procurement processes,[163] there is limited utilization of green procurement practices to ensure uptake of recycled products and compost as a matter of policy in the target counties.

[160] NEMA, S.38 (l); even though CEAP is adopted by County Assembly, a provision which declares its binding effect is missing in S.40.
[161] Sustainable Waste Management Bill, S.15 (1) (e)
[162] Ibid S.15 (2)
[163] Centre for Governance and Development & National Taxpayers Association, *Citizens guide to public procurement: public procurement procedures for Constituency Development Funds* (CGD & NTA, 2010) <http://erepo.usiu.ac.ke/bitstream/handle/11732/1846/Citizens%20Guide%20to%20Public%20Procurement

5.6 Chapter Conclusion

This section has provided an assessment of sectoral coordination and intergovernmental coordination mechanisms and how they respectively relate to implementation of horizontal and vertical environmental integration in MSWM. NEMA is still viewed as the most important regulatory agency in the environment management field but its perceived weaknesses may undermine it pivotal sectoral coordination mandate with adverse implications for environmental integration. County governments are vested with MSWM regulatory and operational functions, but perceptions of poor capacity and performance may likewise undermine their role in vertical environmental integration.

Formal mechanisms for promoting both sectoral and intergovernmental coordination are limited due to official preference for informal structures. Even though informal structures are reflexive to accommodate the particular contexts and constraints prevalent in MSWM, they are not suited in providing strategic guidance for a wicked environmental problem like MSWM and promoting accountability. Hence there is need for ongoing reforms to conceptualize appropriate formal mechanisms for accountability and better strategic approach to MSWM. Normative incoherencies' identified in Chapter 3 are found to have adverse effect on implementation of environmental integration. The need to resolve such incoherencies to avoid fragmentation cannot be overstated.

Tools for facilitating both vertical and horizontal environmental integration are limited in scope and application. The EIA is the most utilized tool for environmental integration, even though its efficacy is undermined by gaps in stakeholder engagement and the history of past EIA decisions that have seemingly imperilled the environment. The national and county environmental planning processes are yet to make an impression as tools for horizontal and vertical environmental integration, due to delays in finalization of the plans and adoption by respective duty-bearers.

%20Procedures%20.pdf?sequence=2&isAllowed=y≥ accessed 16 August 2019. Authors estimate that 65% of public expenditures are channelled into public procurement processes

In the next chapter, experiences on implementation of environmental integration in MSWM from South Africa and Sweden will be examined and appropriate lessons drawn for Kenya.

CHAPTER SIX:

LESSONS FOR KENYA FROM EXPERIENCES OF SWEDEN AND SOUTH AFRICA ON ENVIRONMENTAL INTEGRATION IN MSWM

6.1.Introduction

Environmental integration has acquired effective normative status in most jurisdictions in the world.[1] Sweden is one of the earliest pioneers of environmental integration within the European Union and was among the first countries to assign environmental sector responsibility and introduce a system of environmental objectives and targets.[2] Sweden is also considered a top performer in integrated and sustainable waste management in Europe as it currently ranks seventh in waste recycling and composting generally and third in recycling of packaging materials.[3]

South Africa is an upper middle income country with the most advanced economy in Sub-Saharan Africa,[4] with a comparable legal system to Kenya's, which bears aspects of fragmentation in its environmental governance framework.[5] These two countries provide a rich context characterized by high level of environmental integration and strong performance in MSWM (Sweden) and comparable legal system with moderate performance in MSWM (South Africa) providing key lessons which Kenya may learn from.

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[1] Text to Chapter 2, Section 2.3

[2] Assa Persson, Katerine Eckerberg & Mans Nilsson 'Institutionalization or wither away? Twenty-five years of environmental policy integration under shifting governance models in Sweden' (2016) 34 Environment and Planning C: Government and Policy 478-495

[3] European Environment Agency, *Environmental indicator report 2018: in support to the monitoring of the Seventh Environment Action Plan*, (EAA Report No.19/2018) available at https://www.eea.europa.eu//publications/environmental-indicator-report-2018 last accessed on 25 Sept 2019

[4] See https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups accessed on 25 Sept 2019

[5] Louis Kotze '*Improving unsustainable environmental governance in South Africa: the case for holistic governance*' (2006) 1 Potchesfstroom Electronic Law Journal 1-44

This chapter examines the context of environmental integration and MSWM status in each of the two countries. The legal framework on MSWM is analysed in each country and assessed in terms of its potential for integration. Thus, different legal systems may show similarities or dissimilarities in how the regulatory frameworks are designed and operated in pursuit of these social ends. A functional approach is hereby used to analyse how the different jurisdictions address the common problem of environmental integration within the context of sustainable management of municipal solid waste management (MSWM) sector.

6.2. Sweden

6.2.1. Context

Sweden is considered an environmental frontrunner state, due to high ranking in environmental performance indices, adoption of progressive and innovative environmental policies and long-standing reputation in regional and global environmental processes.[6] The country adopted the first comprehensive environmental legislation- the Environment Protection Act- in 1967 and established Swedish Environmental Protection Agency (SEPA) as the state watchdog in 1969.[7]In 1988, Sweden created a ministry of environment and published the draft environmental code which provided for the principle of sector responsibility for environmental protection, thus underlining the country's pioneer status in implementation of environmental policy integration (EPI) within Europe.[8] The Code eventually entered into force in 1999 and a system of national environment quality objectives (NEQOs) put in place.[9] In 1995, Sweden joined the European Union, thus entering into the rather intricate European environmental law system.[10] In early 2000s the

[6] Erik Hysing, 'A green star fading? A critical assessment of Swedish environmental policy change' (2014) 24 Environmental Policy Governance 264-5
[7] Ibid
[8] Persson, et al '*Institutionalization or wither away* 482-4; General sector responsibility for environmental protection was legally established for all central government authorities in 1996 and two years later, special sector responsibility for 24 government authorities was established.
[9] Ibid
[10] See European Environment Agency, 'The European environment state and outlook 2015; synthesis report,' (EAA, 2015) at p21; The European environmental law (also known as Environmental acquis) was reported as comprises 500 directives, regulations and decisions

country adopted green policies, notably green public procurement and the first national sustainable development strategy and a unit was created within the Prime Minister's Office to coordinate the implementation of these strategies.[11]

Since then, demonstrable progress in achieving integration in various sectors has been witnessed in the country. In the energy sector for instance, there is evidence of strong environment integration with successful implementation of carbon tax (since 1990)[12] and 'greening' of bioenergy policy[13] among other efforts. In the agricultural sector, environmental integration efforts began in the mid-1980s, with the integration of environmental protection, nature conservation and sustainable agriculture goals in the 1985 national food policy, leading to increase in share of arable land that was ecologically managed from 10% in the 1990s to 16.5% in 2014.[14] However, instances of policy incoherence abound as evidenced by decisions by state-owned energy company to invest in fossil fuel energy installations abroad and increased climate footprint of Swedish consumption.[15]

6.2.2. Status of MSWM in Sweden

Municipal solid waste (MSW) generation in Sweden was estimated at 467Kg per person per year in 2016, against an EU average of 477Kg per person.[16] MSW generation has generally been on the decline since its peak of 516Kg per person in 2007, before declining to 465Kg per person in 2010, which was attributed to economic recession of 2008/9.[17] Despite economic recovery of the 2010s, the waste generation levels have remained the

[11] Ibid
[12] Persson et al *Institutionalization or wither away?* 484-487
[13] Viveca Sjostedt & Daniela Kleinschmit, 'Frames in environmental policy integration: are Swedish sectors on track?' (2016) 34 Environment and Planning C: Government and policy, 515-528
[14] Ibid, 487
[15] Ibid
[16] Avfall Sverige, 'Swedish Waste Management 2017' (2017) <www.avfallsverige.se> accessed 28 August 2017
[17] European Environment Agency, 'Municipal waste management in Sweden' (2013) accessed from <https://www.eea.europa.eu/publications/managing-municipal-solid-waste/sweden-municipal-waste-management> accessed 15 June 2019; within the Scandinavian region, Sweden is ranked second after the Netherlands

same, signalling the success of waste prevention measures instituted by Sweden over the last decade. Approximately 4.6million tonnes of waste was collected in 2016 and treated as follows: 36% went to material recycling; 16% to biological treatment (anaerobic digestion and composting); 48.5% to energy recovery plants and 0.7% to landfilling.[18] This compares better with the EU rates for recycling and biological treatment (46%), energy recovery (26%) and landfilling (28%).[19] The foregoing underlines Sweden's impressive performance in MSWM in Europe.

6.2.3. Legal framework on MSWM and environmental integration

MSWM in Sweden is governed by European Law, Constitution, ordinary statues and waste regulations promulgated by county administrative boards and municipalities.

6.2.3.1.European Legislation on Wastes

The Council of the European Union derives its competence in formulating legislation (regulations, directives and decisions) on environmental matters from Article 4 of Chapter XX of the Treaty on the Functioning of the European Union (TFEU).[20] Pursuant to this mandate, the EU published various directives on Waste management which constitute what is now known as the EU waste legislation. Another pertinent provision of the TFEU is Article 11 which provides that "*..environmental protection requirements must be integrated into the definition and implementation of the Union's policies and activities, in particular with a view to promoting sustainable development*".[21] This provision enshrines the principle of integration, which is binding on all policies and programmes of the EU, including on waste management.

[18] Avfall Sverige, (n16)
[19] Ibid
[20] Consolidated versions of the Treaty on the Functioning of the European Union [2012] OJ C326/49 (-TFEU)which replaced Consolidated versions of the Treaty Establishing the European Community [2002] OJ c325/01 (TEC); See art 190& 191 of TFEU (replacing Art 174 & 175 of TEC)
[21] Previously Article 6 of the Treaty Establishing the European Union.

The first such Directive was the Council Directive (EEC) 442/75 on Waste.[22] The Directive provided a definition of waste which excluded hazardous wastes, bio-agricultural waste, waste water, and gaseous effluents.[23] The Directive required Member States to take measures to ensure waste disposal engenders environmental protection.[24] However, this provision ought to have extended the environmental protection obligation to all other aspects of waste management (collection, transfer, treatment) and not just disposal. The law incorporated waste hierarchy into domestic MSWM frameworks of states by valorizing waste prevention, recycling, reuse and recover over disposal.[25] It also required Member states to establish competent authority(ies) for undertaking waste planning, licencing & supervision of waste transporters, and inspection of waste facilities.[26] Responsibilities for waste generators and handlers were provided for and underpinned by the principle of polluter pays.[27] Member states were required to submit reports to the European Commission on state of waste management, status of implementation of the Directives and national laws adopted under the Directive.[28]

By incorporating environment protection obligations in waste disposal measures and promoting the waste hierarchy, the 1975 Directive infused sustainability imperatives in the MSWM framework. The Directive also provided a basis for harmonization of domestic laws with the EU legislation by requiring the transposition of the same in national laws of Member States. Thus, the Directive laid foundation for environmental integration in Europe's MSWM framework. Since then, the 1975 Council Directive has been amended and complemented by other various Directives on this matter.

[22] [1975] OJ L194 /39-41
[23] 1975 Council Directive, Art 1 (a) defined waste as any substance or object which the holder disposes of or is required to dispose of pursuant to the provisions of national law in force;.
[24] Ibid art 4
[25] Ibid art 2
[26] Ibid arts 5, 6, 8, 9 & 10
[27] Ibid arts 7, & 11
[28] Ibid arts 12, 13, 14

The subsequent 1994 Directive on packaging materials introduced among others, recycling targets for such materials as well as the return collection and recovery systems based on the extended producer responsibility principle, which imposed obligations for waste collection on producers of packaging materials.[29] This was followed by the 1999 Directive on landfills[30] which importantly set targets for reduction of biodegradable wastes disposed in landfills (75% by 2004; 50% by 2007 and; 35% by 2014).[31] The Directive refined the definition of MSW by distinguishing hazardous and non- hazardous waste generated by households and related establishments.[32] It also outlined permit-granting procedures, closure and rehabilitation procedures and reporting obligations of Member States. By requiring Member states to transpose the Directive into municipal laws, regulations and administrative provisions within two years, this was expected to standardize the establishment, operations and closure procedures and authorizations for landfills throughout Europe. [33]

The subsequent 2006 Directive on Wastes,[34] redefined wastes to include hazardous and industrial wastes thus beyond the earlier scope of MSW. The law reaffirmed the waste hierarchy and expanded the environmental protection obligation to include other waste management activities and process, beyond disposal.[35] It set forth the contents & technical specifications of waste management plan to be developed by competent authorities, which include among others, technical requirements, costs of recovery and disposal activities and measures to encourage rationalization of waste management activities.[36]

[29] Council Directive (EC) 62/94 on Packaging and Packaging Waste, [1994] OJ L365/10
[30] Council Directive (EC) 31/99 on Landfill of Waste, [1998] OJ L182/1
[31] 1999 Council Directive on Landfills, art 5
[3232] Ibid Art 2; MSW defined as waste from households as well as other wastes which because of its nature or composition is similar to waste for the household
[33] Ibid art 18
[34] Council Directive (EC) 12/2006 on Waste, [2006] OJ L114/9
[35] Council Directive 2006, Art 4
[36] Ibid art 7

In 2008, the Council adopted a new Directive on wastes[37] which repealed the 2006 Directive while clarifying application of other existing Directives on the subject. The 2008 Directive clarified concepts including among others, definition of waste to include any matter intended for discarding;[38] distinction between waste and non-waste (including by-products and end-of-waste products).[39] Derogation from strict adherence to waste hierarchy was made permissible for a Member State if only costs (environmental, social and economic) outweighed the benefits. The Directive also introduced new concepts and approaches to sustainable waste management which included; enlargement of waste hierarchy to include preparation of re-use as a high priority activity in domestic waste legislation and policy;[40] and introduction of life-cycle approach and extended producer responsibility to reduce waste generation and promote reuse, recovery & recycling of wastes;[41]

The reconceptualization of waste and waste management processes & activities served to strengthen the economic value of wastes while valorizing recycling and reuse of waste products in order to reduce consumption and thereby conserve natural resources. This also sought to promote Europe's ambition of attaining the status of a "recycling society" exemplified by avoidance of waste generation, decoupling economic growth with negative environmental impacts of waste generation and use of waste as a resource.[42] To entrench the paradigm of waste as a resource and therefore lay a basis for marketization of wastes, this reconceptualization under the 2008 Directive was therefore necessary.

The 2008 Directive maintained environmental protection obligations of Member States in relation to waste management regulation.[43] Waste permit systems and waste planning

[37] Council Directive (EC) on Wastes [2008] OJ L312/11
[38] 2008 Council Directive, art 3 (1) defines waste as any substance or object which the holder discards or intends or is required to discard. The directive separately maintains (under Art 2) the exclusion of other wastes (hazardous, bio-agricultural, extractives, explosives wastewater, gaseous effluents)
[39] Ibid arts 5 & 6; end-of-waste status is attained when matter previously deemed as waste is recovered
[40] Ibid art 4
[41] Ibid art 8
[42] Ibid para 28
[43] Ibid art 13

procedures were affirmed and minimum standards (with environmental protection dimensions) introduced to strengthen the regulatory framework.[44] The Directive further elaborated on previous approaches such as principles of self-sufficiency and proximity which required Member States to establish integrated and adequate network of disposal facilities to ensure treatment and disposal of waste within localities of generation.[45] However, derogation from the principle was envisaged through authorization of shipment of wastes subject to inability of exporting State to reuse/recycle/recover waste generated within their jurisdiction and clear provision of the same in waste management plans. Public participation and access to waste information were introduced into waste management policy.[46] Like all other previous Directives, this law requires Member States to transpose its provisions into national waste management legal and administrative framework within 2 years.

The foregoing provisions strengthened the environmental protection considerations in EU Waste Law, thereby creating a good basis for environmental integration. However, an analysis of this framework reveals that economic considerations do take precedence over environmental protection imperatives. For instance, derogation from waste hierarchy is permissible if economic costs are not feasible as earlier stated. This may encourage member states to abandon sustainable waste management practices even where environmental considerations are deemed imperative. In the same vein, the preamble of the Directive circumscribes the implementation of the environmental authorization and permitting procedures in a manner which may compromise the internal functioning of the (economic) market.[47] This may cause regulators to water-down environmental authorization and permitting procedures for economic expediency thus imperilling sustainability in management of wastes.

[44] Ibid ch IV
[45] Ibid art 16
[46] Ibid art 31; stakeholders, authorities and members of the general public are targeted by these provisions
[47] Ibid para 30 of Preamble

In 2018, the European Council adopted a new Directive[48] replacing the 2008 framework legislation, with a deadline for national transposition of the same set at 5th July 2020. The 2018 Directive introduces new concepts, clarifies existing concepts and amends various procedures on waste management signifying the evolving nature of waste regulatory framework of Europe. The Directive introduces the transition to a circular economy and sustainable materials management as the overarching goal of waste management regulation in Europe.[49] This transition is to be characterized by increased efficiency in resource use, valuing waste as a resource and lowering EU's dependence on importation of raw materials (through recycling and re-use), alongside environmental protection and natural resources conservation.[50] Related to this, the 2018 Directive designates some materials as "critical raw materials" whose supply poses high risk to the EU economy and therefore exhorts Member States to adopt efficient re-use strategies and prevent such materials from becoming waste.[51]

The 2018 Directive pays significant attention to municipal solid waste (MSW), noting that this waste stream contributes to 7-10% of EU waste but is the most complex, politically visible and with most risks to humans.[52] The Directive redefines municipal solid waste (MSW) to include waste electrical and electronic equipment, waste batteries and accumulators, thereby bringing e-waste and other potentially hazardous wastes into MSWM regulatory framework.[53]

The concept of recovery is now broadened to include processing of materials (from waste) for development of new fuels and raw materials for engineering, construction and development of infrastructure (including back-filling).[54] The concept of extended producer responsibility (EPR) is also expanded to include responsibility of producers for separate

[48] Council Directive (EU) on Waste [2018] OJ L150/109 or simply the "2008 Directive on Waste"
[49] Ibid para 1
[50] Ibid
[51] Ibid para 36 of Preamble as read with arts 1 (10) (c) & 21
[52] Ibid para 6 of Preamble
[53] Ibid art 1 (3) (2b)
[54] Ibid para 12 & 13 as read with arts 1 (3) (f) & (g)

collection, sorting and treatment of wastes.[55]The 2018 Directive brings into the regulatory fold, third party entities contracted by producers to implement the EPR schemes on their behalf.[56] These entities are to be held accountable for implementation of EPR schemes in the same way as producers. Even where set EPR targets are met, producers or their agents are required to continue providing their respective waste management services under their respective EPR schemes throughout the year and beyond their designated geographical limits. Where public authorities undertake waste management services that cover waste from products subject to EPR schemes, they are entitled to recover their reasonable expenses from the relevant producers.

With regards to revision of procedures, the 2018 Directive expands the classification of by-products and end-of-waste products in a move aimed at promoting industrial symbiosis.[57] The procedures call for transparency and upholding of environment protection measures aimed at minimizing risks from such products to humans and the environment.[58] The remit of economic instruments applicable to waste management regulation is significantly expanded with no less than 15 typologies recommended for implementation.[59]Notable novelties include fiscal incentives for donation of products regarded as waste (particularly food); sustainable public procurement to encourage uptake of re-use and recycled products; phasing out of subsidies not consistent with waste hierarchy; and systems for coordination and promotion of dialogue and cooperation.

[55] Ibid para14 as read with art.1 (3) (h); previous Directives limited the EPR concept to waste minimization, re-use (take-back), recycling and disposal of waste
[56] Ibid para 25 as read with Art 1 (9) (3)
[57] The EU defines industrial symbiosis as a process by which wastes or by products of an industry or industrial process become the raw materials of another. See European Commission 'Industrial symbiosis' (2019) available at <http://ec.europa.eu/environment/europeangreencapital/wp-content/uploads/2018/05/Industrial_Symbiosis.pdf> accessed 15 June 2019
[58] 2018 Directive, para 19
[59] Ibid annex IV a; it should be noted that the 2008 Directive lacked a consolidated provision detailing applicable economic instruments .

6.2.3.2. The Swedish Constitution

The Constitution of Sweden (CoS) comprises four legislations that were adopted at different times, namely; The Instrument of Government (1974); The Act of Succession (1810); The Freedom of the Press Act (1949) and The Fundamental Law on Freedom of Expression (1991). The Instrument of Government provides for the fundamental principles of governance and outlines the basic structure of government. The Act of Succession provides for the mechanism and procedures for succession and accession to the throne by the King/Queen as a well as abdication. Other two constitutional legislations provide for the enjoyment and restrictions relating to freedom of press and expression.

Pertinent to this study, the Constitution of Sweden highlights promotion of sustainable development as a cardinal principle of governance.[60] It states that "*public institutions shall promote sustainable development leading to a good environment for present and future generations*."[61] The obligation to promote sustainable development is framed in mandatory terms and is trans-generational. This provides a backbone for entrenching environmental protection in other policies and legislations hence contributing to sustainability, including those on municipal solid waste. Other than the foregoing, the constitution does not have specific provisions on environmental management and therefore such are left to ordinary legislation.

6.2.3.3. The Swedish Environmental Code (1999)[62]

The Environmental Code was enacted in 1999 as the framework environmental law of Sweden which consolidated 15 statutes and provided harmonized general rules of environmental management.[63] The Code contains 33 chapters outlining general provisions as well as basic provisions for sectoral regulation of environmental media. The

[60] The Instrument of Government (1974), art 2
[61] Ibid
[62] Ds 2000:61 <https://www.government.se/legal-documents/2000/08/ds-200061/ > accessed on 02 February 2017.
[63] Ministry of Environment, *The Swedish environmental code:a resume of the text of the code and related ordinances* (Regeringskansliet, 2000) 4 <https://www.svk.se/siteassets/english/stakeholder-portal/dam-safety/environmental-code-and-ordinances---a-summary.pdf > accessed 2 February 2017.

consolidation of these laws was as an initiative towards harmonization of the legal framework which is key to environmental integration.

The Code sets out promotion of sustainable development as its overarching goal for realization of healthy and sound environment for generations as well as ensuring the right to modify nature is exercised with a correlative duty for wise management.[64] The Code sets out objectives, those which are relevant to solid waste management include protection of human health and environment from pollution and other impacts and; reuse and recycling of raw materials and energy.[65] In so doing, the Code lays a good foundation for ensuring environmental protection is integrated in the implementation of the regulatory framework.

As part of the general rules, the Code outlines provisions for permissibility, permits, approvals and exemptions in respect to measures and activities that may cause damage or detriment to the environment.[66] Among these activities or measures subject to permit or authorization include conserving, reuse and recycling of raw materials and energy, which relate to waste management activities.[67] Notable restrictions, prohibitions and protection of waste management activities are laid out in basic provisions governing various sectoral environmental media. For instance within the context of environmentally hazardous activities, the storage or disposal of solid waste in a manner likely to pollute land, surface and ground water is prohibited without permission or notification.[68] Detailed provisions on approval, review and appeal against permits and authorizations are also laid out in the Code.[69]

[64] Environmental Code, Chapter 1 s 1.
[65] Ibid s 1 & 5
[66] Ibid ch 2 s 1 the measures should not be of negligible significance in individual cases. Activities that may lead to significant deterioration of living conditions of large number of people or substantial degradation of the environment are not to be permitted or authorized unless for reasons of public interest (S.9 & 10)
[67] ibid ch 1 s 5
[68] ibid ch 9 s 3 of Environmental Code
[69] ibid ch 16-20

Even though the Code does not provide a definition of MSW, it nevertheless defines household waste.[70] The law identifies households, producers and municipalities authorities as key waste actors and their roles and responsibilities in waste management are defined in a manner that takes into account environmental protection imperatives. For instance, households as waste generators may be allowed by municipalities to dispose their own waste in an environmentally safe manner.[71] Producers are essentially waste generators by virtue of their respective manufacturing, importation, commercial, packaging and professional activities.[72] The government and regulatory authorities are empowered to develop rules apportioning producer responsibilities for waste management, including labelling, packaging and consumer information with necessary environmental safeguards.[73] Municipalities have the duty to ensure the planning, collection, transportation, treatment and recycling of household waste with due regard to environmental protection. However, where producer responsibility has been established by rules for particular category of waste, municipalities are exempted from assuming responsibility for such waste and this is meant to avoid duplication or diffusion of responsibilities.[74]

Local- level waste regulation function is assigned by the Code to municipalities and this involves development and adoption of regulations governing all aspects of waste management and waste planning as well.[75] In developing waste regulation, municipalities are required to consult with property owners and publicize the rules for public scrutiny thus promoting public participation.[76] Waste planning responsibilities of municipalities focus on measures for reduction of quantities and hazardousness of waste.

[70] ibid ch 15 s 2; Household waste means waste generated by households and comparable wastes from other sources
[71] ibid ch 15 s 8 and 18; recycling, composting and burying are permitted if they pose no risk to human health and environment
[72] ibid ch 15 s 4
[73] ibid ch 15 ss 6 &8
[74] Ibid ch 15 s 10
[75] Ibid ch 15 s 13-15
[76] Ibid ch r 15 s 16; Producers may be obliged to supply municipalities with information relevant for regulation purposes

The foregoing notwithstanding, the Government retains some key regulatory powers and responsibilities on municipal waste. First, the government can regulate (or delegate this power on) separation of certain kind of wastes (for purpose of storage and transportation) and prohibition of landfilling of combustible and organic waste.[77] Secondly, the government regulates the licensing of waste transporters and professional waste collectors and recyclers.[78] Notably, the exercise of these powers is justified on grounds of safeguarding health and environment. Thirdly, the government (or through the Surgeon-General) regulates the waste management activities of the military. [79] Fourthly, the government (or its delegate) can issue regulation for purpose of transposition of EU directives.[80]

Besides, the Code sets out broad enforcement measures and mechanisms which are relevant to this study. The Code creates a basis for transposition of EU waste management rules and quality standards, by giving authority to government to instruct public authorities to issue the same and establish programmes as may be necessary for compliance to these standards.[81] The Code has provisions on environmental impact statements (EIS), with requirements for prior consultation of persons likely to be affected by proposed development activities.[82] Approval for EIS applications for in-country projects vests in County Administrative Boards whereas transboundary projects are to be approved by an authority appointed by the Government. The Code outlines the access to justice mechanism comprising environmental courts, superior environmental courts and the supreme court.[83] These provisions extend to waste management activities.

The Swedish Environmental Protection Agency (SEPA) is designated as one among supervisory authorities for purposes of enforcement of this Code, alongside the Surgeon -

[77] Ibid ch r 5 s 19-20
[78] Ibid ch 15 s 25 &27
[79] Ibid ch 15 s 29
[80] Ibid ch 15 s 28
[81] Ibid ch 5 ss 1 & 5
[82] Ibid ch 6 generally
[83] Ibid ch 20 generally

General of the Swedish Armed Forces, County Administrative Boards, Municipalities (exercising their supervisory powers) and other government agencies.[84] Supervisory authorities are supposed to provide advise, inspect and supervise compliance with the Code and decisions made out of the Code with the aim of contributing to attainment of the objectives of the Code. They are also authorized to report violations of the Code to police and prosecutorial authorities for enforcement. In this regard, though SEPA is central to regulation of environmental matters, it does not hold any special or elevated position as a supervisor of environmental management, thus creating horizontal rather than vertical coordination relationship with other regulators.

6.2.3.4. Waste Ordinance (2011)[85]

The Waste Ordinance was enacted in 2011 to provide for elaborate rules for implementation of relevant provisions of the Environmental Code, EU Directives and other pertinent laws. The Ordinance introduces new terminologies such as organic waste, which include biological, plastic and other waste containing organic carbon whereas combustible waste as waste that burns without energy supplements after combustion process has started.[86] The Ordinance introduces new actors in the waste chain such as traders (who professionally buys and sells waste) and brokers (who professionally mediates waste of recycling or disposal).[87]

The Ordinance provides detailed regulations for managing different categories of waste and few pertinent to MSWM are discussed here. There is a requirement for separation of combustible waste (including separate transportation and storage) ostensible to facilitate energy recovery, whereas food wastes are to be treated similarly to promote composting.[88] The extended producer responsibility (ERP) is enlarged to cover household and non-

[84] Ibid ch 26 s 3
[85] 2011:927 <https://open.karnovgroup.se/miljoratt-och-halsoskydd/avfallsforordningen > accessed 02 April 2019.
[86] Waste Ordinance, s 3 o
[87] Ibid s 6
[88] Ibid ss 14 & 15 (a)

household packaging wastes as well as recycled paper and newspaper waste, electrical and electronic wastes while enjoining property owners in facilitating the implementation of this concept.[89] It is important to note that Sweden has in place separate ordinances which elaborate on the obligations of ERP in respect to the aforementioned waste categories.[90] These ordinances require producers to establish collection systems, obtain permits for the same and meet quantifiable goals for recycling, meet reporting obligations and hold consultations with stakeholders over implementation of collection systems. Thus, the Ordinance promotes private sector engagement, which is vital for effective environmental integration.

Regulatory responsibilities for different regulators are clearly defined and delineated. Municipalities are empowered to promulgate regulations on design & waste management devices; separation of wastes; additional measures on re-use, recycling and reporting obligations for waste generators; management of household waste.[91] Municipalities are required to adopt waste plans and update them every four years while waste planning obligations are extended to packaging waste and recycling papers.[92]

County Authority Boards on the other hand have regulatory powers and responsibilities relating to waste licensing, reporting and planning. Licensing requirements for waste transporters are further elaborated, and as it may concern MSWM, professional waste transporters[93] and collectors[94] are required to obtain permits from respective County Administrative Boards (CABs). The Ordinance imposes notification and reporting obligations to CABs on a wide array of actors include waste composters, traders and

[89] ss 24-25
[90] Ordinance on Producer Responsibility for Recycled Paper (2018:1463); Ordinance on Producer Responsibility for Packaging (2018:1462); Ordinance for Producer Responsibility for Electrical equipment (2014: 1075; Ordinance on Producer Responsibility for Glass Packaging and Packaging of Corrugated Board (1993:1154);
[91] Ibid ss 74-5; however, municipalities cannot regulate on waste management matters apportioned to producers by other rules.
[92] Ibid s 76
[93] Ibid s 36 as read with s 40
[94] Ibid s 46

brokers, recyclers, treatment of electrical wastes and handlers of hazardous household waste.[95] CABs are empowered to review waste plans from municipalities but in addition, compile regional waste plans from the same.[96]

The Ordinance assigns the Swedish Environment Protection Agency (SEPA) regulatory authority on behalf of Government on most aspects of waste management. Notable aspects that related to MSWM include; promulgating regulations on sorting of combustible and food wastes;[97] treatment, recycling and transboundary movement of electrical and electronic wastes and;[98] authorization of permits for transportation of non-hazardous wastes and;[99] waste management planning by municipalities and CABs.[100] In its own right, SEPA has a duty to compile a national waste management plan with public participation and update the same as per the relevant EU Directives thus facilitating vertical environmental integration.[101] SEPA has reporting obligations to the EU for compliance of Sweden to EU Directives[102] SEPA has a role in commenting on waste regulations promulgated by the Surgeon-General of the military and a duty to allow the Swedish Chemical Agency comment on reports made to the EU Commission.

Clarification of different regulatory roles assigned to various waste authorities is key to ensuring coordination of these actors either vertically and horizontally and this contributes to effective implementation of environmental integration.

[95] Ibid ss 45, 47- 50, 54, 54 (a), 59 (a), 62
[96] Ibid ss 79-81
[97] Ibid s 15
[98] Ibid ss 27, 29 & 59 (a) as well as Sec 70 (d)
[99] Sec 41 &43
[100] Ibid s 77
[101] Ibid s 83
[102] Ibid ss 71 & 82

6.2.3.5. Other Sectoral and Procedural Laws

The Planning and Building Act[103] regulates planning of land, water and built environment with goal of promoting individual freedom, societal progress, clean and sustainable habitat for current and future generations.[104] The framing of the purpose of this law thus integrates sustainability. With regards to land planning, the law requires municipalities to develop long-term, non-legally binding comprehensive plans providing for among other things, necessary amenities, alignment with national and regional plans and observance of applicable environmental standards.[105] The planning process is underpinned by clear requirements for consultations with relevant stakeholders, particularly if plan proposals are presumed by planning authorities to have significant environmental impacts. Besides, municipalities are required to come up with legally-binding detailed plans and regulations on land uses which form the basis of decision on building permits.[106] Two or more municipalities may constitute a regional planning body and formulate a regional plan to guide development of plans and regulations thereof as well as provide for guidelines for localization of development and construction works of importance to that region.[107]

With regard to regulation of the built environment, the PBA requires building designs to take into account among other matters, promotion of efficient waste management as both overriding and technical consideration.[108]Developers are required to ensure effective and economic management of construction and demolition wastes, including drawing proposals, keeping inventories of waste management activities to facilitate inspection and maintaining prescribed performance standards.[109]

[103] Lag 2010:900 (hereinafter referred to as PBA) <www.boverket.se/publikationer> accessed 23 June 2019
[104] Ibid ch 1 s 1
[105] Ibid ch 1 s 7
[106] Ibid ch 4
[107] Ibid ch 7
[108] Ibid ch 2 s 6 (5) and ch 9 s 4 (9)
[109] Ibid ch 10 ss 6 (5&6) and s 11 (1 &3) as well as ch 10 s 3 of Planning and Building Ordinance (2011:338) <www.boverket.se/publikationer> accessed on 23 June 2019

Environmental Assessment Regulations-EAR- (2017:966) apply to MSWM to the extent that key waste management activities and their products are deemed to have significant environmental impact. Plans and programs such as waste management plans, municipal energy plans and regional plans (under PBA) outrightly warrant environmental impact assessment, whereas detailed plan of municipalities may require a study to establish if an impact assessment study is warranted.[110] The regulations bear clear obligations to conduct consultations and make information regarding EIA statements accessible e to the public.[111] County Administrative Board (CAB) has the mandate to consider an EIA statement in respect to domestic activities whereas SEPA is mandated to consider the same within cross-border contexts.[112]

Pursuant to various sections of the Environmental Code, Sweden has adopted Environmental Review Regulation (2013:251) to provide for permit granting for activities with significant environmental impact classified as A, B & C (with descending order of significance). Most of the waste management activities that exclude hazardous wastes fall under categories B and C, with less notification and permit requirements.

6.2.4. Lessons from Swedish MSWM Framework for Environmental Integration

6.2.4.1. Normative anchorage for environmental integration

The Swedish legal framework on MSW reveals substantial incorporation of environmental protection obligations right from the EU waste law down to municipal law on waste management. The principle of integration is enshrined in the EU Treaty has been transposed into the Waste Directives issued since 1975, as reflected in the various provisions therein that require environmental protection should be considered in waste management actions and decisions. This is relevant to Kenya, especially as the National

[110] EAR ss 2 & 4
[111] Ibid ss 8&9 and 20
[112] Ibid ss 14 & 21

government and Counties embark on development of legislative and policy frameworks on waste.

Both EU law and Swedish domestic law do not explicitly provide for a right to clean and healthy environment, which provides an impelling force for environmental integration in MSWM as analysed in Kenya's legal framework.[113] Rather, jurisprudence from the European Court of Human Rights recognizes the right to clean and health environment as a derivative of the right to life (under Article 2 of European Convention on Human Rights-ECHR) and right to family and privacy (under Article 8 of ECHR).[114]

Within the context of waste management, the European Court of Human Rights (ECtHR) had made a few decisions which also advance the imperative of environmental protection rights in MSWM. In *Branduse v Romania*,[115] the applicant was held at a pre-trial detention facility that was located 20 meters away from a household waste disposal dumpsite that emitted noxious emissions. He successfully brought an action against Romanian authorities at the ECtHR for subjecting him to inhuman and degrading treatment and violating his right to privacy under Articles 3 & 8 of the ECHR respectively. Relying on conclusions of environmental studies on the matter adduced as evidence, Court noted that the Romanian authorities had not taken measures to ensure effective closure of the site, for it had breached pollution levels as per applicable legal standards.

In *di Sarno and Others v Italy*,[116] a legal dispute was triggered by the "waste crises" that erupted in several municipalities in the region of Naples, Italy between 1994-2009. The crises were triggered by widespread failure of waste management system owing to administrative lapses and criminal actions by local authorities. As a result, local landfills

[113] Cases of *ACRAG and Martin Osano* in Chapter 3
[114] See Malgosia Fitzmaurice, *Case Note: The European Court of Human Rights, environmental damage and the applicability of the European Convention on Human Rights and Fundamental Freedoms*, (2011) 13 Environmental Law Review 107-114
[115] Application No/6586/2003 ECtHR
[116] ECHR 005 (2011) (filed at application 30765/08)

were closed-down leading to piling-up of waste on the streets of Naples and nearby municipalities. The applicants in the case successfully brought an action against Italian authorities under right to life (Article 2 of ECHR) and right to respect for private and family life (Article 8 of ECHR), claiming that the administrative and legislative failures complained of that led to breakdown public waste collection service had caused serious damage to the environment in their region thus jeopardizing their lives and health. The Court noted that collection, treatment and disposal of waste were hazardous activities for which the State had a duty to adopt reasonable measures necessary to safeguard the right of the affected to a healthy and protected environment. These cases underscore the normative power of a right to clean and healthy environment in compelling authorities and officials to adopt policies and laws that incorporate environmental protection in the development process, thereby promoting environmental integration. This jurisprudence is thus comparable to the Kenyan decisions on waste cases discussed previously.

It is also important to note that the Swedish legal framework is supported by a rather robust policy framework- The National Environmental Quality Objectives (NEQO) system- which promotes environmental protection in the development process, hence environmental integration. The NEQO was adopted by the Swedish parliament as the preeminent policy document which prioritizes 16 environmental goals to be pursued with the overall aim of ensuring "*... handing over, by 2020 a society in which the major environmental problems facing the country have been solved*".[117] A subsequent revision of the goal included an important caveat that efforts to solve Swedish environmental problems should not come at the price of exporting the same problems to other countries.[118] It has been argued that the NEQOs introduced the concept of management by objectives (MBO) in Sweden's environmental governance, whereby strategic vision was translated into a set of quantifiable objectives based on evidence for implementation at lower levels.[119] This approach is not evident in Kenya's environment policy, which has no clear time-frame of

[117] Swedish Environmental Protection Agency, 'Sweden's environmental objectives-an introduction' (2012) <www.naturvardsverket.se/publikationer> accessed 17 June 2019 p1
[118] European Commission, 'EIR Country Report- Sweden' 2017 at p7
[119] L. Emmelin & A. Cherp, 'National environmental objectives in Sweden: a critical reflection (2016) 123 Journal of Cleaner Production, pp194-199

implementation, takes a more qualitative approach in framing of policy actions and lacks implementation framework with clear quantifiable goals.[120] For effective accountability in implementation of the policy and ensure its contribution to environmental integration, Kenya should consider infusing the Swedish MBO approach to its environment policymaking process.

The Swedish legal and policy framework is in turn supported by a rather progressive political system, which is supportive of environmental sustainability. The earlier foundations of environmental integration in Sweden were laid when center-left government was in power between 1982-2006.[121] Even though the level of ambition and commitment to environmental sustainability declined when a centre-right government took power between 2006-2014, the environmental integration tools however, remained intact.[122] Within parliament, an All Party Committee on Environmental Committee has been established to oversee the implementation of NEQOs, with representation from experts, NGOs and concerned government ministries.[123] The Committee is meant to secure broad political consensus and support for implementation of NEQOs, and its tenure runs until 2020. Therefore, strong political backing for environmental sustainability exists in Sweden, which goes beyond political party platforms and ambitions. Therefore, harnessing political will for environmental integration through electoral platforms of political parties and defined structures in parliament is a lesson which Kenya could consider borrowing.

The system of specialized environmental courts is also important in facilitating environmental integration in the judicial process. The composition of the court, which includes environmental experts is meant to ensure specialized knowledge on environmental matters brings to bear scientific or technical considerations on the decisions of the courts.[124]

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[120] Republic of Kenya, *National Environment Policy 2013*
[121] A. Persson et al *Institutionalization or wither away* (2015) at p483
[122] Ibid; the tools include environmental management system for all government authorities and parastatals; NEQOs; sector responsibility and; greening of public procurement.
[123] European Commission, *EIR Country Report- Sweden* at p7
[124] See Law on Land and Environmental Courts (2010:921), ch 2

The existence of appellate specialized environmental courts also holds promise for consistency in jurisprudence that upholds environmental protection concerns in judicial decision-making. In this regard, it has been observed that the Courts adopt integrated and holistic approach when deciding on cases before them and the presence of technical experts alongside jurists makes it easier for the Court to balance different interests (environmental v/s economic) against each other.[125] Whereas Kenya also has a system of environmental courts and tribunals, creating an appellate environmental court and infusing technical expertise is a lesson worth considering.

Public support for environmental protection and sustainability generally is important for promotion of integration. Within the context of waste management, one survey study revealed that there is strong public support for sorting, recycling and composting household wastes within municipalities, while more residents are willing to pay more for environmentally-sound waste management services.[126] Such public support facilitates compliance with legal provisions of waste regulatory framework and therefore Kenya could endeavor to put in place environmental education programs for similar results.

However, concerns still abound over the extent of prioritization of environmental protection concerns in the development process in Sweden. For instance, it has been noted that Swedish authorities have continued to license waste incinerators despite Sweden exceeding its capacity to supply these energy generators with enough domestic waste-derived fuel.[127]Even though initially there was strong demand for energy and heat (for domestic heating) generated from waste incinerators, soon enough Sweden was compelled

[125] U. Bjallas, 'Experiences of Sweden's environmental courts' (2014) 3 Journal of Court Innovation pp177-184

[126] H. Bartelings & T. Sterner, 'Household waste management in Swedish municipality: determinants of waste disposal, recycling and composting' (February 1999) 13 *Environmental and Resource Economics* pp473-491

[127] See for instance P. Shepherd, 'Environmental legislation and the regulation of waste management in Sweden' (May 1995) a Technical Report prepared for National Renewable Energy Laboratory at p16-23; a moratorium on liciencing of incinerators was imposed in 1985 ostensibly due to complaints over high levels of dioxins emissions from the waste energy plants. The moratorium was lifted in 1987 following industry pressure, but also after several safeguards were installed to lower emissions as well.

to import wastes from neighbouring Norway to address domestic shortfalls.[128] This policy incoherence encourages unsustainable waste management practices in neighboring countries, thereby contradicting the overall vision of NEQOs on avoidance of exporting Swedish environmental problems abroad. In establishing such waste facilities, Kenya should be careful not to create a reliance on importation of wastes from other countries in a way that undermines environmental sustainability of the exporting countries.

6.2.4.2.Sectoral Coordination and horizontal environmental integration

With regards to harmonization of sectoral laws with the framework environmental laws, several observations are pertinent. First, the Environmental Code occupies a central place in the Sweden's environmental regulatory framework, despite not having a provision that declares the supremacy or superiority of the Code vis-a-vis the sectoral laws.[129] This contrasts with the Kenyan legal context where provisions of EMCA override contradictory provisions of sectoral laws. The legislative approach employed in securing the central or elevated status of the Code is cross-referencing of the Code by sectoral laws, including the Waste Ordinance[130] and the Planning and Building Code.[131] Such cross-referencing is meant to ensure implementation of sectoral laws is done in a manner that takes into account the key provisions of the Code. This legislative approach of cross-referencing is worth considering in Kenya, to bolster the efficacy of EMCA through the operation of sectoral laws.

Secondly, even though SEPA is regarded as the central environmental regulator, it enjoys no particular elevated or supreme status under law.[132] Instead, SEPA is one among the various key environmental regulators in Swedish regulatory framework alongside other 11 sectoral agencies.[133] SEPA nevertheless occupies an important place in Swedish

[128] Interview with Key informant, SEPA
[129] The Code lacks a provision equivalent to s 148 of EMCA
[130] Waste Ordinance, s 1: The Environmental Code is cross-referenced at least 30 times in various sections of the Waste Ordinance
[131] The building law cross-references the Environment Code at least 50 times by manual count
[132] See Ordinance (2001:1096) with instruction for the Swedish Environmental Protection Agency
[133] SEPA, 'Swedish environmental law' (SEPA, 2017) 30

environmental management despite not having agency primacy, which is considered necessary for sectoral coordination and hence horizontal environmental integration. This has been attributed to the cooperative and consensus-driven administrative culture underpinning regulatory arrangements and policy processes in Sweden.[134] This enables SEPA to convene or participate effectively in coordination mechanisms with other sectoral agencies with good opportunity to influence regulatory actions and decisions of other agencies. Thus, embedding a culture of consultation and collaboration is a lesson which Kenya should borrow to undergird effective sectoral coordination.

It is important to note that there are consultative structures created under SEPA to promote research, monitoring, biodiversity, access to information and supervision & regulation under the Environmental Code.[135] The Supervisory and Regulatory Council (SRC) is perhaps the most important of these structures and it brings together all authorities responsible for undertaking supervision and issuing regulations under the Environment Code for purpose of coordinating their work under this area. County Administrative Boards and the Municipalities are represented in this Council. The now-abolished Standards and Enforcement Review Committee (SERC) that was under NEMA served the same function as the Swedish SRC in terms of promoting consultations in formulation of regulations. It is necessary to consider establishment of such a structure, which takes into account the devolved system of government and therefore incorporates County environmental authorities.

Thirdly, the legislative framework for waste planning regime is significantly harmonized and provides good opportunity for effective sectoral coordination. The EU law has imposed clear requirements on Member states to develop legislative framework and procedures for waste planning with clear measures and targets for prevention and reduction of waste

[134] Katja Lindqvist, 'Hybrid governance: The case of household solid waste management in Sweden' (2013) 13 Public Organization Review, 147

[135] s 6 (Environmental Research Council); s 10 (Environmental Monitoring Board); s 10(k)- Scientific Council for Biodiversity; s 10(m) The Swedish Environmental Network Council; and Sec 10 (o) Supervisory and Regulatory Council respectively

generation. These requirements are clearly transposed into the Swedish Code and Waste Ordinance. Both laws require municipalities, CABs and SEPA to observe public participation when formulating and adopting waste management plans at the respective levels. This requirement facilitates sectoral coordination by bringing voices of various sectors into the decision-making process. Besides waste planning, the legislative framework provides for consultative and participatory development planning (e.g. comprehensive & detailed planning, and municipal energy planning) and approval processes under the Planning and Building Act (PBA) which create opportunities for aggregation of sectoral perspectives underpinned by environmental protection imperatives. Waste planning framework in Kenya is weak and therefore ongoing efforts to have in place a national waste law could borrow this rather elaborate practice from Sweden.

Fifthly, the Swedish MSWM framework combines the use of a variety of regulatory instruments thus promoting involvement and coordination of various sectors in enforcement of compliance. As stated earlier, prohibitions (on dumping), bans (on disposing combustible waste in landfills), extended producer responsibility and taxes (on landfills and incineration) are examples of statutory command and control instruments which are applied by the State on regulated entities. On the other hand, fiscal incentives for donation of waste for reuse, systems for reporting and coordination (self-regulation) and an incentivized public procurement process for recycled wastes are example of voluntary instruments also applied. This ensures a balanced and coherent way of regulating the sector, using sticks and carrots.

However, several challenges in sectoral coordination are evident that are also relevant to the Kenyan context. First, apparent lack of regulatory primacy of SEPA raises the spectre of fragmentation due to risk posed by duplication and overlaps in the mandates of various regulators over a particular environmental medium. In MSWM, the regulation of municipal energy planning is overseen by Energy Regulatory Agency,[136] without much reference to

[136] See Act of Municipal Energy Planning (1977:439)

SEPA, yet municipal wastes run incineration and bio-digestion facilities which contribute significantly to local energy generation. Thus, unless a particular sectoral law references the supervisory or coordination role of SEPA, it cannot be taken for granted that the sectoral regulator will consult or defer to SEPA on environmental matters. The fact that sectoral regulators have assumed sectoral responsibility for environmental protection may also complicate matters since they may be little incentive to cooperate with SEPA in the discharge of this obligation.

Secondly, even though the Swedish legal framework promotes public participation in MWM decision-making processes, there are concerns over the effectiveness and meaningfulness of the process. In municipal energy planning for instance, the consultative process mandated by law is said to be dominated by municipal departments and municipal-owned companies, with private sector, NGOs and citizens playing a limited role.[137]This is attributed to lack of tradition and experience (capacity) in facilitating stakeholder participation in energy decision-making processes, which undermines the possibilities of inclusion of non-state actors' preferences and perspectives in the planning processes thus outcomes hence weakening integration.[138]

In the same vein, even though the Environmental Code allows environmental NGOs right of appeal on judgements and decisions concerning permits, approvals and exemptions, this right is restricted to organizations with not less than 2000 members and excludes appeals on decisions by military agencies.[139] Hence, small NGOs lack standing in courts and this undermines public participation. However, these restrictions have been waived courtesy of courts' interpretation of the rather expansive *locus standi* rules of the EU Arhus Convention. In *Djurgården-Lilla Värtans Miljöskyddsförening vs Stockholms kommun genom dess marknämnd*,[140] a small Swedish NGO challenged the decision of Stockholm

[137] S. Gustaffsson, J. Ivner & J. Palm, 'Management and stakeholder participation in local strategic energy planning-examples from Sweden' (2014), 98 Journal of Cleaner Production pp205-212
[138] Ibid,
[139] Environmental Code, ch 16 s 13
[140] NJA 2010 s.419

Municipality to over the granting of a permit for construction of a tunnel on grounds of procedural violations related to EIA process among others. The NGO lost the case at the Environmental Court of Appeal on account of failure to fulfil the 2000 members' requirement of Environmental Code. The NGO appealed to the Supreme Court, arguing that the requirement was contrary to the Aarhus Convention which granted locus to any organization challenging EIA decisions, without considerations of membership size. The Supreme Court referred the matter to the European Court of Justice, which decided that the case in favour of the NGO. [141]

Thirdly, even though the EIA requirements within the permit granting processes are meant to embed environmental protection imperatives, recent reforms appear to orient the whole process more towards reducing administrative burdens and thus easing the cost of doing business in Sweden.[142] This reflects thinking that valorizes economic considerations over environmental protection concerns. It has also been noted that the EIA decision-making process in MSWM are skewed in favour of business interests due to information asymmetries between the regulators and regulated entities.[143] Businesses in waste management tend to have more technical knowledge on waste activities than regulators and therefore this creates power imbalance favouring regulated entities. In this situation, economic interests are likely to dominate decision-making processes to the expense of environmental protection considerations. It is also noted that waste management activities are largely run by municipal-owned companies and therefore municipalities as regulators at the local level are inclined to close-off EIA decision-making processes affecting these companies from public scrutiny thus weakening integration.[144]

[141] (2009) ECR I-09967
[142] Lena Gippert, 'Quality and speed in judicial procedures and administrative decision-making: environmental permits in Sweden' (2017) 113-127; on file with the author
[143] Nillson et al, Environment integration & policy implementation 12
[144] Ibid p 12

6.2.4.3.Intergovernmental coordination

Even though Sweden is a unitary state, regional authorities and municipalities enjoy legislative competence and rather unfettered regulatory powers in respect to local governance of waste management activities. This has been attributed to a long history of robust autonomy of local authorities as part of the country's political culture.[145] Regulations are adopted by municipal council with imperatives of public consultations which provide for opportunities for aggregation of sectoral perspectives for integration. Municipalities have also set up bureaucracies constituting of sectoral departments and oversight structures (e.g the Environment and Public Health Committees). These structure present opportunities for coordination on environmental protection matters. This is comparable to the Kenyan situation, even though the constitutional design of devolution guarantees autonomy for Counties.

The considerable autonomy notwithstanding, instruments exist to ensure alignment of local authorities' functions with those of upper levels of governance. The comprehensive planning process for instance creates imperatives for municipalities to align their respective detailed and comprehensive plans with the regional and national plans. Likewise, the legislative competence of municipalities and regional authorities must conform to national laws and EU law, where the latter has been transposed. The legal requirement for the use of environmental assessment tools in evaluation of municipalities' policies (including on waste management) presents good opportunity for not only alignment of such policies but also for incorporation of environmental protection considerations.[146] The assessment process provides CABs and SEPA opportunities to interrogate these plans for alignment with regional and national plans as well as adequacy of environmental protection safeguards. The ongoing review of the Physical Planning Act in Kenya should infuse environmental considerations as well.

[145] S. Gustaffsson et al (n137) 206
[146] Environmental Assessment Regulation (2017:966) s 2

Thirdly, the legal framework creates several opportunities for local authorities to be consulted in waste management legislative and policymaking processes, thus presenting opportunities for promotion of coherence and vertical alignment. As mentioned elsewhere, the municipalities and CABs are represented in the Swedish Supervisory and Regulatory Council anchored in SEPA, presenting the local authorities with opportunities for influencing the development of regulations and strategies for supervisions in the environmental realm. Through their participation in this Council, it can be argued that the local authorities have opportunity to challenge government regulations or supervisory actions which undermine the respective mandates. Another important mechanism for consultation is the permit granting process involving Land and Environment Courts. Local authorities must be consulted before the courts render permit decisions and this could facilitate coherence between the approval process and development plans formulated by local authorities.[147] Within the context of intergovernmental relations, Kenya could borrow this culture of consultation along with having in place a structure to facilitate intergovernmental coordination on waste matters.

However, some challenges and weaknesses are discernible in the Swedish legal framework in this area. The efficacy of waste planning process is questionable, given the fact that not all municipalities have in place updated waste plans.[148] Privatization of waste management activities and the entry of private actors has problematized the planning process in that economic rather than environmental considerations invariably dominate the content of the plans due to weak public participation.[149] Thus, if local level planning is weak, it may be presumed that quality of regional and therefore national plans derived therefrom will be adversely affected.

[147] Chapter 3 Sec 4 of Act on Land and Environmental Courts (2010:921)
[148] Man Nilsson, Mats Eklund & Sara Tyskeng, 'Environment integration & policy implementation: competing governance modes in waste management decision-making' (2009) 27 Environment and Planning C: Government and Policy10
[149] Ibid

6.3. South Africa

6.3.1. Context

Until recently, South Africa was the biggest economy in sub-Saharan Africa with an estimated GDP of USD366 billion and a population of 57.7 million.[150] The economic is quite diversified and driven by manufacturing and export of primary commodities (mostly minerals), meaning that it is highly dependent on energy and extraction of natural resources. [151] This economic context is also reflected in the environmental profile of the country, with carbon dioxide emissions estimated at 8.97metric tonnes per capita, the highest in Africa.[152]

South Africa's legacy of apartheid persists to date, with manifestations in the country's environmental policy and management. Distribution of natural resource wealth was by law, pursued along racial lines resulting in racially-based inequalities that persist to date.[153] Apartheid policies segregated Africans into underdeveloped black townships and rural homelands, leaving the best available land and natural resources to exclusive use of white population. Urban sprawl is still a challenge in many cities, due to uncontrolled growth of the erstwhile black townships characterized by poor service delivery and degradation environment. In rural areas, black populations were forced out of their ancestral lands to give way for creation of national parks thus planting seeds of black indifference to conservation policies.[154]

[150] See <https://data.worldbank.org/country/south-africa> accessed on 30 June2019; Nigeria recently overtook South Africa with an estimated GDP of 397Billion, following years of economic stagnation
[151] World Bank Group, 'South Africa economic update: jobs and inequality' 2018 accessed from <http://pubdocs.worldbank.org/en> accessed 30 June 2019
[152] G. Ziervogel et al 'Climate change impacts and adaptation in South Africa' 2014, WIREs Climate Change 5: 605-620
[153] N. Rossouw & K. Wiseman, 'Learning from the implementation of environmental public policy instruments after the first ten years of democracy in South Africa' 2004, Impact Assessment and Project Appraisal, 22 p131-140
[154] J. Carruthers, 'Tracking in game trails: looking afresh at the politics of environmental history in South Africa' (Oct 2006) 11 Environmental History p.816

South Africa's environmental framework is considered as fragmented with overlapping and conflicting legislative regimes and organizational frameworks.[155] This context has its roots in the apartheid regime, which established disparate legislation with the intended purpose of facilitation resource allocation and exploitation, rather than promoting sustainability and ecosystem approach to environmental management.[156] During apartheid, environmental management policy regime was characterized by technocratic driven-decision making processes which largely excluded broader civil society.[157] Thus, the system did not adequately benefit from a broad-based perspectives on environmental governance, leading to limited integration of sectoral knowledge in the policy framework.

Transition to democracy following the end of apartheid saw fundamental changes in environmental management in South Africa. After the first democratic elections held in 1994 in which the African National Congress (ANC) won with strong pledges on environmental reforms, the country adopted a new constitution in 1996, which contained some important environmental provisions including environmental rights thus laying the ground for the development of the first national environmental policy.[158] The Environmental Management Policy for South Africa was eventually adopted in 1998 simultaneously with the enactment of the National Environmental Management Act (NEMA 1998)[159] as the framework environmental law. NEMA (1998) laid down the principles, institutional framework, tools and mechanisms for managing the environment.

[155] Louis J. Kotze, 'Improving unsustainable environmental governance in South Africa: the case for holistic governance' (2006) 1 Potschefstroom Electronic Law Journal p1-44
[156] Ibid p15
[157] Rossouw & Wiseman, (n153) 133
[158] Ibid 133
[159] Act No. 107 of 1998

6.3.2. Status of MWSM in South Africa

South Africa generated approximately 42million tonnes of (non-hazardous) waste in 2017 or rather 0.96kg of waste per capita.[160] Out of this total, municipal waste accounted for 4.8million tonnes (or 8.9%) for which little (0%) was recycled and hence was almost all landfilled.[161] This notwithstanding, recycling rates for other categories of wastes is estimated at 38.3% which is relatively high. [162]Collection rates in urban areas is estimated at 61%, whereas 34% dump their wastes in communal or private dumps while 5% is unaccounted for.[163] Waste removal services are provided either by local authorities or private companies, dominating collection services in the large metropolises.

6.3.3. Legal framework on MSWM and environmental integration

This section provides an exposition of the legal framework on MSWM.

6.3.3.1.Constitutional framework

The Constitution of the Republic of South Africa (1996) is the supreme law[164] and lists among some of the values underpinning the state as human dignity, achievement of equality and advancement of human rights and freedom.[165] As discussed in the previous sections, the Constitution provides for a right to healthy environment and entitles current and future generations to reasonable legislative and other measures which among others prevent pollution and ecological degradation.[166] The environmental right is a justiciable right which is also framed in a way that imposes obligations on the state to promote of ecologically sustainable development.[167]

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[160] Department of Environmental Affairs, 'South Africa state of waste report- second draft' (Department of Environmental Affairs 2018) p20 <http://sawic.environment.gov.za/documents/9066.pdf> accessed 03 July 2019

[161] Ibid 21

[162] Ibid p22

[163] Ibid 45

[164] Constitution (1996) s 2

[165] Ibid s 1; it should be noted unsustainable waste management results in deplorable conditions that may undermine human dignity as a value and non-derogable right

[166] Ibid s 24

[167] Louis Kotze 'The judiciary, the environmental right and the quest for sustainability in South Africa: a critical reflection' (2007) 16 RECIEL 300.

In the case *Director: Mineral Development, Gauteng Region & another v Save the Vaal Environment and others*,[168] the Supreme Court of Appeal upheld the decision to set aside a mining licence issued by the mining authorities to the SASOL Ltd to mine coal close to River Vaal without giving a hearing to the applicant who sought raise an objection under the Article 24 right. The Court duly noted, "Our constitution by including environmental rights as fundamental justiciable human rights by necessary implication requires that environmental considerations be accorded appropriate recognition and respect in the administrative process in our country."[169] Like in Kenya therefore, this right is binding upon the State and its organs and officials to promote environmental protection and sustainability in a manner that creates an imperative for environmental integration.

The Constitution also defines the three spheres (levels) of government and lays down the principles of cooperative government.[170] Importantly, the Constitution vests in provincial governments exclusive legislative mandates that are pertinent to waste management such as overseeing abattoirs (sites of waste generation) and provincial planning.[171] Municipalities are vested with exclusive legislative competencies on waste management activities including control of nuisances, refuse removal, refuse dumps and solid waste disposal.[172] Thus, the constitution provides for rather clear and unambiguous allocation of responsibilities on MSWM regulation. Pollution control and regional planning are concurrent legislative mandates bestowed upon both national and provincial governments, thus comprising areas of cooperation.[173]

[168] (1333/98) (1999) ZACSA9; (1999) 2 All SA 381 (A);
[169] Ibid para 20
[170] Ibid ss 40 & 41
[171] Ibid Schedule 5,Part A
[172] Ibid pt B
[173]Ibid Schedule 4

6.3.3.2.Framework Law: The National Environmental Management Act (107 of 1998)

The NEMA (1998) establishes the broad principles, organizational framework and tools for integrated environmental management. In terms of principles, NEMA (1998) underscores the importance of sustainable development requiring consideration of the waste hierarchy (avoidance, minimization, re-use, recycling and disposal).[174] This is cardinal because these principles form the basis of formulation, implementation and interpretation of environmental policies, plans, actions and decisions. Thus, it should be reasonably expected that any law or policy developed on waste management should necessarily incorporate the waste hierarchy. NEMA (1998) also highlights integrated environmental management and decision-making along with environmental participation as a principles that entrench the principle of integration in waste management regulatory framework.[175]

Even though NEMA (1998) does not specifically restate the right to clean and healthy environment, there are provisions for the right to safe working environment for workers and right of access to environmental information.[176] The right to occupational health and safety may be construed as promoting waste-free working environments with impact on MWM. Access to environmental information covers waste information.

In promoting cooperative environmental governance, the Act initially created two organs- The National Environment Advisory Forum (NEAF) and the Committee for Environmental Coordination (CoEC). The NEAF is a broad-based stakeholders forum which was to advise the Minister on implementation of NEMA (1998) and achievement of its objectives, whereas CoEC brought together the Directors-General, member of executive councils of Provincial governments and representatives of local authorities of various state departments that affect or concern environmental management. The CoEC was regarded

[174] NEMA 1998, S.4 (a)(iv)
[175] Ibid s 4 (b) as read with (f) & (g)
[176] Ibid ss 29 & 31 respectively

as the engine of cooperative environmental governance for it has responsibilities related to oversight of environmental implementation and management plans as well as decisions related to functional assignment of environmental mandates between levels of government.[177] However, these organs were abolished in amendments that were made to NEMA, 1999 in 2009 and instead, the Minister was empowered to establish advisory forums as institutional mechanisms to foster cooperative environmental governance.[178] The advisory forums therefore present opportunity for facilitating sectoral coordination within the environmental realm at the three respective spheres of government.

The law requires the formulation of environmental implementation and management plans as tools for coordinating and harmonizing environmental frameworks and decisions of various departments of national government as well as between the three levels of government to minimize duplication and ensure coherence of discharge of functions.[179] Environmental plans are normally prepared by national departments whose functions may affect the environment as well as all provinces every four years, whereas environmental management plans are to be prepared by national departments which manage an aspect of the environment for the same period of time.[180]

A state organ may also adopt a consolidated environmental implementation and management plans if their functions both affect or involve management of the environment.[181]It can be reasonably expected that these plans would include waste management activities arising from functions of the respective departments, provinces and municipalities. The plans are submitted to CEC for approval, and this gives the respective levels of government opportunity to harmonize the respective functions.[182] There are strict

[177] L.J. Kotze, J. Nel, W. Du Plessis & E. Sunman, 'Strategies to integrate environmental policy at the operational level: towards an integrated framework for environmental authorizations' (2007) 14 South African Journal of Environmental Law and Policy p66-7
[178] NEMA,1998 s 3A.
[179] Ibid Chapter 3
[180] Ibid s 11 (1) & (2) respectively
[181] Ibid s 11 (3)
[182] Ibid s 15

requirements for reporting, monitoring and compliance during implementation of the plans and this is meant to promote effective implementation.[183] Thus, the environmental management and implementation plans serve as critical tools for fostering integration generally and in MSWM in particular.

Integrated authorizations is another important tool for integration provided for by NEMA (1998).[184] Thus, any prescribe activity that may have significant impact on the environment will require authorization upon investigation, assessment and communication of the same to the authorizing body. Prescription of activities requiring environmental authorization requires consultative decision-making process by the Minister responsible for environment (national government) and the member(s) of executive council (MEC) of respective of provincial governments.[185] In addition, the authorizing body is mandated to promulgate regulations to govern the authorization process, subject to approval by the CoEC on account of harmonization.[186]

Waste management activities would ordinarily have significant impact on the environment and therefore ought to be subject to the provisions of integrated authorizations. This has the potential to promote integration. However, parliament adopted amendments to the chapter on authorizations which took away authorizations for mining activities from the purview of the Ministry of Environment.[187] Mineral operations also generate waste and hence the amendments to NEMA (1998) potentially fragment the integrated authorizations process for waste management.

[183] Ibid s 16
[184] Ibid ch 5
[185] Ibid s 24 (3)
[186] Ibid s 24 (4)
[187] National Environmental Management Laws Amendment Act, 2014 (25 of 2014).

6.3.3.3.The National Environmental Management: Waste Act (NEMWA) 2008[188]

The National Environmental Management (NEM): Waste Act of 2008 is the key legal framework governing waste management activities in South Africa binding all organs of the State.[189] The law has promotion of environmental protection and right to healthy environment as among the overarching objectives through measures geared towards realizing the waste hierarchy.[190] The Act also cross-references the application of the NEMA (1998) and its principles thus further undergirding its orientation towards environmental protection and rights promotion.[191]

The NEMWA (2008) outlines obligations of various key actors in achieving its objectives. First, the Act obligates the State and its organs to institute measures aimed at actualizing the waste hierarchy with due environmental safeguards.[192]Within the three levels of the government, the law empowers the Minister in charge of environment, the counterpart provincial government MEC and municipalities' officials vested with waste management responsibilities to designate waste management officers as the principal coordinators of implementation of the law accordingly.[193] Secondly, the law imposes duty on any person holding waste, including generators and transporters to observe waste hierarchy measures and environmental protection safeguards.[194]

Thirdly, extended producer responsibility is imposed on designated producers by way of notification by environmental minister in consultation with trade & industry minister.[195] The apportionment of these duties reflect the multi-stakeholder nature of duty-bearers in the waste chain, thus imposing the need for an integrated framework to ensure effective management and regulation of MSW.

[188] Act No 59 of 2008
[189] Waste Act of 2008, s .4 (2)
[190] Ibid s 2 & 3
[191] Ibid s 5
[192] Ibid s 3
[193] Ibid s 10
[194] Ibid Ss16 together with S.21 &22
[195] Ibid s 18

The Act provides for various tools for regulating MSWM activities in the country in an integrated manner. First, the Minister is required to adopt a national waste management strategy as a binding blueprint detailing measures, targets and other requirements for implementing the Act for a period of five years.[196]The strategy is binding on all levels of government and produced through a consultative process and therefore imposing integration imperatives within government and across sectors. Secondly, the law empowers the Minister for environment and the counterpart provincial MEC to establish norms and standards governing waste operations at the respective levels, in accordance with the waste hierarchy, environmental protection obligations and other pertinent considerations for effective waste management.[197] These standards bind municipalities as the ultimate waste management service providers, while at the same time empowering them through their exercise of executive authority to promulgate further local standards to govern waste operations.

Thirdly, the law provides for integrated waste planning at the three levels of government which are supposed to link with other environmental (implementation and management plans) and integrated development plans at the respective levels.[198] The plans provide situational analysis, measures, targets, financial estimates and implementation arrangements for integrated waste management at the respective levels. Each respective level of government is required to provide annual reports on progress made towards implementation of the plans. Planning obligations are also imposed on industry actors for waste management operations transcending two or more provinces.[199]

Fourthly the law provides for licencing and authorization of waste management activities, including EIA approvals by way of lists promulgated by the Minister or the counterpart provincial government MEC.[200] This ensures flexibility in the determination of activities

[196] Ibid s 6
[197] Ibid ss 7&8
[198] Ibid s 11-14
[199] Ibid s 28-33
[200] Ibid s 19 & 20

that require licencing by granting wide discretionary powers to the authorities at the two levels of government in publishing the listed activities. The national government retains licencing powers in respect to waste management activities that are undertaken by national department or agency of government, provincial department responsible for environmental affairs and those of transboundary (inter-province or international) nature. Otherwise, MEC retains all other licencing powers including for waste transportation.[201]Provision is however made for integrated authorization procedures which permit application of the principle of cooperative environmental governance and public participation as outlined in NEMA (1998).[202] Fifth waste management information collection, analysis and access provisions are made at national and provincial levels of government.[203] These provisions are critical in facilitating integrated planning and implementation of waste management programmes and actions. Lastly, the law vests regulatory mandates on the Minister and MEC.[204]

It should be noted that the NEMWA (2008) is replete with command and control regulatory tools. For instance, waste planning for industries is tightly regulated with prescribed standards, failure to comply with attracts penal sanctions.[205] The extended producer responsibility obligations are also heavily prescribed, leaving little room for industry self-regulation.[206] Offences listed under the Act virtually cover all aspects of waste management, reinforcing the command and control orientation of the Act.[207] There is little attention paid to voluntary and market-based instruments and this presents a challenge in terms of ensuring integrated approach to regulation of waste management in a sustainable manner.

[201] Ibid s 43 as read with S.25
[202] Ibid s.44
[203] Ibid ch 6
[204] Ibid s 69 -71
[205] Ibid pt 7
[206] Ibid s 18
[207] Ibid s 67

6.3.3.4. Sectoral Laws

Municipal Systems Act (32 of 2000) provides the institutional framework for municipalities which have the constitutional mandate for waste management at the local level. Provision of municipal services including waste management, must be among others, equitable, accessible, financially and environmentally sustainable.[208] Municipalities are empowered to impose tariffs on services rendered which lay emphasis among others on wise use of natural resources, recycling of wastes and other related appropriate environmental objectives.[209]Thus the tariff policy can be modelled to provide incentives for realization of the waste hierarchy objectives. Municipalities are also empowered to establish private companies, utilities and multi-jurisdictional service utilities to discharge services.[210]

The law provides for rights and duties of municipal councils, including exercise of executive and legislative authority in a way that reinforces the autonomy of municipalities as a distinct organ of the State.[211]Municipalities are required to develop through consultative processes, integrated development plans (IDPs) at the beginning of a term of elected council as the blueprint detailing socio economic development needs and interventions.[212] It is reasonable to expect IDPs to contain MSWM needs and strategies of a particular municipality. The IDPs must align horizontally with those of affected municipalities and vertically with those of provincial and national government.[213] Adoption of a particular IDP is by a vote of the respective municipal council, subject to concurrence by the local provincial MEC responsible for local governments.[214] To operationalize the IDP, municipalities are required to develop and implement performance management

[208] Municipal Systems Act, s .73
[209] Ibid 74 (2) (h) as read with s 84A (e)
[210] Ibid ch 8A
[211] Municipal Systems Act, s 4 & 11
[212] Ibid ch 5
[213] Ibid s 24
[214] Ibid ss 32-33

system with community participation to measure implementation of development priorities.[215]

It is important to note that municipalities are under obligation to promote public participation in all their governance and service delivery processes.[216] This includes establishing mechanisms, process and procedures for participation and ensuring access to information necessary to support effective participation. These procedures could apply to governance processes related to MSWM as well.

Waste management is regulated through the operation of the National Water Act (36 of 1998), to the extent that waste activities affect water resources or may do so. To prevent or remedy pollution of water resources, the Act requires land owners or occupiers to observe waste management standards or practices prescribed under law.[217] Discharge of waste into water is regarded as a regulated or permissible water use which is to be licenced and this must comply with established standards and management practices, which may also be prescribed by way of regulations by the water minister.[218]The minister is mandated to regulate pricing strategy and water use charges in a manner which encourages reduction in waste of discharge of wastes into water bodies.[219]

The National Building Regulations and Building Standards Act (103 of 1977as Amended) provides a regulatory framework for building approvals. The Act vests in local authorities (municipalities), the power to grant building approvals, subject to exemptions extended to military, strategic and mining installations. Even though the Act does not have environmental protection objectives, it appears more preoccupied with ensuring safety of the built environment. Among the grounds of refusal of building approval is if the building

[215] Ibid ch 6.
[216] Ibid ch 4
[217] National Water Act, s 19 (2) (b)
[218] Ibid s 22 (2); s 26 (1) & (3); s 29 (1) (c); Schedule 1
[219] Ibid s 56 (5)

poses danger to life and property or is erected in manner prejudicial to good health, hygiene or poses nuisance.[220] The implementation framework of the Act was elaborated through adoption of National Building Regulations in 2008. In respect to SMW, the Regulations require site owners to remove construction waste that may accumulate over time.[221] Building should provide sufficient storage area for waste containers, provide access for waste removal and provide for safe chute installation where necessary.[222]

6.3.4. Lessons from South Africa's MSWM legal framework

6.3.4.1. Normative anchorage for environmental integration

The principle of integration is a constitutional norm in South Africa, with the framing of the right to healthy environment to encompass duty to promote ecologically sustainable development along with justifiable socio-economic development.[223] This would require the government to balance pursuit of socio-economic development with environmental protection. The right to clean and healthy environment is enforceable and binding on all laws and authorities like all rights enshrined in the Bill of Rights.[224] Like in Kenya, the integration of environmental exigencies in development process is thus elevated to the status of a constitutional norm, which essentially it binds waste management policies, authorities and their actions. The right to clean and healthy environment provides the normative framing for legislative measures necessary to ensure environmental protection and for the interpretation of these measures by the judiciary.[225]

Failure by municipalities to execute its obligations relating to environmentally safe waste removal and disposal is indeed a violation of socio-economic rights of citizens as was held

[220] National Building Regulations and Building Standards Act, ss 7 (1) (b) (ii) (bb) as read with s10 (1)
[221] National Building Regulation, F8 & F9
[222] Ibid pt U
[223] W du Plessis & AA du Plessis, 'Striking the sustainability balance in South Africa' in Michael Faure & Willemien du Plessis (eds) *The balancing of interests in environmental law in Africa* (Pretoria University Law Press, 2011) 427-8.
[224] Constitution of South Africa, ss.7 &8
[225] Tracy-Lynn Humby, 'The thabametsi case: Case no 65662/16 Earthlife Africa Johannesburg v Minister of environmental affairs' (2018) 30 Journal of Environmental Law, 146.

in *Kenton on Sea Rate Payers Association & Others v Ndlambe Local Municipality and Others*.[226] In this case, the aggrieved association sued the municipality for failure to effectively manage a local dumpsite leading to fires, dispersion of plastic wastes to neighbouring areas and toxic emissions in violation of Section 24 right. The Court agreed with the association and went on to issue orders of specific performance to remedy the situation complained of, noting that "…*The order I propose to give in this matter, against the background of intersection between the socio-economic rights and the particular functional areas of the Municipality goes towards ensuring that the First Respondent provides the basic services within its area of jurisdiction relating to waste management and in no way, infringe the separation of powers in any objectionable way*".[227]This jurisprudence in comparable with the reasoning by Kenyan courts in the *ACRAG*[228] and *Martin Osano*[229] cases.

The South African courts consider the right to healthy environment at par with other rights including economic rights. In the case *Khabisi & another v Aquarella Investments & 2 Others*, a dispute arose after the respondents refused to comply with a compliance order issued by the second applicant (an environment inspector) acting on behalf of the Mr Khabisi, the provincial MEC in charge of environment. The impugned notice, which the respondents elected to ignore as they commenced construction, sought to stop construction of property on an ecologically sensitive ridge. In upholding the Notice and actions of the applicants, the court noted.. "*Furthermore, in terms of Section 24 (b) (iii) of the Constitution, the applicants owe the public a duty to ensure ecologically sustainable development and the use of nature resources which is consonant with the ethos of the Constitution….one shudders to imaging the amount of damage to the environment and ecology which would result if all people who owned properties were to develop them as they wished much against objections raised by a competent environmental authority*."[230]

[226] (216) ZAECGHC 45; 2017 (2) SA 86 (ECG)
[227] Ibid para 93
[228] (2017) eKLR (also cited as Petition No. 50 of 2012)
[229] (2018) eKLR (also cited as Petition No 53 of 2012)
[230] Ibid 31-32

Incorporation of the principle of integration in South Africa's MSWM is evident in policies adopted at the three respective spheres of government. At the national sphere, the Department of Environmental Affairs adopted its first national waste management strategy[231] in 2011 in compliance with the Waste Act of 2008. The strategy is based on the waste hierarchy and promotes integrated approach to waste management and remediation of adverse environmental impacts. Similar strategies have been adopted in regions and municipalities. For instance the Western Cape Province adopted the Western Cape Integrated Waste Management Plan (2017-2022)[232] whereas the City of Cape Town in that region has in place the City of Cape Town Integrated Waste Management (IWM) Policy.[233] Both documents seek to operationalize the waste hierarchy approach at the respective levels of jurisdiction. This is an approach which Kenya ought to fully pursue to ensure that the legal obligations contained in waste laws are translated into operationalizable strategies for effective waste management.

Notwithstanding persistence of fragmentation, the principle of integration and environmental protection obligations associated with it, is actively promoted in South Africa by a strong judiciary that has produced trail-blazing jurisprudence on socio-economic rights.[234] This is also associated with the rights-centred constitutional framework and the acknowledges need to address the historical legacy of apartheid through application of rights for all.[235] Interestingly though, South Africa lacks a system of environmental courts but this seems not to have affected quality of environmental jurisprudence

[231] Department of Environment Affairs, 'National Waste Management Strategy- November 2011' <https://www.environment.gov.za/sites/default/files/docs/nationalwaste_management_strategy.pdf > accessed 29 June 2019

[232] <https://swellendam.com/wp-content/uploads/2020/02/Western-Cape-Integrated-Waste-Management-Plan-2017-2022-3.pdf> accessed 30 June 2019

[233] <http://resource.capetown.gov.za/documentcentre/Documents/City%20strategies%2C%20plans%20and%20frameworks/Integrated%20Waste%20Management%20Plan.pdf> accessed 30 June 2019

[234] See Kotze, *The judiciary, the environmental right* 298-311.

[235] See E. Christiansen, 'Adjudicating non-justiciable rights: socio-economic rights and the South African constitutional court' (2007), 38 Columbia Human Rights Law Review, 321-386; the author notes that the desperate socio economic situations (deep inequalities and racial injustices) existed before and during the constitutional transition period directly impacted on the process that resulted in the 1996 Constitution.

emanating from the formal court systems.[236] It is argued that in the absence of specialized environmental courts, the principle of jurisdictional subsidiarity has ensured that all environmental cases are dealt with at local courts unless the Constitution directs otherwise.[237] A liberal approach to locus also facilitates citizens to seek courts' interventions in redressing any instances of environmental breaches and this gives the courts opportunity to promote sustainability hence environmental integration.[238]

The Courts have showed willingness to balance environmental as well as socio-economic considerations in approval of development projects in order to secure sustainability as was demonstrated in the case *Fuel Retailers Association of Southern Africa v Director General Environmental Management, Department of Agriculture, Conservation and Environment, Mpumalanga Province*.[239]In this case, the applicant had unsuccessfully challenged the decision by the respondent environmental authorities not to consider socio-economic impacts in the environmental authorization for construction of a petrol station in White River area of Mpumalanga.[240] The Constitutional Court agreed with the applicants that the environmental authorities omitted to consider socio-economic factors along with the environmental impacts as mandated by law. The Court rightly noted:

> "Construed in light of section 24 of the Constitution, NEMA therefore requires the integration of environmental protection and economic and social development. It requires that the interests of the environment be balanced with socio-economic interests...in this sense, it contemplates that environmental decisions will achieve a balance between environmental and socio-economic

[236] See I. Chohan, 'Environmental courts: an analysis of their viability in South Africa with particular reference to the Hermanus Environmental Court' (LLM Thesis, University of KwaZulu-Natal 2013); the Environmental Court was opened in 2003 to deal with poaching cases and closed in 2009 ostensibly due to budgetary considerations.
[237] Ibid
[238] Under NEMA (1998) S32, locus standi is extended to persons who wish to act on behalf of the environment
[239] (CCT67/06) (2007) ZACC 13; 2007 (10) BCLR 1059 (CC); 2007 (6) SA 4 (CC)
[240] Ibid para 15 &16; the applicants contested the decision to approve construction of a petrol station arguing that it was sited within a radius of 5 kilometers from 6 other filling stations that adequately served the needs of the community and that there had been a decline in growth of fuel consumption, hence undermining the feasibility of the project.

developmental considerations through the concept of sustainable development."[241]

It should be noted however that the relevant provision under NEMA (1998) was amended in 2004 excluding socio-economic impacts from considerations which environmental authorities could examine when making EIA authorizations.[242] The amendment now limits environmental authorities to only consider environmental impacts thus moving the EIA authorization regime towards an environmentalism paradigm and away from environmental integration paradigm.[243]

However, implementation of the various waste management strategies and laws on environmental protection has resulted in rather poor environmental outcomes related to waste management. The inordinate large volumes of waste ending up in disposal sites (90-100%) is seen as evidence that South Africa could be 20-30 years behind Europe and other development countries that have successfully transitioned away from 'waste as a problem' paradigm.[244] The gap in strategic drive to ensure sustainability is also evidenced by the absence of a national strategy following the expiry of the first strategy in 2016. South Africa has also delayed in enacting regulatory tools that would ensure foster transition towards the waste as a resource paradigm, such as extended producer responsibility for key wastes. It is noteworthy however the Government has published regulations on ERP, which at the time of this study were undergoing public participation before enactment.[245] This challenge is comparable to the Kenyan situation, where at the national level, the country operated without a strategy until 2014. The need to revise the strategy regularly is evident

[241] Ibid para 61.
[242] National Environmental Management Amendment Act 8 of 2004
[243] Naudene le Roux, 'Environmental governance, fragmentation and sustainability in the mining industry' (A Master in Environmental Law and Governance Thesis, North-West University, 2011) 43-44 <http://repository.nwu.ac.za/handle/10394/7398> accessed on 28 August 2019
[244] L. Godfrey & S. Oelofse, 'Historical review of waste management and recycling in South Africa' (2017) 6 Resources 1-11)
[245] <https://www.gov.za/document?search_query=waste&field_gcisdoc_doctype=All&field_gcisdoc_subjects=All&start_date=&end_date=> accessed 04 October 2020.

to ensure a clear and robust strategic drive towards sustainability of MSWM. The foregoing points to gaps in political will to foster integrated and sustainable waste management in South Africa, for which there is empirical evidence.[246]

It is important to place the problem of political will in a broader perspective. Upon ascending to power in 1994, the African National Congress (ANC) adopted a national development plan (Reconstruction and Development Programme) with strong pro-environmental agenda.[247] However, subsequent national development plan shifted focus to traditional macroeconomic issues within diminished environmental protection orientation.[248] This notwithstanding, South Africa managed to attract acclaim for global leadership in environmental management issues, a fact that was underlined in the country's choice for hosting the World Summit on Sustainable Development (WASSD) in 2002 where green economy was a central theme.[249]In 2010, South Africa hosted the FIFA World Cup undergirded by a 'Green Goal 2010' programme which sought to create a legacy of 'greened' tournament with limited carbon footprint.[250] Despite ranking among the 15 top carbon dioxide emitters globally, South Africa leveraged on its support for the international climate change regime and won leadership mantle by hosting the 15th Conference of Parties for the Kyoto Protocol in Durban.[251] These events underscore the apparent political support for sustainability within the South African government.

However, this apparent political support has not followed through commensurate actions to guarantee sustainability. The South African economy is heavily dependent on the carbon-intensive minerals and energy industries, which put at risk other environmental

[246] A. Nahman & L Godfrey 'Economic instruments for solid waste management in South Africa: opportunities and constraints' (2010) 54 Resources, Conservation and Recycling, 521-531; the authors conducted a survey which among other things, interrogated challenges in adoption of economic instruments; lack of political will emerged as among the key challenges.
[247] Carruthers (n154) 805
[248] ibid
[249] Carl Death, 'The green economy in South Africa: global discourses and local politics' (2014) 41 South African Journal of Political Studies, 1-22
[250] Carl Death, 'Greening the 2010 FIFA world cup: environmental sustainability and the mega-event in South Africa' (2011) 13 Journal of Environmental Policy & Planning, 99-117.
[251] Death, *The green economy in South Africa*, 10.

assets of the country.[252]Currently, there is no policy framework to guide transition from heavy reliance on coal as source of electricity to less polluting renewable sources, despite abundance of opportunities for such in South Africa.[253] In 2013, the South Africa government approved the building new coal power stations in Medupi and Kusile reigons, effectively reneging on its domestic and international obligations for reduction of GHG emissions.[254] Despite the strong support for sustainability at the normative level, it is argued that government's continued commitment to unsustainable technologies is embedded in the misconception that economic growth is the panacea to development.[255] These policy incoherencies belie inadequate political will which undermines the effective implementation of environmental integration in practice.

6.3.4.2. Sectoral Coordination

Unlike Sweden and Kenya, South Africa does not have a specialized environmental regulatory agency, but rather, the environmental ministries and departments at the respective spheres of government play that role. At the national sphere, the cabinet minister responsible for environment is designated as the principal implementer of NEMA (1998) and is also vested with wide regulatory and quasi-judicial powers thus reinforcing centrality of the ministry in the implementation of the regulatory regime.[256] This institutional arrange has particular implications for sectoral coordination and HEI in the South African context.

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[252] Mark Swilling, Josephine Musango & Jeremy Wakeford, 'Developmental states and sustainability transitions: prospects of a just transition in South Africa' (2015) 18 Journal of Environmental Policy & Planning, 650-672.

[253] Jaclyn Cock, 'Resistance to coal inequalities and the possibilities of a just transition in South Africa' (2019) 36 Development Southern Africa, 860-873

[254] Anel du Plessis & Reece Albert's, 'Cooperative environmental governance: at the coalface of sustainable infrastructure development in South Africa' (2014) 29 South African Public Law, 458-9; authors note both plants will emit 60 million tons of CO_2 annually and cause environmental damage at between R350million- R10.7 Billion annually.

[255] Zarina Patel, 'Environmental justice in South Africa: tools and trade-offs' (2014) 35 Social Dynamics: A journal of African Studies, 100.

[256] NEMA 1998 s 43 and 44

First, even though the Minister for Environment is designated as the principal implementer of NEMA 1998, the regulatory power over environmental decision-making is also domiciled in other departments of national government, without reference to the environment ministry.[257] For instance, the department responsible for mining and energy is undertakes environmental authorizations on matters falling under the scope of the ministry under the Minerals and Petroleum Resources Development Act.[258] Government bureaucracy implies sectoral specialization rather than policy integration because respective departments are constructed around policy domains resulting in administrative silos, often ignoring related problems.[259] Thus, the prevailing legal and policy context in South Africa encourages sectoral fragmentation, in the absence of supremacy clause in NEMA, 1998, vesting agency primacy on the environment department on environmental authoritizations.

Secondly, the Minister, being a politician is able to marshal political support at cabinet level for coordination and harmonization of sectoral departments and agencies. It should be noted however that the coordination role of the Minister could weaken if the holder of the office wields limited political clout as was the case in the period after the first democratic elections in South Africa, when the ruling ANC appointed Marthinus van Schalkwyk, the former leader of the Minority (white-led) Nationalist Party as the Minister for Environment.[260] The political profile of the ministry declined until a more powerful leader was appointed subsequently.

[257] Willemien du Plessis, 'Legal mechanisms for cooperative governance in South Africa: success and failures' (2005) 2-3 < http://userpage.fu-berlin.de/ffu/akumwelt/bc2004/download/du-plessis_f.pdf> accessed on 03 October 2020; the author notes that NEMA, 1998 is so widely formulated that certain government departments usurp environmental decision-making from the environment department.
[258] Act No 28 of 2002.
[259] Reinhard Steurer & Gerald Berger, 'Horizontal policy integration: concepts, administrative barriers and selected practices' (Institute of Forest, Environmental and Natural Resource Policy, Discussion Paper #4, 2010) 4 < https://boku.ac.at/wiso/infer/publikationen/diskussionspapiere> accessed on 23 August 2019.
[260] Carruthers (n154) 805; The first environment Minister, Mohammed Valli Voosa was considered competent, dynamic but moved to head the World Conservation Union. His replacement van Schalkwyn was not considered a strong political figure and the National Party at the time was on the decline.

It should also be noted that, cabinet ministers as political leaders are more inclined to engage in bargain politics leading to trade-offs that weaken environmental integration. For instance, the Environment and Transport ministries jointly agreed to exclude social and economic impacts of toll roads from EIA assessments and decision-making processes, purely on economic and political rather than environment considerations.[261] In the same vein, a carbon tax that was scheduled to take effect in 2015 as regulatory measure to curb GHG emissions faced considerable resistance due to its presumed effects on economic growth, leading to deferment of its enforcement and exemptions of key sectors include waste management.[262] This creates policy incoherence and thus fragmentation, which undermines environmental integration efforts.

Thirdly, successful environmental integration across government sectors is usually predicated on effective sectoral coordination through a strong environmental ministry or coordinating agency. However, environmental ministries often lack authority, power, resources and resources to foster environmental integration through effective sectoral coordination.[263] The environment ministry in South Africa is considered as less powerful, in relation to the energy and mineral ministries, because of the importance of minerals to the economy and the role energy plays in exploitation of such minerals.[264] It is against this background of power asymmetry that the mining ministry successfully resisted centralization of EIA authorizations in the environment department in mid-2000s, highlighting a significant instance of policy incoherence and therefore fragmentation.[265]

[261] Rossouw & Wiseman (n153) 135.
[262] Death, *The green economy in South Africa* 16.
[263] Hens Runhaar, Peter Driessen & Caroline Uittenbroek, 'Towards a systematic framework for the analysis of environmental policy integration' (2014) 24 Environmental Policy and Governance 287.
[264] Lucy Baker, Peter Newell & Jon Phillips, 'The political economy of energy transitions: the case of South Africa' (2014) 19 New Political Economy, 791-818; The authors argue that the the minierals and energy actors have coalesced in the mineral-energy-collation (MEC) which controls most critical sector of the South African economy and society.
[265] Roux (n241); Rossouw & Wiseman (n153) 136

Fourthly, the key important functions of policymaking, implementation and monitoring are fused and discharged contemporaneously by the Minister in the South African context.[266] Without division of regulatory authority, real and perceived conflict of interest in the discharge of the fused roles usually arises and this further undermines the credibility and legitimacy of the Department vis-a-vis the regulated entities and stakeholders. It has been argued that the separation of the fused roles is needed as part of strengthening the institutional framework for environmental policy in South Africa.[267] From the foregoing, the current institutional set-up in Kenya where the National Environment Management Authority (NEMA) plays the role of sectoral coordinator, rather than the Ministry of Environment is preferable in light of the emerging gaps in the South African institutional arrangements.

To complement the coordination role of the Minister, NEMA (1998) has established the National Environment Advisory Forum (NEAF) as a sectoral coordination mechanism. However, the Minister took five years after enactment of NEMA (1998), to establish and convene NEAF, demonstrating the rather low priority accorded to stakeholder engagement by the environment department.[268] The first NEAF comprised 14 representatives appointed by the Minister from labour, business, NGOs, youth and expert groups.[269] In its first year of operations, the NEAF met six times and prioritized pollution and waste management as one of the themes of focus and subsequently played key role in advising the Minister in the adoption of NEMWA 2008.[270]

In 2009, NEAF was abolished following amendments to NEMA, 1998 and instead, the Minister was granted broad powers to establish advisory forum at his/her discretion in

[266] See < https://www.environment.gov.za/aboutus/department> accessed 28 August 2019; the website of the Department of Environment Foresty and Fisheries indicates that it is responsible for policy oversight, authorizations and implementation of sectoral programmes
[267] Rossouw & Wiseman (n153) 132
[268] Ibid 135
[269] Department of Environment & Tourism, 'Report of the portfolio committee on the national environmental advisory forum (NEAF) annual report 2006/7' (October 2007) < http://pmg-assets.s3-website-eu-west-1.amazonaws.com/docs/2007/071016neaf.ppt> accessed 6 July 2019.
[270] Ibid

terms of timing, functions and compositions.[271] This situation is comparable to the fate that befell the National Environment Council (NEC) before its abolition in 2015. The risk of redundancy is rather high in creating a consultative structure with high level political leaders who may not dedicate time to the structure due to their busy schedules. The discourse on significance of the NEAF in terms of promoting sectoral coordination however did not fade away with the repeal of the organ because as recently as 2014, the Department for Environmental Affairs recommended for reinstatement of the Forum.[272]

Public participation is a key legal requirement in the context of MSWM governance and this is reflected in the robust provisions of the Constitution, 1996, NEMA (1998) and the NEMWA (2008) highlighted previously. The Court in *Meadow Glen Home Owners Association v City of Tshwane Metropolitan Municipality*,[273] it was held that municipalities are under obligation to respond to people's needs, encourage public to participate in policymaking and promote accountability. Enforcement of provisions of public participation may serve to ensure views of different stakeholders are integrated into policy framework and actions of waste authorities. However, engagement of informal waste actors in waste decision-making at the local level is unstructured and superficial.[274] South Africa has an estimated 60,000-90,000 informal waste pickers, who play a large role in the recycling of 10% of the aggregate waste generated daily.[275] Local authorities show high preference for engaging with organized private sector and NGOs, rather than organized informal waste actors. Yet, waste management policies and practices directly influence the waste pickers' access to recyclable waste and livelihoods, hence the need for waste

[271] National Environmental Management Amendment Act No 14 of 2009, s 5
[272] Department of Environmental Affairs, 'Environmental impact assessment and management strategy for South Africa, (DEA, 2014) 108 & 110 <https://www.environment.gov.za/sites/default/files/docs/eiams_environmentalimpact_managementstrategy.pdf> accessed 07 November 2020.
[273] (2014) ZASCA 209
[274] Melanie Samson, 'Wastes citizenship? The role of reclaimers in South African municipal management' (a paper presented at the 12th General Assembly of CODESRIA, Cameroun, Yaounde on 07-11 December 2008) 3.
[275] Catherine Schenck, Phillip Blaauw, Elizabeth Swart, Jacobs Viljoen & Naome Mudavanhu, 'The management of South Africa's landfills and waste pickers on them: impacting lives and livelihoods' (2019) 36 Development Southern Africa, 82.

authorities to engage them more.[276]In this regard, South Africa suffers with Kenya the same problem of exclusion of informal waste voices in public policy processes.

Environmental impact assessments (EIA) are considered as important sectoral coordination tools for promoting integration principle and sustainable development generally in South Africa.[277] There is evidence that due to the elaborate process outlined in legislation, the EIA process in South Africa integrates environmental considerations in decisions relating to development and provides a basis for implementation of mitigation measures.[278] However, because of inadequate public participation processes and inordinate high premium accorded to expert knowledge, the EIA process as presently designed is more biased towards facilitating trade-offs that privilege socio-economic development to the disadvantage of environmental protection.[279] The fact that EIA authorizations have yielded unsatisfactory outcomes from a sustainability perspective continues to raise concerns over the efficacy of the process.[280] It should also be noted that South Africa does not have a specific requirement for impact monitoring through audits but is same is undertaken in practice on a voluntary basis.[281] Equally, the SEA practice has a long-entrenched tradition in South Africa, dating back in the mid-1990s but it is still not mandated by legislation.[282] Thus, Kenya should borrow from South Africa, the importance of sustaining good environmental management practices, even where the same in not mandated by legislation.

[276] Schenck et al (n262) 98.
[277] Department of Environmental Affairs, *Environmental impact assessment* 19
[278] M Marais, F Retief, L Sandham & C Ciliers, 'Environmental management frameworks: results and inferences on report quality performance in South Africa' (2015) 97 South African Geographical Journal 83-99.
[279] Patel (n247), 106;
[280] See Kotze, *The judiciary, the environmental right* 298-311; the author analyses various cases litigated over issuance of EIA authorizations for projects that were adjudged to be of dubious sustainability
[281] Christina Rebelo & Jose Guerreriro, 'Comparative evaluation of the EIA systems in Kenya, Tanzania, Mozambique, South Africa and the European Union' (2017) 8 Journal of Environmental Protection, 603-636
[282] Ibid

Sectoral coordination imperative is discernible from the design of NEMA, 1998 as a framework environmental law. Even though NEMA,1998 lacks a supremacy clause vis-a-vis sectoral law, its central role in coordinating other frameworks is evident in the fact that sectoral laws on waste management, air quality and integrated coastal management were subsequently promulgated under the NEMA umbrella.[283] Similarly, NEMA,1998 is cross-referenced in sectoral statutes and this ensures binding nature of the framework law in sectoral regimes.[284] Therefore, when sectoral agencies implement their respective laws, they are under obligation to observe NEMA,1998 referenced therein. This lesson is important for effective implementation of EMCA imperatives through operations of sectoral laws.

6.3.4.3. Intergovernmental coordination

The decentralized structure of government and conferment of legislative competencies at all levels of solid waste engenders environmental fragmentation in South Africa. However, the constitution and ordinary statutes clearly define the regulatory responsibilities of the respective levels of government and this may serve to forestall the problem of fragmentation. The national government has a regulatory role in respect to hazardous and transboundary wastes as well as oversight of provincial and local governments. Provincial governments have regulatory and supervisory responsibilities over municipalities. On the other hand, municipalities enjoy regulatory and operational responsibilities over waste management at the local level. With this level of clarity, vertical overlaps of competencies are more likely to reduce and where they arise, can be resolved effectively. This lesson is appropriate to Kenya, which is still grappling with role clarification in the division of responsibilities between National and County governments over waste regulation.

The constitutional and statutory framework undergirds autonomy of municipalities and this is essential in the discharge of their respective service delivery mandates. In so doing, the

[283] Department of Environmental Affairs, *Environmental impact assessment* 99
[284] Du Plessis & du Plessis (n223) 442-447 provides an extensive discussion on this matter.

municipalities have the option of directly providing such services or establishing entities special purpose vehicles (SPV) to render the same on their behalf. In relation to solid waste management, municipalities occupy the position of both regulator and service provider, where SPVs are established for this purpose. The propriety of this arrangement was challenged in the case of *Dumpit Waste Removal Ltd v City of Johannesburg and another*,[285] in which the aggrieved company accused the municipality and its SPV (Piktup Ltd) for abusing their dominance in the waste market by blocking residents from dealing with the company. In response, the Municipality insisted that it had a constitutional monopoly to provide waste management services, which was not subject to competition laws. The Tribunal agreed with the Municipality, noting that the Constitution and Municipal Systems Act clearly reserved provision of waste delivery services to municipalities and therefore it lacked jurisdiction in this matter. However, the Tribunal observed that a constitutional challenge on fairness of the arrangement could perhaps be sustained but only at the right forum.

To address the challenge of fusion of regulatory and operational responsibilities, Counties in Kenya should consider establishing SPVs but allow for competition with private sector actors. Such competition will ensure cost-effective provisions of services to residents. However, the SPVs should have an obligation to provide services at subsidized rates to poor and vulnerable neighborhoods where incomes may not allow residents to pay for the services at market rates. Because municipalities are bestowed with considerable autonomy and competencies in promulgation of bylaws, most went about discharging this function in a rather haphazard and uncoordinated manner.[286] This resulted in more fragmentation of the regulatory framework, exhibiting discrepancies in regulation and enforcement of MSWM responsibilities among and between different municipalities. To address this situation, the national government as promulgated national standards on waste

[285] (2004) ZACT 1
[286] Michael Fakoya, Institutional challenges to municipal waste management service delivery in South Africa' (2014) 45 Journal of Human Ecology 121

classification,[287] domestic waste collection,[288] storage[289] and disposal in landfills that integrate environmental protection considerations.[290] Kenya is currently in the process of establishing municipal and urban area boards as the third tier of decentralization below the counties under UACA. A lesson from the South African regime is the need for national government to develop and adopt national standards on MSWM to guide the new municipalities and area boards as they formulate regulations on MSWM at their respective localities to prevent fragmentation.

The cooperative environmental governance principles laid out in the Constitution and NEMA (1998) also serve to address challenges of fragmentation, with implication for solid waste management. With the enactment of the Intergovernmental Relations Framework Act and establishment of intergovernmental coordination mechanisms within it, the Committee on Environmental Coordination (CoEC) was abolished to avoid the risk of duplication. One major weakness that undermined the efficacy of CoEC was lack of buy-in by senior governmental officials at all levels, which was reflected by rather low-care representation witnessed in meetings and poor follow-up of decisions.[291] In 2009, the Department of Environmental Affairs established an intergovernmental forum (under IGRFA) under the leadership of the Minister and brought together members of executive councils (MECs) of respective provincial governments and representatives of South

[287] Waste Classification and Management Regulations, Gazette Notice R 634 in Government Gazette 36784 of 23 August 2013; requires waste handlers to classify and label hazardous and medical wastes, obtain waste management licenses and assessment prior to disposal in landfills.
[288] National Domestic Waste Collections Standards, Gazette Notice 21 in Government Gazette 33935 of 21 January 2011; These provide for standards for segregation, collection (frequency, equipment, facilities), health and safety and public awareness related to MSWM.
[289] National Norms and Standards for the Storage of Waste, Gazette Notice 926 in Government Gazette 37088 of 29 November 2013; these provide uniform standards for registration, construction and operation of storage facilities with due regard to environmental protection.
[290] National Norms and Standards for Disposal of Waste to Landfill, Gazette Notice R 636 in Government Gazette 36784 of 23 August 2013; these provide for standard for construction, waste acceptance criteria and disposal restriction for various categories of landfills.
[291] Kirsten Day & Alexander Paterson, 'Integrated environmental management: where is South Africa headed given recent developments relating to NEMA and the Infrastructure Development Act' (2015) *MPhil Dissertation, University of Cape Town*, 34 <https://open.uct.ac.za/bitstream/item/16227/thesis_law_2015_day_kirsten_dea.pdf?sequence=1> (accessed 04 October 2020).

African Local Government Association (SALGA).[292] The IGFRA framework allows for non-state actor participation in implementation of intergovernmental pacts, something that was lacking in the CEG regime.[293] However, despite the existence of the IGFRA forum, the South African government has through subsequent legislations continued to establish similar decision-making forums to address related concerns without reference to existing cooperative environmental governance instruments, thus creating further risk for duplication and redundancy.[294]

The environmental planning framework also provides opportunity for harmonization and coordination between the various levels of government. Integrated development planning, especially at the municipal level provides the primary opportunity for mainstreaming environmental issues at the local level, but recent evidence suggests that municipalities have not adequately integrated sustainability and environment issues in their respective plans.[295] This is attributed to lack of prioritization of environmental goals, failure to establish environmental departments or appoint environmental managers and weak funding for environmental mandates.[296] Therefore, weak integration in development planning frameworks has an implication for waste planning, especially in relation to allocation of resources for service delivery and human resources.

The waste planning framework in particular, allows waste authorities at all levels to consult horizontally with stakeholders but also enable vertical alignment between respective levels of planning. However, not all municipalities have development integrated waste

[292] Department of Environmental Affairs, *2nd South Africa environment outlook: a report on the state of the environment* (2016) at 49, <https://www.environment.gov.za/sites/default/files/reports/environmentoutlook_chapter4.pdf> accessed 4 October 2020
[293] Du Plessis & Albert's (n254) 451
[294] Ibid, 465-6; the authors note that under the Infrastructure Development Act (No.23 of 2014) creates an intergovernmental council to make decisions on sustainable infrastructure projects
[295] Sheunesu Ruwanza & Charlie Shackleton 'Incorporation of environmental issues in South Africa's municipal integrated development plans' (2016) 23 International Journal of Sustainable Development & World Ecology, 28-39; the findings are based on a survey of integrated development plans drawn from 35 different municipalities.
[296] Ibid 36.

management plan, and this weakens the overall framework due to evident gaps.[297] Waste planning processes are now enriched by availability of reliable data courtesy of South Africa Waste Information System (SAWIS) which came into being after adoption of National Waste Information Regulations (2012).

Through SAWIS, waste generators, recyclers, importers, exporters and disposers submit information, which goes into preparation of South Africa State of Waste Report. However, SAWIS data is still not being used diligently or comprehensively to waste managers and this may undermine the quality of planning.[298]It is also important to note that two provincial governments (Gauteng and Western Cape) have adopted their own waste information systems for greater efficacy at the sub-national level.[299]

Adoption of a bottom-up integrated waste planning framework is a lesson which Kenya should learn from South Africa. Due to the problem of inadequate access to reliable waste data, Kenya should consider adopting a national as well as sub-national waste information management systems similar to South Africa's. This will not only fulfil the constitutional requirement for guarantees access to such information but may also serve to enrich the waste planning and reporting processes. This will also foster accountability as it will enable stakeholders to gauge performance of waste authorities and actors and demand for action where performance is low.

6.4. Chapter conclusion

In this chapter, a comparative study of environmental and MSWM regulatory frameworks and implementation thereof was undertaken, focusing on South Africa and Sweden. The study has revealed that the choice of the two countries at different levels of achieving

[297] Nahman & Godfrey (n246) 525
[298] Department of Environmental Affairs, *State of waste report 2018* 61; the report indicates that out of the 1,396 registered waste management sites, only 535 provided reports to SAWIS in 2018 (38% compliance rate).
[299] Ibid

environmental integration and sustainability in MSWM has provided good contrasts and comparisons from which Kenya could learn.

Respective MSWM legal frameworks South Africa and Sweden demonstrate commendable level of anchorage of sustainability and environmental protection considerations in MSWM, though adoption of sustainable development principle and right to clean and healthy environment provisions. Sustainability in MSWM framework is further reinforced by elaborate provisions on waste hierarchy approach. There is strong political will for environmental integration generally, albeit significant instances of policy incoherencies that undermine consistency of commitment. Stakeholder engagement is a perhaps the only key weakness in both countries, which potentially undermines effective environmental integration in MSWM. A key lesson for Kenya is the need to adopt elaborate norms that uphold waste hierarchy approach with adequate stakeholder engagement.

The analysis reveals existence of legally-mandated sectoral coordination mechanisms and instruments which could not only facilitate horizontal environmental integration generally but also in the MSWM sector. Key lesson Kenya should draw is the cross-referencing of EMCA as the framework law in all sectoral legislations with a focus on MSWM to avoid instances of sectoral incoherencies' and fragmentation. Whereas Sweden has adopted variety of waste management instruments that coordinate variety of actors through voluntary and involuntary approaches, the practice in South Africa is still emergent and therefore Kenya should learn from both jurisdictions as current efforts at national and county levels to review the MSWM framework continue.

Both Sweden and South Africa have established mechanisms that facilitate intergovernmental coordination on environment management in a collaborative way with implications for MSWM. There is clear division of regulatory responsibilities on MSWM and Municipality autonomy is well- defined in both jurisdictions. Kenya therefore should borrow leaf on strengthening the legally- mandated intergovernmental forums and borrow

from the two countries, coordination instruments such as integrated development and waste planning respectively.

Overall, both countries provide useful lessons which Kenya could adopt to accelerate progress towards environmental integration in MSWM. However, blanket transposition of lessons may not be practical and hence the need to interrogate the political, economic and sociocultural factors in each country which explain the success or failures registered in operationalization of environmental integration. In the chapter, the overall conclusions and recommendations of the study will be presented.

CHAPTER SEVEN:

CONCLUSIONS AND RECOMMENDATIONS

7.1 Introduction

This study was designed to assess the prospects and gaps in entrenchment of the concept of environmental integration in Kenya's municipal solid waste management (MSWM) framework. The choice of MSWM sector was informed by the dearth of research on this area and the growing recognition that the waste problem can be addressed better by ensuring incorporation of environmental considerations in the development process. The study has examined the applicable legal framework and assessed the extent to which it embodies environmental integration. A field study was conducted to assess how environmental integration is bearing out in the actual implementation of MSWM at both national and county levels. To enrich the findings, a comparative study was conducted focusing on the jurisdictions of South Africa and Sweden with applicable lessons identified and further analysed.

This chapter discusses the broad conclusions that arise from the study. It also provides appropriate recommendations for ensuring optimal arrangements for enhanced entrenchment of environmental integration in MSWM and the environmental management sector generally.

7.2 Conclusions

7.2.1 Normative anchorage of MSWM for environmental integration

This study sought to analyse the extent which the legal framework on MSWM espouses environmental integration. The analysis of the MSWM legal framework revealed strong foundation for entrenchment of environmental integration through provisions on environmental protection rights and sustainability obligations. The Constitution frames

sustainable development as a binding principle of governance thereby providing basis for rationalizing laws, policies and official practices as against the imperatives of environmental integration. Therefore public authorities are under obligation to consider sustainability in decisions and actions taken in MSWM. Articulation of the norm of sustainable development in the Constitution as a principle to guide environmental enforcement under EMCA reinforces this view.

The right to a clean and healthy environment and an enforceable Bill of Rights provide a profound normative basis for proscribing socioeconomic activities (especially those related to MSWM) which may otherwise endanger the environment. Indeed, judicial interpretation of the right to clean and healthy environment in *ACRAG* and *Martin Osano* cases held that exposure to poor and unsanitary management of municipal wastes constitutes a violation of this right. The corelative state obligations for environmental protection under Article 69 of the Constitution create basis for ensuring accountability for pollution and environmental degradation that may arise in MSWM processes. These obligations are enforceable in Court under Article 70 of the Constitution and the rather liberal locus standi requirements make it possible for literary anyone to approach in the Court in the event of breach.

Under international legal framework, there are clear obligations for adoption of the waste hierarchy, environmentally- safe disposal of wastes and investment in appropriate technology. These obligations are to be achieved through domestic legal frameworks. EMCA and the subsidiary Waste Regulations of 2006 provide the preeminent national waste legislation in Kenya. The EMCA framework does not provide a holistic conception of the waste hierarchy and instead focuses on clean production technology, which is preoccupied with waste reduction than other components of the hierarchy. The EMCA framework is also less focused on socio-economic dimensions of waste management such as recycling and recovery which have enabled developed countries make a transition to zero waste circular economy.

In contrast however, the Nairobi City County waste law has significantly embraced the waste hierarchy and provided for legal obligations to the county authorities and waste actors in this regard. However, implementation of these obligations is contingent on adoption of elaborate regulations which will provide clearer normative guidance on this matter. Without such a normative framework in other Counties, the County-level administrative and judicial enforcement of sustainable solutions to solid waste management remains difficult as highlighted in the *ACRAG* and *Martin Osano* cases. It is noteworthy that the draft Sustainable Waste Management Bill (2019) adopted zero waste hierarchy and circular economy as guiding principles and goes on to elaborate the same in the obligations of various waste actors. If adopted, this law will adequately entrench the waste hierarchy and create a firm basis for environmental integration in the MSWM framework.

This study revealed that political will for environmental integration in MSWM is viewed as low at both level of government. Without executive support at the highest levels, economic considerations overshadow environmental protection concerns leading to fragmentation of environmental management efforts with negative consequences for sustainability. This manifests in inordinate investment of budgetary resources on waste collection and disposal services rather than incentivizing adoption of technologies for recycling and recovery, which could achieve better sustainability in waste management. However, the prevailing legal framework provides institutional mechanisms that potentially could harness political will for environmental integration such as collective ministerial responsibility (at both national and county levels) and oversight committees of legislatures at both levels.

Environmental rule of law deficits that currently manifest in prevalent corruption and impunity in MSWM undermine effective consideration of environmental issues in MSWM thereby undermining environmental integration. The highlighted deficits provide perverse incentives to waste authorities to make decisions that are incoherent with environmental protection imperatives and realization of sustainable waste management. The ongoing

heightened attention on corruption provides prospects for rolling back the highlighted deficits.

Strong legal backing for public participation and stakeholder engagement is evident in MSWM framework. Recognition of public participation as a principle of governance in the Constitution and principle of environmental governance under EMCA empowers non-state actors and fosters an atmosphere of environmental accountability. As a corollary, the norm of participation places obligations on duty bearers to solicit, receive and consider views from varied sectors in decision-making, which is necessary for successful environmental integration. However, findings from the study indicate that NEMA and County authorities have not effectively fostered public participation with study respondents rating these institutions rather poorly in this regard. A combination of inadequate political will, limited capacity and fragmented mechanisms hamper the effective facilitation of public participation. This undermines effective environmental integration by exclusion of important sectoral perspectives in waste decision-making processes.

External funding of environmental reforms to the normative framework engenders a risk of fragmentation. Even though external funding is viewed as integral to international cooperation for global environmental governance, foreign donors deploy external funding as a tool for realization of their respective interests. In the ongoing waste reforms, this study has encountered such instances where external funding has resulted in adoption of waste laws that appear to support waste marketization and less environmental protection considerations. Thus, more investment by government in environmental reforms is necessary and greater vigilance and more advocacy from civil society is required against perversion and therefore fragmentation of environmental reforms by foreign funding.

The analysis of the framework revealed considerable instances of normative and policy incoherencies arising from conflicts and overlaps in laws at both national and county levels. These incoherencies provoke institutional fragmentation, which is inimical to

entrenchment of environmental integration. From Witgens' theory of coherence of the law, the MSMW framework evinces the first level of incoherence, wherein norms at the same normative plane exhibit dissonance. The entrenchment of the principle of sustainability and the right to clean and healthy environment provides normative principles to cure the incoherencies. In this regard, the judiciary plays a critical role in resolution of the aforesaid incoherencies, through its judicial interpretation mandate.

The Constitution has established a specialized environmental court- the Environment and Land Court (ELC)- with exclusive jurisdiction on environmental disputes and appellate jurisdiction in respect to similar disputes emanating from subordinate courts and administrative tribunals. Thus the ELC now plays an important role in balancing environmental concerns with other socio-economic interests at par with other coordinate levels of judiciary. The Court also serves as bulwark to fragmentation of jurisprudence emanating from subordinate levels of the judiciary. However, the absence of a specialized appellate environmental court raises the prospects of fragmentation of jurisprudence at that level.

By and large, the legal framework significantly embraces environmental integration generally, even though there is need to entrench better norms of waste hierarchy and circular economy as foundation for sustainable management of wastes. Nevertheless, implementation of the waste framework engenders risks to fragmentation, pointing to need for political will and emphasis on stakeholder engagement to ensure prioritization of environmental protection and sustainability considerations in the waste governance processes.

7.2.2 Optimizing sectoral and intergovernmental coordination

The study sought to analyze the extent of implementation of horizontal and vertical environmental integration in Kenya's MSWM regulatory framework. The study concludes

that sectoral coordination and therefore horizontal environmental integration has not been fully optimized due to various legal and organizational obstacles impeding aggregation and consideration of sustainability perspectives in MSWM regulatory processes.

Even though NEMA is regarded as the most important institutional mechanism for facilitating sectoral coordination, the Authority is beset by declining funding base, shortage of human resources and political interference in its mandate. Recent amendments to the EMCA have abolished sectoral coordination mechanisms which NEMA leveraged on previously to coordinate the work of lead agencies and other stakeholders. For this reason, the regulatory capacity of the Authority has declined and therefore its ability to convene sectoral lead agencies with MSWM mandates is compromised. There is need therefore to restore the agency primacy of NEMA through improving its regulatory capacity and resolving the apparent asymmetrical relationship with the national government ministries.

At the county level, whereas the devolved system of government has opened- up possibilities for sectoral coordination on MSWM through county inter-departmental cooperation and the workings of the County Environmental Committees (CECs), such coordination is not optimized. County governments are yet to fully operationalize CECs and where they exist, operations of these committees are not adequately financed. There is need for the national government and the Council of Governor to prioritize strengthening of capacities of county governments generally and the CECs specially to foster optimal levels of coordination on MSWM matters.

Sectoral coordination at both national and county levels is undermined by an entrenched culture of weak cooperation between regulatory agencies and government departments. This culture is sustained by longstanding tradition in government of working in silos which reinforces sectoral compartmentalization. The fact that the performance contracting system in public sector does not incentivize collaborative initiatives between NEMA and other regulatory bodies serves to weaken inter-agency coordination.

Sectoral coordination is further constrained by limited repertoire of sectoral coordination available for MSWM authorities, leading to heavy reliance on environmental impacts assessment (EIA) and the national and county environmental action planning processes. Whereas the EIA is not only designed to integrate environmental concerns in development approval, it brings together NEMA, lead agencies and non-state actors in the decision-making process. However, concerns over the quality of stakeholder engagement and the soundness of approvals made under EIA authorizations undermines the efficacy of the tool. The national and county environmental planning processes are beset by incoherencies that undermine integration of environmental management and MSWM strategies in development planning and financing frameworks. There are prospects for expanding the repertoire of sectoral coordination instruments to include strategic environmental assessments and regulatory impact assessments as well. These additional tools are guided by comprehensive and rational assessment procedures while infusing stakeholder consultations in a way that facilitates aggregation and consideration of varied sectoral perspectives in the regulatory process.

Despite the prevalent robust public participation frameworks, there is limited appreciation of co-regulation in MSWM undermines effective stakeholder engagement and coordination. For this reason, the MSWM framework does not prioritize participation of private actors, community groups and informal waste actors in waste management decision-making processes. Thus, opportunity is lost for holistic aggregation of perspectives of the non-state actors in policy formulation and implementation, which undermines horizontal environmental integration. Yet, the study has highlighted existence of rather robust self-regulation mechanisms established by waste operators in Kenya. The extent to which waste authorities at both national and county levels forge links with these mechanisms and tap on their expertise to enrich the policy and decision-making processes presents a prospect.

Notwithstanding the foregoing, there presently exists various institutional mechanisms for facilitating such stakeholder engagement and coordination in MSWM, to which NEMA is represented. These include the Physical Liaison Committees (under Physical Planning & Land Use Law), National Council for Occupational Safety (Under OSHA), County Environmental Committee (EMCA), Climate Change Council (under Climate Change Act) among others. However, the study found that these structures tend to operate in isolation of each other hence presenting a risk of fragmentation of stakeholder coordination and engagement. Effective sectoral coordination through these mechanisms is contingent on NEMA leveraging on its presence in these structures to foster coordination and synergy hence effective environmental integration.

Despite clear constitutional and other statutory imperatives for intergovernmental coordination, this has not been pursued effectively within the context of vertical environmental management generally and in MSWM specifically. County government's capacity to discharge their MSWM functions is undermined by limited financing, staffing and inadequate political will for prioritization of MSWM issues, which in turn undermines effective intergovernmental coordination for sustainable waste management at the local level.

The ability of county governments to engage with national government over MSWM issues is further undermined by unclear division of regulatory responsibilities, inadequate structure of intergovernmental coordination and a culture of fractious intergovernmental relations. The highlighted challenges in addition undermine the autonomy of County governments, a necessary condition for engaging in effective intergovernmental coordination to facilitate VEI. The Sustainable Waste Management Bill, 2019 holds prospects for improving intergovernmental coordination through establishment of the National Waste Council as a broad-based intergovernmental structure. The need to broaden further the composition of the Council to include informal waste sector interests is necessary.

Delays in decentralizing MSWM decision-making and service delivery below the county level through establishment of municipal and urban area boards have constrained efforts to entrench vertical environmental integration at the sub-County levels. The risk of overlaps in mandates between the pre-existing sub-County administrative structures and the new municipal and urban area boards may exacerbate policy incoherencies thereby provoking fragmentation. There is need for clear policy guidance in the rolling-out of these boards in a way that clarity of roles and mainstreaming of environment issues in MSMW mandate.

Incoherencies entailing the sequencing of EIA and change of user approvals undermines effective consideration of environmental issues in land use decision-making which have adverse implications for MSWM. Counties are yet to adopt specific waste planning procedures that allow for bottom-up integration of environmental concerns and proper alignment with national waste planning frameworks. Despite enabling legal provisions under the Public Procurement and Disposals Act and emergent recycling opportunities, there is very limited uptake of waste value chain products through public procurement processes which otherwise would promote marketization of wastes at both levels of government. The need to improve on the application of variety of vertical environmental integration tools is evident.

The study has therefore brought out policy incoherencies in the implementation of the MSWM framework that arise from failure to resolve the normative incoherencies brought out the analysis of the framework. Failure to implement the norms of sustainability and environmental protection in the pursuit of sectoral or intergovernmental coordination perpetuates the highlighted incoherencies. Thus, the study validates Wintgen's theory of coherence of the law as providing explanation for persistent incoherencies at both vertical and horizontal levels of environmental integration.

7.2.3 Summary of key lessons from South Africa and Sweden

In all the three countries studies, the constitutional and environmental framework laws provide normative foundation for principle of sustainability and environmental protection. Judicial interpretation of the right to clean and healthy environment in all the three jurisdiction deems unsanitary waste management actions as violations of the said right. Hence, it is judicially possible to proscribe poor waste management actions which threaten the environment and human health.

Sweden has made a complete transition from 'waste as a problem' to 'waste as a resource' and is firmly on track to achieving a circular economy with zero wastes. On the other hand, South Africa is yet to transition from waste as a problem paradigm as demonstrated by high disposal rates and relatively low recycling rates. Kenya appears to be faring worse than South Africa, even though it has a less complex and smaller economy. One of the ingredients to Sweden's transition is the enabling legislative framework, which fully integrated norms of waste hierarchy and provided tools and incentives for waste valorization and beneficiation. Like Sweden, South Africa's legal framework also incorporates norms of waste hierarchy but evinces limited incentives for exploiting waste as a resources and this may explain why the transition to the new MSWM paradigm is incomplete. Kenya therefore has opportunity to entrench the waste hierarchy norms as proposed in the draft Sustainable Waste Management Bill (2019) and draft waste policy.

Like Kenya, Sweden and South Africa enacted framework laws in the 1990s with imperatives for harmonization of sectoral laws for effective coordination. In all instances, the framework laws have provisions governing on MSWM. Unlike Kenya's EMCA, Sweden's Environmental Code of 1999 and South Africa's National Environmental Management Act of 1998 lack supremacy clause imposing a mandatory requirement for alignment of sectoral laws to the framework law. Sweden and South Africa introduced national legislations on waste management in the 2000s in what may appear as further sectoralization of environmental law with prospects for fragmentation. However, in both

cases, the new waste laws are properly cross-referenced with the framework law and this addresses the prospect of asynchrony and fragmentation. Such cross-referencing is also evident in the drafting of other sectoral environmental laws, and perhaps this takes away the need for the aforesaid supremacy clause in the framework laws of the two countries. Should Kenya adopt the Sustainable Waste Management Bill (2019), there is need to ensure such cross-referencing is employed to promote synchrony.

In both Sweden and South Africa, there is strong evidence of political will for promotion of environmental protection and sustainability as vital ingredients for entrenching environmental integration. Strong political party platforms have emerged in both countries and harnessed political will effectively towards environmental change. Besides, Sweden has specialized system of environmental courts with expertise in environmental issues at both high court and appellate levels. This system has been credited for efficiency and consistency in balancing of environmental interest in the development process.

Unlike in Kenya where NEMA enjoys an elevated legal status vis-à-vis other sectoral agencies, Swedish EPA tends to be regarded as one among other key environmental regulators. This notwithstanding, SEPA able to convene other sectoral regulators and agencies and to coordinate their work. This is attributed to the deeply entrenched culture of consensus and consultation which characterizes Sweden's regulatory setting, a lesson relevant to NEMA in light encroachment of its mandate in Kenya. In South Africa on the other hand, sectoral coordination role is undertaken by a Minister and this has been blamed for political interference in regulatory decision-making leading to fragmented outcomes. This is a lesson Kenya should perhaps strive to avoid.

Both Sweden and South Africa have developed one-stop-shop integrated environmental assessment authorization processes, which ensure adequate consultations among all sectors (including non-environmental sectors) for projects bearing significant impact on the environment. This is a lesson which is applicable to Kenya in light of its fragmented

authorization processes. Both Sweden and South African have in place clear legal provisions that create unambiguous distinction in the roles and jurisdictions of various levels of government on their obligations relating to MSWM regulation. This contrasts with the Kenyan situation where despite entrenchment of devolution in the 2010 Constitution, uncertainty persists in the allocation of regulatory authority over MSWM between national and county governments. Municipalities enjoy autonomy in both countries and have established special purpose vehicles to carryout waste management services, which may be relevant to the Kenyan context.

Even though Sweden is a unitary State, there exist inter-governmental bodies (e.g. Supervisory and Regulatory Council- S&RC) to coordinate regulatory responsibilities of the three administrative levels of government. In South Africa, the intergovernmental forum on environment (which replaced the Committee for Environmental Coordination - CoEC) plays a similar role and provincial governments and municipalities are represented therein. To strengthen intergovernmental coordination and mediate on tensions between two levels of government, Kenya should contemplate existence of such a structure for waste management specifically and environmental management generally.

In both Sweden and South Africa, bottom-up planning frameworks (in waste management and environmental governance generally) make it possible for harmonization of strategies and mandates. The integration of environmental considerations in planning frameworks for non-environmental sectors also contributes to better harmonization and coordination. Swedish waste planning framework however embraces a results-based management approach, with quantifiable waste reduction, recycling and disposal targets. In operationalizing the waste planning framework in Kenya, it might be necessary to pursue the bottom-up planning approach to achieve alignment and synchrony as well as a results-based approach with target-setting for MSWM performance.

In conclusion, both Sweden and South Africa have offered valuable lessons that can be taken on board towards strengthening of Kenya's normative framework for entrenching waste hierarchy and transition to waste as resource paradigm. There are innovative institutional designs, mechanisms and cultural traditions which Kenya could borrow from these two jurisdictions. However, owing to differences in socio-political culture and economic development between Kenya and these two jurisdictions, there is need to adopt these lessons with necessary precautions.

7.2.4 Contribution to knowledge

This thesis proffers an alternative conceptualization of environmental integration as "entailing incorporation of environmental considerations into the development process through harmonized policy and legal frameworks". This is informed by the theory of coherence of law applied in the present study, which considers both internal and external rationality criteria as integral to assessment of coherence of a legal system. This conceptualization also ensures better appreciation of the law and its role in environmental integration in terms of providing a normative framework comprising rights, obligations and coherent institutional mechanisms for pursuing balancing of environmental and socioeconomic concerns in the development process.

Secondly this study proposes a conceptual model for environmental integration in MSWM as a possible pathway to achieving sustainability which may also be applicable to other sectors of environmental management. This model has four elements. The first is a normative framework bearing norms of sustainability (waste hierarchy and circular economy), environmental protection as well as political will and appropriate administrative traditions. Second is institutional arrangements facilitating sectoral coordination and consideration of environmental concerns in the development process at the horizontal plane. Sectors to be coordinated include the following dichotomies; state/non-state actors; environmental/socio-economic; formal/informal. Third is institutional arrangements facilitating inter-governmental coordination (devolve governance arrangements) and

consideration of environmental concerns in the development process at the vertical plane. Fourth are normative factors that facilitate effective implementation of the normative framework and institutional arrangements to secure effective environmental integration. These factors include political will, administrative culture which fosters collaboration and coordination and the promotion of environmental rule of law. For the second and third elements, institutional arrangements comprise of structures and instruments (tools) for realizing coordination. Implementation of the four elements promote environmental integration, thereby making a contribution towards realization to sustainability.

This model can be summarized in the diagram below:

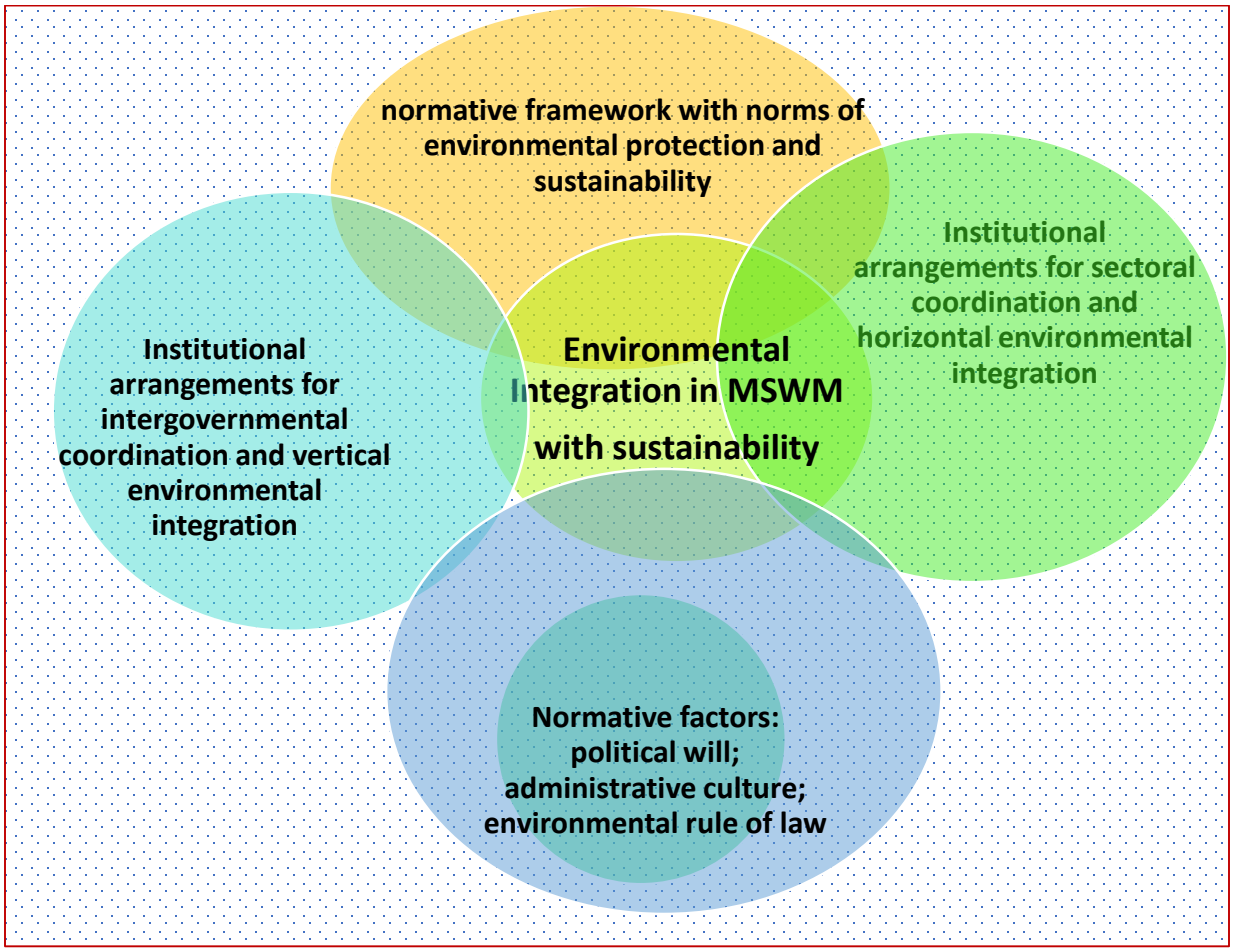

Table 21: Proposed conceptual model of environmental integration

Thirdly, this study has identified new factors that affect environmental integration hitherto not studied or understudied in literature of this kind. These include external role of judiciary, environmental rule of law deficits and influence of external funding. Hopefully,

this expands our understanding of how and why fragmentation persists in environmental management.

7.3 Recommendations

This section identifies key issues arising from the study conclusions and recommends particular policy, legislative and administrative actions and interventions targeting key actors in the MSWM framework. The recommendations also include optimal arrangements for promoting environmental integration.

7.3.1 Improving the normative anchorage for environmental integration in MSWM

7.3.1.1 Entrenchment of the waste hierarchy

Review of the national MSWM framework is necessary to ensure entrenchment of norms supportive of the waste hierarchy. In this regard, the Ministry should accelerate the process of finalization of the draft Sustainable Waste Management Bill (2019) and policy. The Ministry should ensure adequate cross-referencing of the draft law with EMCA to ensure coherence and synchrony.

Counties should revise their respective regulatory frameworks for MSWM where necessary adopt legislations and policies that embrace norms of environmental protection and sustainability, particularly the waste hierarchy. The revised legislations and policies should bear clear obligations and incentive structures for implementation of waste hierarchy at the county level. This may entail adoption of new MSWM laws to replace the outdated Bylaws inherited from the defunct local authorities. The model county solid waste management law and policy developed jointly by the Council and Governors and the Kenya Law Reform Commission provides a good working template which Counties should contextualize to suit their specific regulatory circumstances.

The Kenya Bureau of Standards (KEBS) has a role to play in developing and enforcing standards for product development and importation of products that takes into account waste prevention and minimization. For this reason, KEBS should be represented in the proposed National Waste Council and any other sectoral or intergovernmental coordination structure established for this purpose.

7.3.1.2 Strengthening normative and policy coherence in MSMW framework

The Ministry of Environment in conjunction with the Kenya Law Reform Commission should also accelerate the process of review of discordant national laws that currently exhibit varying degrees of normative incoherencies, which adversely impact on MSWM. These include the Public Health Act, Physical and Land Use Planning Act, OSHA and Building Code. Sections of these laws pertinent to MSWM should be cross-referenced with EMCA and the Sustainable Waste Management Bill (2019) once adopted to ensure synchrony.

To prevent fragmentation of policy and legislation at the onset, legislatures at both levels should strengthen their oversight of the environmental sector through their respective Departmental committees responsible for environment and natural resources. The Departmental committee on environment should endeavor to comment on any matter before another sectoral committee, if the subject matter has significant impact on the environment. This can be supplemented by establishment of informal parliamentary or County assembly caucuses on environment, to champion environmental interests in all departmental committees and other decision-making structures of respective Houses.

Like is the case with the National parliament, County Assemblies should entrench the use of regulatory impact assessments (RIA) as tools for promoting legislative coherence and harmonization at the county. The RIA will also promote consideration of environmental concerns in legislative process, including for laws that target non-environmental realms.

7.3.1.3 Promotion of political will for environmental integration

Environmental interest groups should promote awareness and actively lobby political parties to incorporate environmental integration considerations, especially on MSWM in their respective party manifestoes. This will ensure these issues assume a political profile during elections. Further, interest groups should also advocate for the incorporation these considerations in the national and county development planning processes. NEMA should empower the relevant departmental committees of the national parliament and county assemblies to interrogate development plans from an environmental integration perspective, while ensuring MSWM concerns are adequately addressed. Environmental interest groups should also undertake social audit exercises to ascertain the extent to which ongoing MSWM projects are promoting environmental integration and sustainability. The reports from these exercises should be channelled to policymakers in the respective legislations and executives at both national and county level for remedial actions.

7.3.1.4 Strengthening role of judiciary in upholding environmental integration

The judiciary plays an important role in upholding the right to clean and healthy environment and sustainability through interpretation of laws and review of administrative actions. To prevent fragmentation of jurisprudence emanating from multiplicity of tribunals with jurisdiction on environmental disputes, ongoing reforms should promote convergence of access to justice for administrative disputes on MSWM to the National Environmental Tribunal under EMCA.

The Judiciary should consider establishing an environmental division of the Court of Appeal to handle appeals from the ELC. In the alternative the judiciary should promote recruitment of appellate judges with expert training in environmental law and empanel them in benches hearing appeals from the ELC. Alternative, the law should be amended to allow for use of environmental experts assessors in such appeals to infuse expertise in decision-making.

The Judiciary Training Institute could also be supported and encouraged to mount routine specialized environmental law courses for tribunal members, magistrates and judges to support continuous learning and offset fragmentation risks emanating from knowledge asymmetries. Bringing all tribunals under the ambit of the Judiciary, courtesy of Constitution of Kenya 2010 makes it possible for the JTI to develop programmes that would benefit members running tribunals in the environmental sector.

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7.3.2 Improving normative factors for enablement of environmental integration in MSWM

7.3.2.1 Strengthening environmental rule of law in MSWM

This study has identified corruption and impunity as key risks which foment fragmentation and policy incoherence in MSWM. It is therefore important that waste management strategies at both national and county levels should take into account measures for addressing environmental rule of law deficits which perpetuate corruption and impunity. Such strategies should prioritize adoption of transparency and openness in contracting of waste management services. Borrowing from South Africa and Sweden, County governments should adopt solid waste information management systems and make this information available to the public. The Ethics and Anti- Corruption Commission (EACC) should establish a division that specializes on corruption and impunity in the environmental sector, given the significance of such measures for sustainability.

7.3.2.2 Enhancing administrative culture that fosters inter-agency cooperation

The Public Service Commission should develop policy guidelines on performance contracting that provide adequate incentives and disincentives necessary to promote inter-agency cooperation among regulatory bodies. Agencies that exhibit high levels of networking and collaboration should be rewards and those demonstrating proclivity for working in silos should be penalized.

Environmental authorization processes on MSWM should be reviewed to allow for integrated decision-making by all relevant authorities. NEMA should consider convening approvers to scheduled meetings to facilitate integrated authorizations on MSWM. This is likely to foster cooperation as opposed to the existing round- robin authorization procedures where approvers examine development applications without reference to each other.

7.3.2.3 Promote co-regulation and public participation

Private sector actors should lobby for recognition of co-regulation as the appropriate regulatory strategy in Kenya in MSWM. To achieve this, the existing self-regulatory mechanisms should enhance their capacity through enlisting all actors and keeping their respective associations vibrant and engaged in policymaking processes, notwithstanding lack of formal recognition. Where necessary, these associations should not hesitate to engage in strategic public interest litigation to enforce their collective interests and involvement in the regulatory process.

Like private sector actors, residents associations should stake a claim to their involvement in decision-making in the regulatory process. Under the Nairobi City County neighbourhoods law, residents associations (RAs) should seek formal recognition and enter into service delivery agreements with the County government. In other target counties, RAs

should push for adoption of frameworks similar the Nairobi City neighbourhood law to realize similar regulatory benefits. As part of promoting self-regulation, RAs should educate their members on their rights and responsibilities relating to MSWM. Civil society organizations should advocate for the enactment of the Sustainable Waste Management Bill of 2019 and promote the involvement of informal waste actors and community groups in formal policy processes.

The Nairobi City County should operationalize its Neighbourhood and Community Association law and provide organized groups and informal actors a framework to achieve recognition of their role in MSWM. Other Counties in the Nairobi metropolitan regions should consider enacting similar laws for similar purposes. This will pave way for channelling of incentives to these groups to accelerate their involvement in waste management, within the framework of waste hierarchy.

7.3.2.4 Aligning development assistance with environmental integration

There is need to sensitize policymakers in both legislatures and executives on the perversive incentives for fragmentation inherent in external funding for environmental reforms. Environmental interest groups and NEMA should play this role of capacity building and sensitization of policymakers. Environmental interest groups should monitor legislative processes and flag out normative incoherencies emanating from conflict goals of development assistance (promotion of economic interests) and environmental protection imperatives.

Development agencies should undertake SEAs of their funding programmes with a view to promoting environmental integration. The SEA process should be opened up for participation by local environmental interest groups to ensure aggregation of local expertise and knowledge. This will forestall fragmentation of donor-funded reforms and related initiatives.

7.3.3 Enhancing horizontal environmental integration

7.3.3.1 Strengthening capacity of NEMA

The Ministry should provide adequate funding of NEMA to enable the Authority undertake its regulatory and coordination functions sufficiently. The decision to drastically reduce EIA licence fees to nominal levels should be reversed to restore this vital revenue stream to NEMA. The Ministry should also consider granting NEMA more autonomy in the discharge of its waste management activities. The function of regulating hazardous wastes should be restored to NEMA.

To enhance the autonomy of NEMA and protect its decision-making processes from undue interference, future amendments to EMCA should recreate the Authority as an independent regulator and a shared institution. The President should consult Council of Governors in making appointments to NEMA's Board, which also County interests should be represented therein.

7.3.3.2 Strengthening sectoral coordination mechanisms at national level

NEMA should enhance its coordination capacity through leveraging its presence in sectoral agency bodies and structures with regulatory role in MSWM. These include Physical Planning Liaison Committees, the National Council for Occupational Safety and Health and the Climate Change Council among others. It should ensure consistency of its representation in these bodies in order to promote coherence and consistent follow-up of deliberations and actions emanating from these bodies.

Sectoral agencies will not necessarily accept for granted NEMA's coordination role due to long history of sectoral and compartmentalized management of the environment. NEMA therefore needs to build a strong value proposition to safeguard its coordination role. As alluded to by the Court in the *Martin Osano* case, NEMA should strive to demonstrate greater capacity for technical support to counties in order to enhance its legitimacy as the

coordinator of the environment management setting. In this regard, NEMA should organize training activities and research initiatives on MSWM which could help build technical capacities of Counties and other lead agencies.

7.3.3.3 Strengthening sectoral coordination mechanisms at county level

Counties should strengthen intra-county environmental coordination. County environmental committees (CECs) should be established and operationalized with adequate financing and technical support. A culture of inter-departmental collaboration should be promoted to ensure synergies and collaboration.

7.3.3.4 Improving instruments for horizontal environmental integration

NEMA should strengthen stakeholder engagement processes within the EIA authorization process in order to tap into knowledge and perspectives of citizens and non-state actors for better integration of environmental concerns in development approval processes. NEMA should also build citizen confidence in EIA authorizations by striving to make decisions which uphold sustainability and effectively communicate the same to stakeholders.

The practice of SEA as policy coherence tool in environmental management should be promoted by NEMA at both levels of government. NEMA should build capacity of policymakers at both levels of government on the importance of the tool and its application in the policy process. NEMA should also conclude on the NEAP process with adequate involvement of all sectors and relevant stakeholders. NEMA should revised the National Solid Waste Management Strategy to take into account recent policy and legislative developments.

7.3.4 Enhancing vertical environmental integration

7.3.4.1 Enhancing capacity of county governments

Counties should continue seeking constitutional interpretation of the division of responsibilities between National and county governments in relation to MSWM. This can be pursued within intergovernmental mechanisms (The Summit) or by way of seeking an advisory opinion at the Supreme Court.

To enhance the organizational capacity and reduce conflict of interests, Counties should consider establishing special purpose vehicles (SPVs) to undertake waste management activities in municipalities. Regulatory powers over licencing of waste actors at the County level, including the SPVs should be vested in the Department of Public Health, which has officers with more technical competencies in this area.

Counties should improve their performance in the design and implementation of an integrated county civic education programme, in which matters relating to MSWM are to be well- mainstreamed as provided for under S.100 of the County Government Act 2012. Counties should also leverage on the existing administrative structures at the sub-county levels as well as departments for civic education and public participation to achieve this.

NEMA should promote the capacity of Counties to undertake waste regulation. This can be achieved through training, provision of advisory services and importantly, facilitating counties to undertake public education and awareness campaigns on wastes. NEMA can build on the work done so far such as the formulation of the 10-point guidelines on waste regulation. NEMA has the mandate to support counties in designing the proposed integrated civic and environmental education programme and could be approached to do so. The programme should also harness the knowledge and expertise of NGOs and private sector (particularly occupiers of workplaces), given their relative high levels of awareness and knowledge on environmental matters relating to solid waste management, as demonstrated in this study.

Even though the concept of assisted or negotiated compliance may promote voluntary approaches among County governments and hence achieve better outcomes in waste management, there is need to develop a framework to guide this process. The framework should outline the threshold for triggering the use of assisted compliance and when this fails, compel NEMA to engage its full regulatory powers vis-à-vis lead agencies envisaged under S.12 of EMCA. This will promote accountability and root the concept of assisted compliance better within the framework of environmental rule of law.

The Department of Occupational Safety and Health (DOSH) should work closely with NEMA and County governments in promoting the uptake of environmental protection concerns in MSWM at the workplaces. The national government should ensure better funding and more autonomy to the DOSH to enable it to discharge its affairs. In turn, DOSH should aggressively register more workplaces and work progressively towards reaching all the 1.7million workplaces.

7.3.4.2 Improving intergovernmental coordination mechanisms

The Ministry should re-establish the intergovernmental coordination forum on environmental management that was previously established under Intergovernmental Relations Act to facilitate effective coordination and mediation of problematic relations in this area. The forum should comprise the Cabinet secretary, Inter-governmental Technical Committee and Council of Governors, and County executive committee members of the respective County departments responsible for environment as a consultative structure on areas of mutual interest, including MSWM. Upon the enactment of the Sustainable Waste Management Bill, 2019, the Ministry should oversee the establishment of the National Waste Council but in a manner, which does not provide overlaps or duplication with the aforementioned intergovernmental forum.

Within the framework of emergent trans-county regional blocs, Counties should also explore inter-county collaborations on waste management to address the problem of unlawful trans-county movement of wastes. They should work towards convergence of MSWM regulation to prevent a 'race to the bottom' phenomenon, where counties competing jurisdictions lower environmental quality standards to attract investments.

7.3.4.3 Improving intergovernmental relations

The President and the Council of Governors should embrace the principles and spirit undergirding the Intergovernmental Relations Act and foster a political environment within which positive intergovernmental relations will thrive. The Summit should hold regular meeting and strengthen the mandate of the Intergovernmental Technical Relations Committee. The Secretariat of the Council of Governors should be strengthened, and its mandate anchored in law. Both levels of government should avoid resorting to needless litigation especially where disputes can be amicably resolved through negotiations. The National government should strive to devolve environmental management mandates to Counties and build capacity for the devolved governments to take up these responsibilities effectively. In this regard, the Transition Authority report on functional assignment should be implemented in full.

7.3.4.4 improving vertical environmental integration instruments

County governments should rationalize environmental planning processes with the integration planning and budget process. This notwithstanding, the Governor as the chairperson of CEC could leverage on his/her position to ensure the budget process takes into account the contents of the County Environment Action Plan (CEAP). In the same vein, the County Government Act should be amended to include references to CEAP among the documents to be consulted during the development of county integrated development plans and associated spatial and sectoral plans.

Besides CEAP, counties should undertake waste planning using standards prescribed the national government. They should also endeavor to collect and utilize scientific waste information in such planning processes. the resultant waste plans should form the basis for budgeting and oversight of waste management actions throughout the budget cycle.

Counties should promote green procurement and promote uptake of recycled products. Notable products include fencing poles and water storage tanks (from recycled plastics) and composted waste for use as fertilizers for street gardens and community parks. This will spur marketization of wastes at the county level. County governments should also promote incentives for private sector participation in recycling, reuse and recovery initiatives aimed at diverting wastes from the landfills. There is need for the National government to build capacity of its departments, agencies and county governments in utilizing public procurement and disposal law provisions to achieve an effective green procurement system which support growth of MSWM value chains. The starting point in this regard would be the development of a green procurement policy by the National government.

7.3.5 Recommendations for future research

The study has only used data from registered workplaces to draw make necessary inferences. It would be important to study other key waste actors such as households, informal waste actors and regulators as samples for an empirical study. This will contribute to broader understanding of how environmental integration is implemented at various levels.

Secondly, the concerns over corruption in MSWM emerged as potential causes of fragmentation. However, the effect of corruption on environmental integration is an area which has been understudied. Corruption presents a risk or deficit in the environmental rule of law paradigm and therefore a study in this area would provide vital conceptual links between the concept of environmental integration and the rule of environmental law paradigm.

Thirdly, the study has identified several political factors that impact on environmental integration. Environmental integration in practice entails balancing of political considerations alongside the other three dimensions of sustainability. This points to the need for theorizing of political factors as a possible fourth sustainability dimension.

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ANNEXES

Annex 1: Survey Questionnaire

INTERNAL USE	
Date of Interview:	
Time of Interview:	
Interviewer Name:	

PHYSICAL LOCATION	
County:	
Ward	
Road/Street:	

INTRODUCTION:

Good morning\ afternoon. My name is ….....……..We are currently conducting a PhD study to assess integration of Kenya's environmental regulatory framework with a focus on solid waste management. We therefore humbly request for your participation in this study.

The information we seek concerns key aspects of regulation of solid waste management and your assessment of regulation of solid waste by various regulators at county and national level.

This information will be confidential, and the data will be analyzed in aggregation.

It is my hope that you will choose to participate in this survey.

BUSINESS PARTICULARS	
Name of the business	
Physical address	
Name of respondent (optional)	
Respondent contact (optional)	

S1. Gender RECORD**, DO NOT ASK**

- Male
- Female

Type of organization:

Small scale	1
Medium scale	2
Large scale	3

Main questionnaire

1.1 What is your position in the establishment

Employee	1
Supervisor	2
Manager	3
Proprietor	4
Other specify	5

1.2 What category is your business?

Manufacturing	**1**
Hotel & restaurant	**2**
Retail	**3**
Wholesale	**4**
Construction	**5**
Academic institutions	**6**
Financial institution	**7**
Other specify	**99**

1.3 Types of waste generated (monthly)

Type	Food	Paper	Old chattels	Clothes	Scrap metal	Other (specify) _____
Tick (as applicable)	1	2	3	4	5	6

1.4 **(ASK IF CODED 02 AT SC1)** How much waste does your establishment generate?

Volume	0-5Kg/day	6-10kg/day	11-15 kg/day	16-20kg/day	21-25 Kg/day	+25Kg/day
Tick one	1	2	3	4	5	6

1.5 How do you store establishment waste (storage equipment)?

Type	Polythene bags	Plastic Bins with	Plastic Bins without	Metallic bins with	Metallic bins without	Chute with polythene	Chute without	Communal Bin/Pit	Other (specify) _____

		polyth ene	polyth ene	polyth ene	polyth ene		polyth ene		
Tick one	1	2	3	4	5	6	7	8	99

1.6 Do you separate different kinds of waste before storage? (Waste Segregation)

Segregation at source	Yes	No	Don't know
Tick one	1	2	3

1.7 What is your level of satisfaction with SW Management at your establishment?

On a scale of 1-5 where *1= Very satisfied; 2=somewhat satisfied; 3= neutral; 4= Not satisfied; 5= Very dissatisfied. How satisfied are you by the way your establishment is handling the following?*

Rating/Issue		**1**	**2**	**3**	**4**	**5**	**999**	**N/A**
.7.1	Waste storage							
.7.2	Waste segregation							
.7.3	Disposal of uncollected wastes							
.7.4	Participation of my business/organization in waste management decisions within my neighbourhood							

1.8 What is your Satisfaction with waste management system on?

Use the scale of 1-5 and tick your response accordingly, where 1= Very satisfied; 2=Somewhat satisfied; 3= neutral; 4= Not satisfied; 5= Very dissatisfied. If you do not know the answer, tick 999= Don't know

Rating/Issue		**1**	**2**	**3**	**4**	**5**	**999**	**N/A**
.8.1	Waste collection by waste collectors							
.8.2	Waste transportation							
.8.3	Waste recycling							
.8.4	Management of public dumpsites in an environmentally-sound manner							
.8.5	Public education and awareness on safe waste management practices							

1.9 What is the Impact of solid waste management on the environment on?

Use the scale of 1-5 and tick your response accordingly, where 1= Strongly agree; 2=somewhat agree; 3= neutral; 4= somewhat disagree; 5= strongly disagree. If you do not know the answer, tick 999= Don't know

Rating/Issue		**1**	**2**	**3**	**4**	**5**	**999**
.9.1	Unlawful dumping of waste is prevalent in our neighbourhood						

.9.2	Unlawful dumping of waste in my neighbourhood poses a risk to human health						
.9.3	Unlawful dumping in my neighbourhood poses a risk to clean and healthy environment						

2 Section C: Legal Framework for Environmental Integration in SWM (implementation of principle of integration)-

In this section, you are required to provide your assessment of key aspects of regulation SWM. Use the scale of 1-5 and tick your response accordingly, where 1= Strongly agree; 2=somewhat agree; 3= neutral; 4= somewhat disagree; 5= strongly disagree. If you do not know the answer, tick 999= Don't know

2.1 Talking about Incorporation of sustainable development in legal framework, to what extent do you agree or disagree with the below statements?

Rating/Issue		**1**	**2**	**3**	**4**	**5**	**999**	**N/A**
.1.1	I am well informed about the principle of sustainable development							
.1.2	The Constitution of Kenya recognizes the importance of sustainable development							
.1.3	Sustainable development is generally (regarded) taken seriously in Kenya?							
.1.4	National laws promote sustainable development							
.1.5	County laws promote sustainable development							
.1.6	In my county, economic development is prioritized over environmental protection							
.1.7	In Kenya generally, economic development is prioritized over environmental protection							

2.2 Talking about Incorporation of right to clean and healthy environment in the legal framework , to what extent do you agree or disagree with the below statements?

Rating/Issue		**Yes**	**No**	**Don't know**
2.2.1.	The Constitution of Kenya affords citizens the right to clean and healthy environment?			
2.2.2.	National laws promote right to clean and healthy environment			
2.2.3.	County laws promote right to clean and healthy environment			

2.3 Incorporation of state duties to promoting right to clean and healthy environment and safeguarding the environment

Rating/Issue	Yes	No	Don't know
2.3.1. The constitution imposes duties on the state to ensure citizens enjoy a clean and healthy environment			
2.3.2. The constitution imposes duties on citizens and non-state actors to ensure all enjoy a clean and healthy environment			
2.3.3. National laws impose duties on state to ensure clean and health environment			
2.3.4. National laws impose duties on citizens and non-state actors to ensure clean and healthy environment			
2.3.5. County laws impose duties on citizens to ensure a clean and healthy environment			

2.4 Performance of County and National authorities in implementation of right and duty to clean and healthy environment

Use the scale of 1-5 and tick your response accordingly, where 1= Strongly agree; 2=somewhat agree; 3= neutral; 4= somewhat disagree; 5= strongly disagree. If you do not know the answer, tick 6= Don't know

Rating/Issue	1	2	3	4	5	6
2.4.1 National authorities' carryout their duties to ensure a clean and healthy environment						
2.4.2 County authorities' carryout their duties to ensure a clean and healthy environment						

2.5 Environmental integration in SWM law

Rating/Issue	Yes	No	Don't know
2.5.1 My County has a SWM law			
2.5.2 As a business, I/we have a legal right to clean and healthy environment free from solid waste in my county			
2.5.3 As a business, I/we have a legal duty not to generate waste unnecessarily			
2.5.4 As a business, I/we have legal duty not to unlawfully dispose waste			
2.5.5 As a business, I/we have a legal duty to separate wastes according to the characteristics before storage			
2.5.6 As a business, I/we have legal duty to pay fees/charges for solid waste collection			
2.5.7 Solid waste collection fees/charges imposed by collectors are based on volume of waste that my establishment generates			

2.5.8	Solid waste collection charges imposed by collectors take into account level of income of establishments			
2.5.9	As a business, I/we am/are legally entitled to tax reliefs from the county government for observing environmentally safe waste management practices			
2.5.10	As a business, I/we am/are legally entitled to tax reliefs/benefits from the national government for observing environmental safe waste management practices			
2.5.11	The law imposes adequate penalties for those who dispose waste illegally			

2.6 State any appropriate recommendation for improvement of legal framework for SWM

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3. ***Section D: Horizontal integration in environmental regulatory framework for SWM***

In this section, you are required to provide your assessment of role of National Authorities and NEMA in coordinating other key agencies and actors for effective in SWM. Use the scale of 1-5 and tick your response accordingly, where 1= Strongly agree; 2=somewhat agree; 3= neutral; 4= somewhat disagree; 5= strongly disagree. If you do not know the answer, tick 6= Don't know

3.1. Role of Lead Agencies

Rating/Issue	**1**	**2**	**3**	**4**	**5**	**6**
3.1.1. Ministry of Environment (of national government) plays a critical role in SWM in my neighbourhood						
3.1.2. Directorate of OSHA plays a critical role in SWM in my neighbourhood						
3.1.3. The President and his government takes seriously solid waste management in the country						

Role of NEMA

3.2. To what extent do you agree or disagree with the following statements about NEMA

Rating/Issue	**1**	**2**	**3**	**4**	**5**	**6**
3.2.1. NEMA is the most important government agency in protection of the environment						
3.2.2. NEMA plays adequately its role in environmental protection in Kenya						
3.2.3. NEMA plays adequately its role in environment protection in my county						
3.2.4. NEMA plays a critical role in SWM in my county						

Rating/Issue	1	2	3	4	5	6
3.2.5. NEMA officers inspects our neighbourhood to ensure we collect and store solid waste in an environmentally-safe manner						
3.2.6. NEMA officers routinely arrest and prosecute those who illegally dump or mishandle solid waste in my neighbourhood						
3.2.7. NEMA officers routinely educate residents on how to manage waste in an environmentally-safe manner.						
3.2.8. NEMA affords members of public and Private sector adequate opportunity to participate in environmental protection						
3.2.9. NEMA affords the members of public and Private sector adequate opportunity to participate in regulation of solid waste management in my county						
3.2.10. Under extreme circumstances, NEMA shuts down establishments that do not observe sound waste management practices						

Coordination between NEMA and Lead agencies

3.3. Effectiveness of horizontal coordination between NEMA and lead agencies

Rating/Issue	1	2	3	4	5	6
3.3.1. Safe collection and storage of waste was adequately considered in the design of my/our premises building						
3.3.2. Our neighbourhood has proper waste disposal facilities (collection points) installed by developer						
3.3.3. Industries located near your neighbourhoods dispose their wastes in an environmentally safe manner						
3.3.4. Occupants of commercial buildings dispose their wastes in an environmentally safe manner						
3.3.5. Public dumpsites in our neighbourhood are managed in an environmentally-safe manner						
3.3.6. Waste collectors serving our neighbourhood transport wastes in an environmentally-safe manner						
3.3.7. In order to operate, my business is required to acquire an EIA licence & conduct an environmental audit every year						

3.3.8. Environmental management plan developed and implemented by my establishment prioritizes SWM issues						
3.3.9. Environmental audits conducted by my establishment focus on SWM issues						
3.3.10. NEMA prioritizes on SWM issues in approving environmental audit undertaken by my establishment						
3.3.11. Directorate of OSHA considers compliance with waste management regulations of my business establishment before issuing us with a licence for registration of workplace						

Nb: 3.3.8 -3.3.10 apply to establishments with EIA licences

3.4. **State any appropriate recommendation in strengthening/improving the role of NEMA in regulation of SWM**

4. ***Section D: Vertical integration of environmental regulatory framework for SWM***

In this section, you are required to provide your assessment of county governments and their coordination with other agencies and actors involved in regulation of in SWM. Use the scale of 1-5 and tick your response accordingly, where 1= Strongly agree; 2=somewhat agree; 3= neutral; 4= somewhat disagree; 5= strongly disagree. If you do not know the answer, tick 6= Don't know

4.1. Institutional framework for environmental protection the county level

Rating/Issue	**1**	**2**	**3**	**4**	**5**	**6**
4.1.1. The County Governor takes seriously environmental protection in my county						
4.1.2. My local MCA takes seriously environmental protection in my county						
4.1.3. County department that deals with environmental protection adequately plays its role in environmental protection						
4.1.4. County government has established a County Environmental Committee						
4.1.5. The County Environmental Committee is active and visible in my county						

4.2. Performance of County Government in Integrated Waste Management

Rating/Issue	1	2	3	4	5	6
4.2.1. County Government ensures timely collection of wastes in my neighbourhood						
4.2.2. County government officers routinely arrest those who illegally dump wastes in my neighbourhood						
4.2.3. County government officers routinely inspect our neighbourhood to ensure residents collect and store solid waste in an environmentally- safe manner						
4.2.4. County government manages public dumpsites in an environmentally-safe manner						
4.2.5. County government officers educate residents on how to manage waste in an environmentally-safe manner						
4.2.6. County government allows participation of residents associations (or local community-based organizations- whichever is applicable) to participate in waste collection and disposal						
4.2.7. County government promotes waste recycling in an environmentally- sound manner						
4.2.8. County government promotes waste composting in an environmentally-sound manner						
4.2.9. County government under extreme circumstances has issued notice of closure to establishments that fail to observe sound waste management practices						
4.2.10. County government in extreme cases shuts down commercial and industrial establishments that do not observe sound SWM practices and relevant law						
4.2.11. County government considers compliance with waste management regulations of my business establishment before issuing us with an annual business/trading licence						

4.3. Coordination between County Government and NEMA

Rating/Issue	1	2	3	4	5	6
4.3.1. County government cooperates with NEMA on environmental protection issues in my county						

Rating/Issue	1	2	3	4	5	6
4.3.2. County government cooperates with NEMA on waste management issues in my county						
4.3.3. NEMA adequately supervises county governments in matters relating to environmental protection						
4.3.4. NEMA adequately supervises county governments in matters relating to solid waste management						

4.4. State any appropriate recommendation in strengthening/improving the role of County governments in regulation of SWM

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5. Do you wish to add any comment relevant to this study?

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Thank you.

Annex 2: Key Informant Guide

- Instructions:

This guide is to be administered to all key informants identified for this particular study. The study seeks to assess integration of Kenya's environmental regulatory framework with a focus on municipal solid waste management sector. The purpose of the study is purely academic and all the responses shall be treated confidential. Kindly provide honest and truthful responses- there are no wrong answers and therefore the do not hesitate to make their opinions heard.

Nb: the interviewer is to seek permission to record all responses using a tape recorded to enable him/her pay attention to details; maintain eye contact and nudge respondents to give more perspectives. Transcribe the recordings as quickly as you can after the interviews.

1. **Section A: Description Respondents (to be answered by all respondents)**
   - **1.1. Particulars**

     Name: Organization:

     Position: Sector:

     County (*if applicable*):
   - 1.2. **What is the mandate of your organization** (*explore role in/link to SMW regulation/operations*)
2. **Section B: State of MSWM (***for all***)**
   - 2.1. **Do you think solid waste management is a problem in Kenya/your county? Why?** (explore challenges)
3. **Section C: Legal framework on environmental integration for MSWM sector** (focus on and *explore a sectoral perspective of respective regulated entities*)
   - 3.1. **Is sustainable development a major issue in Kenya? Why?** (*explore prioritization of SD in policy and practice*)
   - 3.2. **To what extent is the constitutional right and duty to clean and healthy environment respected in Kenya?** (explore level of integration of rights approach in waste management)
   - 3.3. **Does the regulatory framework for solid waste (at national and county level) promote sustainable management of wastes?** (*explore extent to which regulatory framework has moved from waste disposal to waste as resource paradigm- explore opportunities and challenges*)
   - 3.4. **How can the legal framework on solid waste management be strengthened to realize sustainability**?

4. **Section D: Horizontal integration of environmental regulatory framework for municipal solid waste management (***for NEMA and Lead Agencies*)
    4.1. **Does NEMA have a role (s) in regulation of solid waste management in Kenya? Which role(s) if any and how effective in discharge of these roles?** *Explore regulatory capacity (use of various regulatory tools NEAP, command and control, voluntary, incentives) tools; resource capacity of NEMA; possibilities of conflicts and duplication in regulatory roles of NEMA vis-à-vis other authorities (Directorate of OSHA, Ministry of Environment); also explore level of political will for NEMA)*
    4.2. **To what extent does NEMA coordinate and supervise other key actors (lead agencies) in environmental protection generally and in regulating solid waste management at national and county level specifically?** *Explore coordination with the national authorities' targeted by this study- Ministries of Environment/ Directorate of Occupational Safety and Health etc) Explore use of various coordination mechanisms (NEAP process, Technical advisory committee) and supervisory tools (EIA/Audit, inspections, reporting etc) at the disposal of NEMA*
    4.3. **To what extent does NEMA promote public participation and Non-state actor involvement in environmental protection generally and regulating solid waste management at national and county level specifically**? *Explore role of residents' association, industry associations etc in NEAP, implementation of National SWM Strategy*
    4.4. **How can NEMA's role in coordination and supervision role as above be enhanced** to ensure environmentally-sound and integrated solid waste management?
5. **Section C: Vertical Integration of environmental regulatory framework for MSWM (***for County Authorities***)**
    5.1. **How effective is the county government in regulating key players in solid waste management to ensure economic, social and environmental sustainability**? *Explore the use of regulatory (integrated planning, budgeting, command and control, voluntary and incentive) tools while pin-pointing opportunities and challenges*
    5.2. **To what extent does the County government coordinate and cooperate with national government authorities in ensuring environmental protection generally and sustainable solid waste management at the county levels**? Explore existence –and effectiveness -of coordination mechanisms e.g. County Environmental Committee; CEAP process etc)?

5.3. **To what extent do County governments departments coordinate on regulation of solid wastes** (*explore coordination between and among Dept of Environment (waste management), Public Health, Trade, Physical Planning, enforcement and Treasury*)

5.4. **How does the county government facilitate public participation in environmental protection matter generally and sustainable solid waste management specifically**? (*explore role of regulated entities business, industry, schools etc.. focus on the nature and level of their involvement)*

5.5. **Is there adequate political will to address sustainable management of solid wastes at the county level? Why?** (*explore the role and level of commitment of county governor and his executive committee members as well as the County Assembly- Speaker and MCAs as reflected in policymaking priorities, budget allocations, political rhetoric etc*)

5.6. **To what extent have national actors targeted by this study** (*Ministry of Environment, Directorate of OSHA*) decentralized their roles in waste management at the county level? (*Do they have waste management strategies; have they designated responsibility for execution of strategy to specific officers? Are resources for execution decentralized? Explore opportunities and challenges*)

5.7. **How can the role of county governments (operational, coordination, supervision) in regulating solid waste management be strengthened in order to realize sustainability**?

6. Do you anything to add or any question?

Thank you.

Annex 3: Research Permit

NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION

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Ref. No. **NACOSTI/P/18/09071/22193**

Date: **20th April, 2018**

Emmanuel Wambua Kituku
University of Nairobi
P.O. Box 30197-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Unmet expectation? assessment of integration of environmental regulatory framework in Kenya,"*** I am pleased to inform you that you have been authorized to undertake research in **selected Counties** for the period ending **20th April, 2019.**

You are advised to report to **the Chief Executive Officers of selected government agencies, the County Commissioners and the County Directors of Education of the selected Counties** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

DR. STEPHEN K. KIBIRU, PhD.
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The Chief Executive Officers
Selected government agencies.

The County Commissioners
Selected Counties.