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# **Audit Service Sierra Leone**

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## **PERFORMANCE AUDIT REPORT ON THE MANAGEMENT OF MUNICIPAL SOLID WASTE - CASE STUDY ON SELECTED LOCAL COUNCILS**

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**SEPTEMBER 2014**

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## **ABBREVIATIONS AND ACRONYMS**

ASSL	Audit Service Sierra Leone
BCC	Bo City Council
DSDP	Decentralized Service Delivery Programme
EHD	Environmental Health Division
EHO	Environmental Health Officer
FCC	Freetown City Council
GoSL	Government of Sierra Leone
INWMP	Integrated National Waste Management Policy
INWMS	Integrated National Waste Management Strategy
ISSAI	International Standards of Supreme Audit Institutions
KCC	Kenema City Council
KDC	Kenema District Council
LCs	Local Councils
MCC	Makeni City Council
MDAs	Ministries Departments Agencies
MoHS	Ministry of Health and Sanitation
MLGRD	Ministry of Local Government and Rural Development
MMUNICIPAL SOLID WASTE	Management of Municipal Solid Waste
MUNICIPAL SOLID WASTE	Municipal Solid Waste
WARD-C	Western Area Rural District Council

## FOREWORD

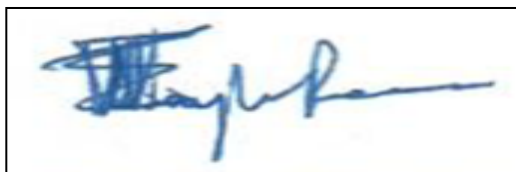
As the Supreme Audit Institution (SAI) of Sierra Leone, the Audit Service Sierra Leone (ASSL) is set on expanding the scope of external audit. In addition to its traditional role of Regularity Audit the ASSL has established Performance Auditing as another key service. To enhance this function, the ASSL has devoted significant efforts to upgrading the professional skills in the institution and modernising the audit methodology.

As I present this Performance Audit Report for tabling, let me draw your attention to the relevant section of the 1991 Constitution of Sierra Leone that mandates the Audit Service to carry out its work - Section 119 (2): “The public accounts of Sierra Leone and of all public offices including the courts, the accounts of the central and local government administrations, of the Universities and public institutions of like nature, any statutory corporation, company or the body or organization established by an Act of Parliament or statutory instrument or otherwise set up partly or wholly out of Public Funds, shall be audited and reported on by or on behalf of the Auditor General, and for that purpose the Auditor-General, or any person authorised or appointed in that behalf by the Auditor-General shall have access to all books, records, returns and other documents relating or relevant to those accounts.”

I further refer you to the Government Budgeting and Accountability Act of 2005, Section 63 (1) Sub Section (1 e), which states that “In his examination of the Final accounts the Auditor General shall ascertain that in his opinion, financial business has been carried out with due regard to economy in relation to results achieved”, and;

Sub section 66 (4) which states that “Nothing in this section shall prevent the Auditor General from submitting a special report for tabling in Parliament on matters that should not await disclosure in the annual report.”

In line with the forgone mandate, the Audit Service Sierra Leone has undertaken this Performance Audit in order to assess the Management of Municipal solid waste by local councils, highlighting significant issues that have impeded public health and the safety of the environment. The recommendations put forward will contribute to improving the current status of waste management in the country.



**Lara Taylor-Pearce (Mrs.) FCCA, FCA (SL)**  
**Auditor General of Sierra Leone**

## **EXECUTIVE SUMMARY**

The Audit Service Sierra Leone in its drive in assessing the effective devolution of services to the Local Councils undertook an independent assessment of waste management activities by local councils under the auspices of the Ministry of Local Government and Rural Development (MLRGD).

In that light, the objective of this audit was to assess the extent to which local councils provided efficient and effective services on the Management of Municipal Solid Waste (MMSW).

This audit was also purposed by the presence of waste piles in streets and other strategic locations within cities and the general concerns of the public on environmental health in the country.

In order to assess the extent to which local councils are providing services on the management of municipal solid waste the audit aimed at answering the following questions:

How efficient is the management of solid waste by local councils?

How capacitated are local councils to provide efficient implementation of municipal solid waste activities?

Are there proper monitoring and control over municipal solid waste activities?

The audit was conducted in accordance with International Standards of Supreme Auditing Institutions (ISSAI) and the Performance Audit guidelines.

## **FINDINGS**

The Integrated National Waste Management Strategy stipulates that the most appropriate method of managing MSW is reduction of waste at the source. It was however, noted that local councils had not complied with the requirements of waste separation, hence, waste deposited at transit/skip sites and landfills included medical wastes and recyclable materials like: plastics, empty tins/cans, metals, food remains, etc.

Necessary actions were not taken by local councils to identify and address issues relating to inadequate collection and/or access to available disposal services. This was evidenced by overflowed transit/skips as a result of delays in collecting wastes. Waste collection was mostly concentrated on the main streets leaving other areas underserved. Apparently, it was noted that FCC had only 43 transit points compared to the growing number of population the city. In fact, some local councils did not have transit/skip sites for the disposal of wastes; therefore they allowed wastes to be deposited on streets, in front of houses, markets or other public areas.

Documents reviewed and interviews conducted clearly indicated that Bo and Makeni City Councils had developed mechanisms for the separation of waste in order to implement the process of recycling of MSW in their cities. It must be noted that evidence of the rate of recycling for the period under review was not provided even though requested for by the auditors.

It was noted that illegal disposal of waste in public and prohibited areas was a common practice in all local councils visited. Local councils with the exception of Freetown City Council (FCC) had not enacted bye-laws as

at the time of the audit. Even the enacted bye-laws developed by FCC were not enforced to prevent indiscriminate and illegal disposal of waste.

During the audit, it was observed that the Kingtom and Grandville Brook landfills in Freetown (establishment in 1946 and 1986 respectively) had reached their capacity levels. Landfills visited were either partially fenced, or not fenced at all. This resulted in the lack of control over access to the landfills. There were instances where waste was deposited at the entrance of landfills, thereby impeding access to swiftly deposit waste in the landfills.

The audit revealed that staff were not assigned to monitor and control the flow of traffic in and out of landfills in local councils visited, except for FCC. There were inadequate transit/skip sites for the disposal of waste. In Bo, the involvement of private - public partnership in MSWM contributed to addressing the problem of inadequate transit/skip sites as confirmed in the responses of questionnaires and documents produced by local councils. On the whole, evidence of monitoring reports on MSWM was not produced at the request of the auditors.

## **CONCLUSIONS**

The above findings present strong evidence that local councils have not efficiently performed their responsibilities in protecting the health and safety of the immediate environment where landfills are located. Consequently, the major cities don't reflect acceptable standards of waste management.

Failure to separate waste at source has led to the increase in the amount of waste deposited at transit/skip sites and landfills, hence, hampering the objective of recycling waste. Inappropriate disposal of medical waste could expose waste handlers, scavengers, children and other people to accidental transmission of infectious diseases, such as, Ebola, HIV, Hepatitis, cholera etc.

Inadequate storage and collection services have contributed to the increased number of rodents (mice, rats, squirrel etc) and provided breeding ground for mosquitoes, flies, cockroaches etc. These pests contribute greatly to the transfer of communicable diseases.

## **RECOMMENDATIONS**

Municipal Solid Waste is generated on a daily basis; therefore, managing it requires regular and well-coordinated approach between those who generate waste, (i.e. households, institution, private sectors) and those responsible for collecting and disposing it, in this case, the local councils.

The practice of separating and recycling should be adopted and mass sensitisation undertaken in order to educate residents about the benefits of waste reduction, separation and recycling. This will make the process of recycling easier and thereby minimise the amount of waste accumulated and disposed off at landfills.

Adherence to the different waste collection options required by the INWMS should be implemented by the Environmental Health Division of all local councils. Community participation should be encouraged; through the provision of garbage bins for residents which can be collected at various intervals at an affordable charge.

Collection services should be provided for public areas, streets and bye-laws enforced in cases of littering and indiscriminate dumping of waste in those areas.

Local councils should adopt the use of sanitary landfills which includes the control of leachate, air pollution by waste burning, emission of foul odour etc. in order to maintain a healthy environment. Landfills should be protected and disinfected periodically as a way of minimising the health risks associated with them.

Local councils should take appropriate steps to mobilise resources that will enhance their capacities for effective waste collection and disposal. The utilisation of available machines/vehicles should be monitored in order to minimise the cost of repairs. Transit/skip sites should also be provided at strategic locations in order to prevent locals from burning, littering, dumping and working long distances to deposit waste.

Waste management activities undertaken by local councils and other contractors should be regularly monitored and reported on accordingly. This will greatly contribute to enhancing local councils' capacity in addressing some of the drawbacks identified in this report.

MLGRD and MoHS should ensure that local councils prepare annual plans for MSWM activities and follow-up on the execution of those plans on a periodic basis, through supportive supervision. The involvement of health education and sanitation officers from the Ministry in providing support to the Environmental unit of local councils should be paramount in achieving the above.



## 1. INTRODUCTION

This chapter provides background information to the audit, the objective, scope, design, assessment criteria and methodology for the audit.

### Background

Local councils are charged with the responsibilities of developing, improving and managing human settlements and the environment under the supervision of the Ministry of Local Government and Rural Development (MLGRD).

MLGRD is primarily charged with the responsibilities of supervising, monitoring and coordinating the activities of the 19 local councils.

Local councils have been re-established in Sierra Leone to bring about effective systems of service delivery that will assist the country in achieving its poverty reduction goals and ensuring strong economic growth. They deliver key government devolved functions such as health, education, agriculture, solid waste management services, rural water services and feeder roads management. Local councils continue to attract considerable funding from the Government of Sierra Leone (GoSL) for undertaking devolved functions<sup>1</sup>.

The Management of Municipal Solid Waste (MMSW) was devolved to Local Councils (LCs) from the Ministry of Health and Sanitation (MoHS) since 2005 to complement the role of the Health Ministry in facilitating healthy environment in Sierra Leone. Waste therefore includes the following:

Municipal waste

Health care waste

Liquid waste and;

Industrial waste

Municipal waste is sub divided into liquid and solid waste. “Municipal Solid Waste (MSW) includes waste that are durable goods, non-durable goods, containers and packaging, food scraps, yard trimmings and miscellaneous inorganic waste from residential, commercial, institutional and industrial sources, including, but not limited to appliances, auto mobile tires, old newspapers, clothing, disposable table-ware, office and classroom papers, wood pallet and cafeteria waste that are discarded by communities<sup>2</sup>.”

About 70% of MSW generated in Sierra Leone are made up of organic materials. Municipal solid waste is therefore categorised thus:

Organic and bio degradable waste, which includes food leftovers, plants, animals and household waste.

Inorganic and bio-degraded waste, which includes broken table, vehicles, stones, glass, batteries and

E-waste: computers, air conditioners, refrigerators.

<sup>1</sup> Decentralization Policy, 2010

<sup>2</sup> Integrated National Waste Management Policy, 2012

## **1.1 MOTIVATION FOR THE AUDIT**

The Integrated National Waste Management Strategy 2012 (INWMS), states that MSWM in Sierra Leone and Freetown in particular had experienced immense trials and failures since 1971. It further states that the status of sanitation in Sierra Leone is still undergoing challenges due to poor environmental sanitation, poor communities and poor personal hygiene practices which have contributed to the spread of malaria, diarrhoea and cholera.

In the Integrated National Waste Management Strategy 2012, it is also stated that problems of waste management were identified by the UNDP in 2008, but were not addressed due to the absence of a strategic plan. These problems include:

- indiscriminate disposal of waste (solid liquid industrial and health care waste);
- lack of disposal equipment and technologies;
- insufficient trash cans and industrial waste bin;
- lack of awareness and understanding on the part of the population;
- lack of data and information on the waste characteristics and generation rate, and
- lack of systematic management system

There was an issue on sanitation and health in the Awoko Newspaper of Friday, 16<sup>th</sup> August 2013 headlined “Garbage blocks Aberdeen Road Traffic”. The report stated that there were piles of garbage in the street because of insufficient dumpsites in the area, hence, inhibiting the flow of traffic and also preventing residents from buying food items from local vendors for fear of cholera. Consequently, the establishment of LCs should endeavour to address these issues by ensuring that the required services for the development of their localities are met.

This has led to public concerns relating to the devolution of functions and the performance of local councils in carrying out these functions especially in the Management of Municipal Solid Waste.

## **1.2 DESIGN OF THE AUDIT**

### **1.2.2 Audit Objective**

The objective of this audit was to assess the implementation of municipal solid waste management activities (waste reduction, separation, collection, treatment and disposal) by local councils under the supervision of the Ministry of Local Government and Rural Development in ensuring environmental sanitation for the general well being of the people.

### **1.2.2 Audit Questions**

In order to achieve the objective of the audit, the following audit questions were developed:

- How efficient is the management of solid waste by local councils?
- How capacitated are local councils to provide efficient implementation of municipal solid waste activities?
- Are there proper monitoring and controls of municipal solid waste activities?

### **1.2.3 Audit Criteria**

The assessment criteria were derived mostly from the integrated waste management strategy and policy, local council job description and best practices on waste management.

The Integrated National Waste Management Strategy:

Waste should be separated at source

Municipalities and districts should establish programmes for separation and collection of recyclables

Local councils should identify areas with inadequate collection services and access to disposal facilities and take action to ensure needs are met.

Times waste should be collected from sites

The Integrated National Waste Management Policy:

Local councils should protect and preserve the environment of the country and manage solid waste in the most environmentally safe and cost effective manner

They should ensure that solid waste is transported, stored, treated, processed and disposed of in a manner adequate to protect human safety

Local councils should also promote reduction, recycling, reuse and treatment of MSW

The Local Government Job Description:

The development, planning and management department should coordinate, evaluate and monitor all activities undertaken by local councils

### **1.2.4 Audit Scope**

This audit is on the Ministry of Local Government and Rural Development which supervises all nineteen (19) local councils. It covered the period 2009-2013 and available information for 2014 will be considered. The audit focused on the MMSW by selected local councils i.e.

Freetown City Council (FCC) – capital city, Western Urban

Bo City Council (BCC) - Provincial headquarter, Southern province

Makeni City Council (MCC) – Provincial headquarter, Northern Province

Kenema City Council (KCC) – Provincial headquarter, Eastern Province

Western Area Rural District Council (WARD-C) – Western Rural

Pujehun District Council (PDC) – Southern province

Kenema District Council (KDC) – Eastern province

### **1.2.5 Audit Methodology**

The audit was conducted in accordance with the International Standard of Supreme Auditing Institutions (ISSAI) and Performance audit guidelines.

Seven out of the nineteen local councils were selected, four city councils and three district councils. The city councils were selected based on the population and the level of activities taking place in these regions. The audit team also selected district councils in those regions with the exception of the north which was already visited at the planning stage of the audit.

In order to assess the extent to which local councils are providing efficient and effective services with regards MSW, the team conducted interviews, reviewed documents, administered questionnaires and did physical visitations.

Documents obtained were reviewed to understand the processes involved in the MMSW and the activities undertaken. One hundred (100) questionnaires in Freetown and fifty each in Bo,

Makeni and Kenema were also administered randomly to residents of the cities visited, to gauge public opinion on MSW. The team also conducted interviews with key personnel in the Ministry, Decentralisation Secretariat, Local Government Finance Department and the councils visited. Physical observations were made and photos taken. See appendix 1, 2, and 4 for details of documents reviewed, personnel interviewed and places visited respectively.

A draft version of this report was presented to the Ministry of Local Government and Rural Development on the 7th July 2014 for comments. Responses were received from the Ministry on the 12th August 2014 without consulting Local Councils. Another request for written comments was sent to the Ministry in order for local councils to respond and submit same on Friday, 5th September, 2014; the response was not received up to the time of completion of this report.

## **2. MANAGEMENT OF MUNICIPAL SOLID WASTE**

### **2.1 INTRODUCTION**

The information presented in this chapter includes the regulatory framework on municipal waste management, the policy objectives and the process of managing solid waste. It also highlights information on the roles and responsibilities of key players and funding for solid waste activities.

### **2.2 REGULATORY FRAMEWORK**

The Local Government Act of 2004 is the main legislation that provides the legal framework for the effective running and administration of local councils.

The Local Government (Assumption of Functions) Regulation 2004 guides the process of devolution. This legislation specifies 80 functions of which the devolution of MSW from central to local council is one. The devolving central Ministry, Department or Agency (MDA), and when the local councils should assume each function, are also contained in the legislation.

In 2012, MoHS introduced an Integrated National Waste Management Strategy and Policy that gave guidance to priority actions taken in waste management activities undertaken by local councils.

### **2.3 POLICY OBJECTIVES**

#### **2.3.1 Policy Objectives of Municipal Waste Management**

The policy document of the MMSW outlines its objectives as follow:

To protect the public health and safety, protect and preserve the environment of this country, and recover resources which have the potential for further usefulness by providing the storage collection, transport, separation treatment ,processing recycling and disposal of solid waste in the most environmentally safe, economically feasible and cost effective manner

To establish and maintain a national program for providing planning, technical, and financial assistance to local government for municipal solid waste management.

To ensure that local governments adequately plan for and provide efficient, environmentally acceptable solid waste management services and programs.

To promote the establishment of resources recovery systems that preserve and enhance the quality of air, water and land resources from pollution

To ensure that solid waste is transported, stored, treated, processed and disposed of in a manner adequate to protect human health safety, welfare and the environment.

To promote the reduction, recycling, reuse and treatment of municipal solid waste, and the recycling of materials which would otherwise be disposed as solid waste.

To encourage local government to utilise all means reasonably available to promote efficient and proper methods of managing solid waste, which may include contracting with private entities to provide management services or operate management facilities on behalf of local government, when it is cost effective to do so.

To promote education of the general public and training of municipal solid waste professionals to reduce the generation of solid waste, to ensure proper disposal of waste and to encourage recycling.

To encourage the development of waste reduction and recycling programmes through planning, technical assistance; grants and other incentives

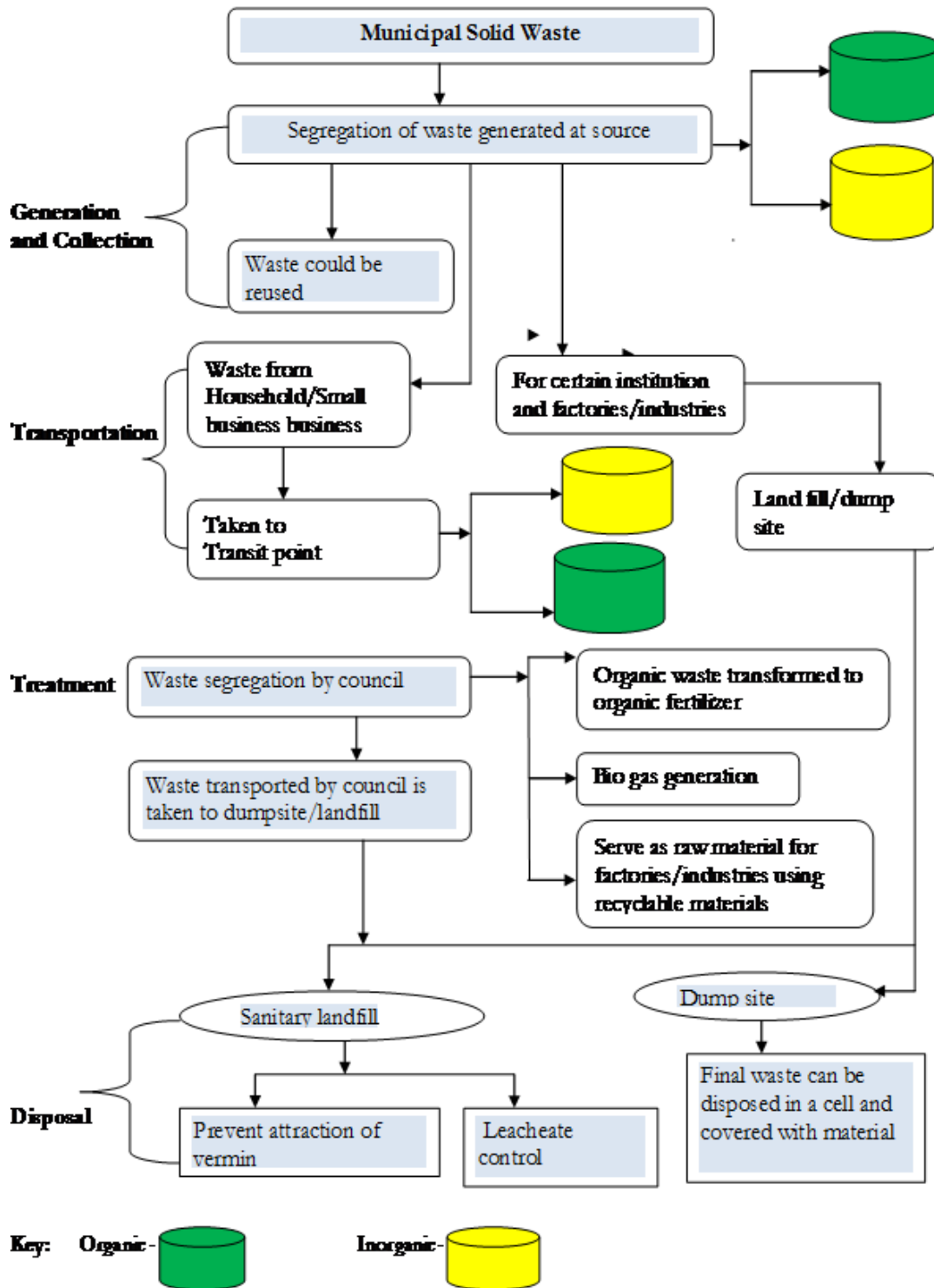
To encourage the development of recycling industries by promoting the successful development of markets for recycled items and by promoting the acceleration and advancement of technology used in manufacturing processes that use recycled items. This requires municipalities to develop and implement source separation, recovery or recycling programmes so that valuable materials may be returned to productive use energy and natural resources conserved and the useful life of solid waste management facilities extended.

To ensure that local government and national agencies determine the full cost of providing storage, collection, transportation, separation, treatment, recycling and disposal of solid waste in an environmentally safe manner.

To encourage local government to pursue a regional approach to solid waste management

## 2.4 PROCESS OF MUNICIPAL SOLID WASTE MANAGEMENT

Figure 1: Flow chart showing the different stages in the Management of MSW



The management of municipal solid waste involves the collection, transportation, processing or disposal and monitoring of waste materials. The process is generally undertaken to reduce effect on health and the environment.

MSW generation starts at source by households, institutions, markets, other public places etc. Waste generated can either be reused (in the same form of application before without change of its identity) or separated in order to remove a particular type of recyclable material from other waste at the point of generation for the purposes of collection, deposition and recycling.

Waste should be separated at source by using two or more containers or bins, one for organic waste and the other for inorganic waste. The recommended storage containers according to the INWMS, include plastic bags, metal or plastic rigid containers, rollout carts and large metals or plastic bins.

Waste deposited at transit or skip sites should also be separated, one for organic and the other for inorganic waste. The organic components can be used to produce compost/ fertilizers and energy. The resulting compost can be used for agricultural purposes or landscaping, waste gas (methane) can be captured and used to generate electricity and heat.

Recycling inorganic waste is a resource recovery practice that refers to the collection and reuse of waste materials such as empty beverage materials, pints, plastics etc. to reproduce new products.

Solid waste should be collected by designated officials of local councils or private contractors using skip trucks, tippers, bulldozers, frontend loaders to transport waste from transit sites to landfill or sanitary landfill; the final disposal site.

The waste collected should be segregated by local councils. Organic waste can be transformed into organic fertilizer, bio gas generation and can serve as raw materials for factories/industries that uses recyclable materials.

Disposal at a landfill involves depositing solid waste in or on land with little environmental regulation. A sanitary landfill involves disposing solid waste on land in a manner that minimises environmental hazards and meets the design and operation requirements of the INWMP.

## **2.5 ROLES AND RESPONSIBILITIES OF KEY PLAYERS OF MUNICIPAL SOLID WASTE**

See appendix. 3 for roles and responsibilities of key players in MSW

## **2.6 FUNDING**

Solid waste activities by local councils are funded by the Government of Sierra Leone (GoSL), and Decentralized Service Delivery Programme (DSDP) grants.



<b>Table No1: GoSL Allocation for MSW Activities</b>							
<b>COUNCILS</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>			<b>2012</b>	<b>2013</b>
	<b>Le (000)</b>						
BO CITY	190,000	232,843	179,158	602,002	18.10	442,368	442,932
MAKENI CITY	105,000	115,575	89,134	309,709	9.31	220,472	220,753
FREETOWN CITY	250,000	350,000	734,518	1,334,518	40.12	1,820,644	1,822,964
KENEMA DISTRICT	93,000	82,943	63,812	239,755	7.21	377,934	378,415
KENEMA CITY	163,000	196,635	151,335	510,970	15.36	373,752	374,228
PUJEHUN DISTRICT	28,000	25,014	19,245	72,260	2.17	235,461	235,761
WARD-C	100,000	88,877	68,377	257,255	7.73	282,648	283,008
<b>NATIONAL TOTAL</b>	<b>929,000</b>	<b>1,091,890</b>	<b>1,305,581</b>	<b>3,326,471</b>	<b>100.00</b>	<b>3,753,282</b>	<b>3,758,065</b>

**Source: Analysis from the Local Government Equitable Grant Distribution Formulae and Annual Allocations**

According to the Local Government Equitable Grants Distribution Formulae and Annual Allocations, the amounts allocated for 2009, 2010 and 2011 were specifically allocated to solid waste management activities.

Allocations to selected local councils for the period 2009-2011 amounted to Le 3,326,471,846 of which FCC received the highest (40%) followed by BCC (18%) and KCC (15%). All others were allocated less than 10% respectively as shown in the table above.

The amounts allocated for 2012 and 2013 were block grants allocated for solid waste and other devolved activities listed below:

Fire prevention

Marine

Youth and sport and

Other recurrent administrative activities of local councils

### **3. FINDINGS**

#### **3.1 INTRODUCTION**

This chapter presents detail findings of the audit in response to the three audit questions as stated in chapter one, mainly:

Inefficient waste management practice

Inadequate capacity to undertake municipal solid waste activities

Ineffective monitoring of municipal solid waste activities

#### **3.2 INEFFICIENT WASTE MANAGEMENT PRACTICE**

##### **3.2.1 MSW generation and separation**

According to the Integrated National Waste Management Strategy 2012, the most preferred management option for MSW is the reduction of waste at source involving the separation of solid waste at the point of generation. In addition, municipalities and districts should comply with statutory requirements to establish programmes for the separation and collection of recyclables at government facilities and operations, thereby giving preference to the purchase of products made from recycling materials.

Physical observation of households, institution, markets, transit/ skip sites and dumpsites of the areas visited within cities revealed that wastes generated at source were not separated before transportation to landfills. Plastics, empty cans, food remains, tyres and other types of MSW were all disposed into the same container or bin, for example in the landfill in Bo city, medical waste such as sterile packs (needles and empty intravenous giving sets) were transparently deposited at landfill amongst various MSW as shown in the picture.



**Partial view of medical waste mixed with MSW  
at the Bo Dumpsite as at 4/12/13**



**Waste not separated and deposited at Bai Bureh  
Road, Freetown as at 15/1/14**

Interviews with residence of areas visited, verified by physical observation of transit/skip sites, indicated that local councils have not sensitised the public on the separation of MSW. They had also not provided the facilities for separation of MSW, that is, providing separate transit/skips for organic and inorganic waste.

Failure to separate waste at source has led to an increase in waste deposited at those transit/skip sites up to the final disposal at landfills. The source reduction and recycling strategies of waste from households, institutions and other public areas have been greatly affected making it impossible for the separation of organic waste (which could be used for composting) from inorganic waste. In addition, disposal of medical waste in a transparent manner exposes especially scavengers, local council workers, children and other people accessing disposal sites, to accidental transmission of infectious diseases, such as, HIV, Hepatitis, and Cholera etc.

### **3.2.2 Storage and Collection**

The Environmental Health Division (EHD) of local councils are responsible for the collection of municipal solid waste in their various localities.

One of the objectives stated in the INWMS requires local councils to identify sub-regional areas with inadequate collection services and or access to available disposal facilities and identify actions to ensure that those needs are met. They should also include solution for providing services and encourage the use of citizens' collection stations and transfer stations where appropriate. According to the timetable of the implementation for the strategic plan (MSWM) the above activities were expected to have been completed by the end of 2013 (year2).

The strategy also states that in order to collect MSW in a sustainable and practical manner, collection should be done within a week at the following intervals:

- twice weekly,
- three times weekly,
- Six times weekly or
- daily

During the course of the audit the team spent at least a week in each of the provincial regions visited. It was then observed that transit/skip sites in strategic locations in Bo and Kenema were overflowed with wastes which were not collected for over a period of one week. This also applies in Freetown where inspection of transit sites in strategic locations were extended to a period of two weeks.

The team also observed that the LC workers and private contractors collecting and transporting wastes only concentrated on the transit points/skips that were located on the main roads and streets leaving others uncollected for over a week.

Further interview with residents of the affected areas revealed that collection of wastes is sometimes delayed to weeks or month/s. The resident said that they mostly had to burn the waste in the transit or skip sites in an effort to minimise the volume and odour emitted.

Below are sample of photos of different transit points:



**Partial view of overflowed transit point at Aberdeen back of Bintumani Hotel in Freetown as at 7/1/14**



**Partial view of overflowed transit site at New Castle Street Kissy, Freetown as at 15/1/14**



**Partial view of overflowed skip at Manjama Market, old Koribondo Road Bo as at 7/12/13**



**Partial view of overflowed transit site at Blama Road Kenema as at 29/11/13**

The team observed that there were piles of wastes left in public areas, especially in front of residential houses and around markets in Makeni City, Pujehun and Western Area Rural Districts.

Further investigations were done through interviews with key officials. These revealed that the above mentioned councils did not have transits/skip for the disposal of wastes. They disclosed that the method of wastes collection adopted by these councils was the collection of waste piled in the streets, in front of houses, markets or other commercial areas as evident in the photo below:



**Wastes deposited on the side of the street at Mess Road in Makeni**

Questionnaires were administered in order to gauge the perception of the public on the rate of waste collection by city councils. An analysis of the responses from these questionnaires revealed that waste collection is on average for Bo and Makeni and poor in Freetown and Kenema.

<b>Table No:2 Rate of Collection of MUNICIPAL SOLID WASTE</b>							
<b>Councils</b>	<b>Very Poor</b>	<b>Poor</b>	<b>Fair</b>	<b>Average</b>	<b>Good</b>	<b>Very good</b>	<b>Excellent</b>
<b>Freetown</b>	22	55	9	11	3	-	-
<b>Bo</b>	1	4	1	19	14	7	4
<b>Makeni</b>	1	12	5	18	13	1	-
<b>Kenema</b>	5	18	9	10	6	-	-

It was disclosed in a Memorandum of Understanding signed, 29<sup>th</sup> October, 2013 that municipal solid waste management for the municipality of Freetown had been outsourced to a private waste management company. This company should be responsible for clearing and management of transit points, street sweeping and beautification. Further details of the contract were not made available by FCC upon request by the auditors.

It was revealed that the reasons for not collecting waste within a week was due to the unavailability of vehicles and required equipment like bulldozers, skip trucks, tippers, tricycles etc. In some cases, the available vehicles needed to be repaired. This was also due to delay in repairs and difficulty in getting the required spare parts.

This has contributed to the increased number of rodents (mice, rats, squirrels etc) and provided breeding ground for mosquitoes, flies, cockroaches. These pests contribute greatly to the transfer of communicable diseases.



### 3.2.3 Municipal solid waste not recycled (MSW) not Recycled

The INWMS required the following waste reduction activities to have been implemented by 2013:

- Establish mechanisms to track the level of compliance requirements to recyclables, separation and collection programmes.
- Continue to compile information on the number of recycling programmes conducted by local governments and businesses.
- Determine appropriate mechanism to estimate the national recycling rate on a regular basis

In the INWMS, the focus of the plan of action for MSW recommends that the second most preferred municipal solid waste management technique is recycling and reuse of MSW. It further states that the goal is to achieve, maintain and exceed 50% recycling of MSW by the end of the calendar year 2014.

The plan of action in the INWMS also requires municipalities to develop and implement source separation, resource, recovery, or recycling programmes or enhance existing programmes so that valuable materials may be returned to productive use, energy and natural resources conserved, and the life span of solid waste management facilities extended.

Interviews and review of the documents provided during the audit inspection, did not show evidence of mechanisms developed on recyclable separation and collection programmes in the councils visited with the exception of the BCC and MCC. Documents also showed that MCC had delivered training in plastic weaving and briquette making to members of community based organisations and social enterprises in Makeni as part of the Waste to Wealth Project in Makeni.

At the BCC, existing vast local knowledge on waste derived product were considered for the purpose of raising awareness and sensitisation in transforming waste to wealth. In light of this, an idea contest was held during the first week of July 2013 in order for participants to convince and solicit support from BCC and a private consulting firm on the waste derived product listed in the table below:

Waste Derived Products	Used Materials
Bio charcoal briquetting	Organic waste
Compost making	Organic waste
Hand bag making	Plastic sachets
Mattress making	Rice-straw, textile waste
Pot making	Aluminium scrap metals
Sawdust briquetting	Saw dust ,paper
Sieves and greater making	Tin
Slippers	Old tyres
Soap making	Organic waste
Tin box making	Tin

Source: support to local public and private sector in solid waste management Bo City and the environment /Quarterly project progress report

Irrespective of the above, the LCs could not provide evidence on the quantity of waste generated and recycled for the period under review. Physical inspections of landfills also showed that separation and recycling of MSW was not in practice at final disposal points. It was observed that recyclables such as used tyres, scrap metals, tins, empty cans, food remains, other organic wastes etc. were deposited at landfills. Although there were instances of scavengers collecting some of these wastes from landfills, no evidence was provided to the auditors on the rate of collection of recycled waste or recycling of MSW for the period under review.

Wastes were not recycled because there had been limited involvement of the public private partners that have innovative ideas in transforming waste to wealth. The lack of data on waste generation had made it impossible for LCs to determine the rate of recycling. Therefore causing an increase in the amount of waste disposed at landfills making it difficult to manage. Depositing organic waste in combination with other types of waste e.g., plastics, metals, sharps etc. makes it difficult for composting, which also impacts negatively on the objectives of recycling waste. Burning of waste, combined with plastics, emit dioxin which is very harmful to humans when inhaled.



**Partial view of waste deposited at Grandville Broke Landfill in Freetown (tyres, metals and other solid) as at 15/1/14 which can be recycled.**

### **3.2.4 Littering and indiscriminate disposal of municipal solid waste**

One of the objectives of the strategic plan on municipal solid waste management in the INWMS is to support local efforts to identify areas with litter and illegal disposal problems, and implement enforcements and other programmes to address those problems.

Physical inspections/observations show that there is littering and indiscriminate disposal of Municipal solid waste. Waste was deposited illegally on streets, in drainages and bridges, market areas and other public places as evident in photos below.



**Waste dumped at the open space around Water Works Area in Makeni as at 11/12/13**



**Partial view of waste deposited on the side of National Workshop, Cline Town, as at 9/1/14**



**Partial view of waste front of Princess Christian Maternity Hospital (PCMH) at Fouray Bay Road Freetown as at 5/3/14**

During the course of the audit, it was noted that bye-laws for illegal disposal of Municipal solid waste, as required by the INWMS in order to prevent people from depositing waste in prohibited areas were not developed specifically by the MCC, KCC, KDC, WARDC and PDC. However, FCC had developed bye-laws and BCC had started the process of enactment.

Interviews, observations and questionnaires were administered in order to assess the provisions (transit sites) in place for the disposal of waste before taking them to the landfills. Apparently, it was noted that FCC had only 43 transit points compared to the growing number of population the city. There were areas mainly, Grass Field Lumley in Freetown and Sewa road in Bo that did not have sites for the disposal of waste to be collected by LCs and this caused littering and illegal disposal of waste.



### Analysis of Questionnaire on the availability of disposal sites

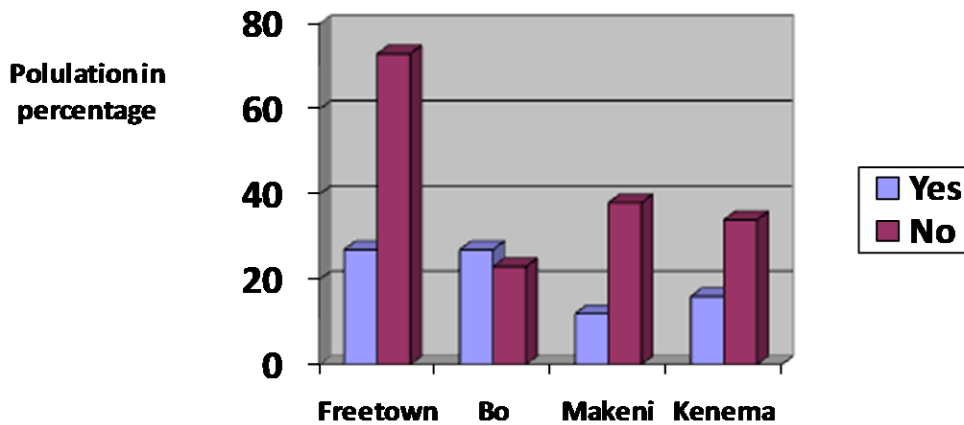


Figure 2: Bar chart showing analysis of questionnaires on the availability of disposal sites

The significant drop in Bo compared to other cities was attributed to the involvement of private-public partnership in municipal solid waste management. This contributed to the reduction of the problem of inadequate skips/transit sites. The strategy adopted by the BCC was (door to door service) which involves the employment of youth in their communities to collect waste at intervals from households, institutions and other private bodies on a commercial basis.

Interviews with key officials of LCs also revealed that, the inadequacies identified in the development of bye-laws for the prevention and control of illegal disposal of waste, has increased the act of littering and indiscriminate disposal of waste attracting rodents and foul odours in public areas particularly in cities. Despite the fact that bye laws have been developed by the FCC, failure to enforce such laws has contributed to littering in the streets, drainages, bridges, markets and other public areas.

#### 3.2.5 Improper Disposal of Municipal Solid Waste

The specific objectives as described in the INSWM require local government to adequately plan for and provide efficient environmentally acceptable solid waste management services and programmes:

- To promote the establishment of resource recovery systems that will enhance the quality of air, water and land resources and preserve them from pollution.
- To ensure that solid waste is transported, stored, treated, processed, and disposed of in a manner adequate to protect human health, safety and welfare and the environment.

In order to assess the disposal of waste at landfills, the team visited landfills in Freetown, Kenema, Bo, Pujehun and Makeni, where the following were observed:

- There was continuous burning of waste in all dumpsites visited and the emission of awful odour.
- Review of documents unearthed that the two landfills in Freetown have been in existence since 1946 and 1986 respectively. Kingtom in the west and Grandville Brook in the east. According to interview with a waste management professional, the dumpsites in Freetown (Kingtom and Grandville Brook) have reached their capacity and are no longer suitable for disposal of waste, hence environmental hazards.
- The Kingtom landfill was not fenced, nor secured, making it easily accessible to

scavengers (persons, domestic animals such as, dogs and pigs etc searching through waste for things that can be used or eaten from the waste).

- Grandville Brook land fill was partially fenced giving access to people, animals as a footpath and making the landfill uncontrollable.
- There was a presence of leachate (a liquid that dissolves or entrained environmentally harmful substances which may then enter the environment posing threats to humans).



Partial view of scavengers at the Kingtom Dumpsite as at 15/1/14

From physical observation during the course of the audit, the dumpsite in Bo City, Kenema City and Pujehun district were not fenced and secured and people deposited waste at random. It was also noticed that there were wastes deposited on roads leading to these dumpsite thereby impeding the access of waste collection vehicles to deposit waste at dumpsites.



Partial view of Road leading to a dumpsite at Nyagolehun Bo-Kenema high way as at 4/12/13



Dumpsite at Nyagolehun Bo-Kenema as at 4/12/13 located very close to the newly constructed stadium





Partial view of unfenced dumpsite along Gendema Road in Kenema as at 9/12/13



Partial view of road leading to dumpsite in Pujehun District as at 3/12/13



Partial view of dumpsite in Pujehun District as at 3/12/13



Partial views of the area used by MCC as landfill as at 11/12/14

The major cause for the above finding is due to the fact that, LCs are still using open dumping for final disposal of waste. It is also clear that LCs have not prioritised the prevention and control of access, odour, blowing litters, etc.

Improper disposal of waste in landfills causes environmental degradation which can be measured by the contamination of ground water through leachate, air pollution by waste burning, spreading of diseases by different vectors such as birds, insects and rodents.

### **3.3 INADEQUATE CAPACITY TO UNDERTAKE MUNICIPAL WASTE ACTIVITIES**

#### **3.3.1 Unavailability of Key Staff for Municipal solid waste activities**

The Environmental Health Officer (EHO) is responsible for the implementation of all municipal solid waste management activities (reduction & separation, collection, treatment and disposal). According to waste professionals of MoHS, management of municipal solid waste requires trained technical staff for proper implementation of activities.

Interviews and documents reviewed disclosed that KCC did not have an environmental health officer to carry out Municipal solid waste activities as at the time of the audit. The activities of the EHO were therefore undertaken by an environmental health supervisor of the MoHS assigned to the District Health Medical Team (DHMT).

It was further noted that with the exception of landfills in Freetown, all other cities did not have officers assigned to those landfills in their localities in order to monitor and control the flow of traffic at those sites

The unavailability of assigned EHO for the implementation and coordination of Municipal solid waste activities poses a challenge to local councils in performing their respective duties. The absence of designated staff to landfills makes it impossible to put into practice traffic control measures, quantify the volume of waste deposited and determine the rate of recycling on a regular basis.

#### **3.3.2 Inadequate Waste Management Equipment/Machines**

According to section 20(1) of the LGA 2004, LCs “shall be responsible generally for promoting the development of the locality and the welfare of the people in the locality with the resources at its disposal and with such resources and capacity as it can mobilise from the central government and its agencies, national and international organisations, and the private sector”.

Interview with waste management professionals of the Ministry of Health revealed that at least one of the following equipment should be available to efficiently manage waste:

- bulldozers
- tippers
- front-end loaders presently

weigh bridge - used to weigh the quantity of waste disposed off  
compactors; to spread out rubbish in dumpsites.

Physical observation and documents reviewed revealed that all the councils visited were experiencing problems of insufficient waste management vehicles and equipment. In PDC and KDC, tricycles were the only available machines used for the transportation of waste.

Interviews further revealed that the available vehicles/ machines were very old undergoing continuous

maintenance, and difficulties in getting the required spare parts contributed to the above.

Table 3 shows list and status of Municipal solid waste management machines/equipment of the LCs visited, with the exception of FCC whose Municipal solid waste management was outsourced to private contractors.

List of Waste Management machines of the selected councils

Table No: 3						
COUNCIL	MAKENI CITY COUNCIL	KENE MA CITY COUNCIL	KENEMA DISTRICT COUNCIL	PUJEHUN DISTRICT COUNCIL	BO CITY COUNCIL	WARD. C
EQUIPMENT						
Compactor	1	1	Nil	Nil	1	Nil
Garbage truck/tipper	1	2	Nil	Nil	3 (2 Not functioning)	1
Skip loader	1(Under maintenance)	Nil	Nil	Nil	1 (Regular need for maintenance)	Nil
Motorbike		3	Nil	Nil	2	Nil
Front-end loader /JCB- machine	1 (under maintenance)	Nil	Nil	Nil	1	Nil
Tricycles	3	3	2	3	11	1
Monitoring vehicle	Nil	3	Nil	Nil	3	Nil
Weighbridge	Nil	Nil	Nil	Nil	Nil	Nil
Bulldozers	Nil	Nil	Nil	Nil	Nil	Nil

Analyses of documents received from selected councils



An aged skip-truck of the BCC as at 4/12/13 requiring regular maintenance

The absence of these machines/vehicles affects local councils' objectives of collecting and transporting waste on a regular basis as recommended in the INSWMS. This has also led to local councils prioritising waste collection from some main streets in cities leaving other areas underserved.

### **3.4 INEFFECTIVE MONITORING OF MUNICIPAL WASTE ACTIVITIES**

The strategic plan of the MLRGD provided for the supervision and monitoring of local councils in order to improve performance while, the INWMS stipulates that MoHS should oversee the waste management activities in the country.

According to the revised job description of local councils, the purpose of the Development, Planning and Management Department is to ensure effective co-ordination, monitoring and evaluation of all activities undertaken by LCs. The department comprises the Development and Planning Officer, Monitoring and Evaluation Officer and Economist.

Interviews with Monitoring and Evaluation Officers and Development Planning Officers of the councils visited, revealed that these officers who should perform the above functions had little or no idea of Municipal waste management activities undertaken by their respective councils. Evidence of monitoring reports on Municipal solid waste activities undertaken by local councils and contractors were not made available upon request by the auditors. The lack of evidence to show the extent of supervision and monitoring done by MLRGD and MoHS had also contributed to the inefficient performance of local councils.

Ignoring such oversight responsibility has led to the inefficiencies identified in this report. The failure to adequately monitor and report accordingly on Municipal solid waste activities has resulted in the current drawbacks in the collection and disposal of waste.

## **4. CONCLUSIONS**

The findings from this audit present strong evidence, mostly visual, that local councils have not efficiently performed their responsibilities in protecting public health and safety. The objective of preserving the environment in Sierra Leone and recovering resources which have the potentials for further use have not been attained. In fact, the process of separation, collection, transportation, recycling and disposal of Municipal solid waste had not been carried out to adequately protect health and safety of the immediate environment. This has undermined the environmental health and safety of residents.

The cleanliness of principal streets in cities is one of the visual yard sticks used to assess how environmentally healthy and friendly a particular city is, considering its aesthetic values especially to visitors and residents. It has been clearly realised that local councils are not doing much in maintaining an acceptable standard of waste management system in cities visited.

One of the issues in the findings relates to local councils, inability to facilitate the dumping method of Municipal solid waste; that is, waste reduction and separation at source.

Municipal solid waste is generated every day due to various human activities and could have adverse effect on the health of Sierra Leoneans and the environment if not suitably stored and consistently collected from public places and transit sites by the local councils.

The most appropriate and a cost – effective method of minimising waste and disposal of waste is by recycling. Local councils with the exception of BCC and MCC have not developed and implemented strategies for recycling waste generated in their localities.

Inadequate capacity for the disposal of Municipal solid waste is one of the contributing factors to adverse environmental impacts due to inappropriate location, operation or maintenance of landfills. The lack of capacity reserves for the two landfills in Freetown that have reached their capacity poses threats to the surrounding environment which may cause landslides or fires and possibly destroy homes and injure residents.

Further inefficiencies in the collection and transportation of Municipal solid waste can be linked to the unavailability of the required machines. The absence of these machines/vehicles hampers local councils' objectives of collecting and transporting waste on a regular basis as recommended in the INSWMS.

Regular monitoring of Municipal solid waste activities contributes to ensuring that the desired standards of environmental health are maintained. Local councils still have the responsibilities to oversee the collection of solid waste, enforce solid waste management laws and regulation and provide technical assistance and support services. Ignoring such oversight responsibility has lead to the inefficiencies identified in this report.

## **5. RECOMMENDATIONS**

### **5.1 PROPER MANAGEMENT OF MUNICIPAL SOLID WASTE**

Managing Municipal solid waste is a continuous task that demands permanent and regular efforts by all parties concerned ranging from households, institutions, private sectors, local councils and MDAs. The following recommendations will contribute to improving on the effective management of Municipal solid waste.

Local councils should undertake mass sensitization on waste reduction, separation and recycling. The public also should be made aware of the dangers and benefits associated with waste reduction and separation. Local councils should map out strategies that will encourage institutions, government

departments, public places and households to separate organic waste from in-organic waste. They should provide colour coding transit skips for depositing separated waste. This will make the process of collection and recycling easier and hence minimise the amount of waste accumulated and disposed to landfills. Local councils should also facilitate the establishment of markets for recycled products and educate the public in purchasing products made from recycled materials.

To achieve an efficient and effective collection of Municipal solid waste from transit/skip sites to landfills, the Environmental health division of local councils should adhere to the different options of collecting Municipal solid waste as required by the Integrated National Waste Management Strategy. Mechanisms should be developed to encourage community participation in waste management; this may include the provision of garbage bins at strategic locations for residents which can be collected by local councils on a daily basis. Transits/skip sites have to be provided at strategic locations in all areas so as to prevent locals from burning, littering, dumping and working long distances to deposit wastes.

Local councils should evaluate the factors leading to litter and illegal disposal of waste, provide collection and disposal services specifically for public areas, and increase law enforcement in order to address those factors. Local councils without bye-laws should take necessary steps to make available bye-laws that will prevent littering and indiscriminate dumping of waste especially in public areas. The FCC should enforce available bye-laws in order to minimise or eliminate littering and illegal dumping of Municipal solid waste.

It is highly recommended that the FCC in collaboration with key stakeholders should develop strategies to mitigate the potential effects of continuous use of outdated landfills in order to protect the health and safety of people and the environment. Modern methods of landfills for example, sanitary landfills should be adopted by local councils in order to control contamination of ground water, air pollution by waste burning and emission of foul odour and dissemination of diseases. Transit guards/staff should be provided at all landfills in order to regularly direct and monitor waste deposited.

Fencing of landfills needs to be prioritised in order to secure and prevent easy access to them and efficiently monitor the activities of scavengers. Local councils should also make it a point of duty to disinfect these landfills to reduce the health risk they pose to the environment.

## **5.2 STRENGTHENING THE CAPACITY TO UNDERTAKE MUNICIPAL WASTE ACTIVITIES**

Staff should be readily available to undertake their respective functions of implementing or supervising Municipal solid waste activities. Necessary steps ought to be taken by local councils to enhance their abilities to make available machines and equipment needed for the collection and transportation of Municipal solid waste. The use of available machines/equipment should be strictly monitored so as to minimise the cost of repairs and safeguard their life span.



### **5.3 MONITORING AND SUPERVISING MUNICIPAL SOLID WASTE ACTIVITIES**

Monitoring being a very important tool in Municipal solid waste activities should be done regularly by the local councils and reported accordingly to the Ministry of Health and Sanitation. The Development, Planning and Management Department of councils should ensure that they effectively monitor, coordinate, evaluate and report to the MoHS on all activities undertaken by local councils so as to enhance proper management of MWS activities. Monitoring and supervision should be extended to private sector and contractors engaged in Municipal solid waste activities.

MLGRD and MoHS should ensure that local councils prepare annual plans for municipal solid waste management activities and follow-up on the execution of those plans on a periodic basis, through supportive supervision. The involvement of health education and sanitation officers from the ministry in providing support to local councils should be paramount in achieving the above.

## APPENDICES

### APPENDIX I: LIST OF DOCUMENTS REVIEWED AND REASONS FOR REVIEW

Document Reviewed	Reasons for Review
The Local Government Act, 2004	To ascertain the responsibilities and mandate given to Local Councils
National Decentralization Policy, 2010	To understand the roles and responsibilities of National Decentralization Secretariat in the day to day administration of local councils
Revised Job Descriptions for local councils, 2010	To ascertain the roles and responsibilities of every core staff in the local councils
Local councils Equitable Grants Distribution Formulae and Annual Allocations, 2008, 2009, 2010, 2011, 2012 & 2013	To know the total grants allocated to each council from 2008-2013 for the management of solid waste
The Local Government (Assumption of Function) Regulations, 2004	To ascertain the different functions devolved to local councils from various MDA's
Solid Waste Management Report, Pujehun District Council	To know how the waste management process is going on in the District and to know the list of waste management equipment
The Constitution of Sierra Leone	To ascertain the right and mandates given to the Audit Service to audit all local councils
Integrated National Waste Management Strategy and Integrated National Management Policy	To understand the strategies and policies in waste management

## APPENDIX II: INSTITUTIONS & PERSONNEL INTERVIEWED

Institutions	Personnel Interviewed	Reasons for Interviews
Ministry of Local Government & Rural Development	Permanent Secretary	To obtain information on the activities of LCs and generally understand the local governance system.
	Rural Development Director	To know the role of his division in developmental activities.
	Accountant	To know his roles and responsibilities and obtain information on funding of LCs and the MLGRD.
	Internal Auditor	To know his level of involvement in the activities of LC
	Procurement Officer	To understand the methods used in procurement by LCs and the procurement activities undertaken by them
The Decentralisation Secretariat	Director	To acquire knowledge of the decentralisation process and understand their roles & responsibilities.
	Capacity Building Manager	To have a better understanding of the implementation of capacity building programmes and the extent to which such programmes have been provided for councils.
	Legal Officer	To obtain knowledge of the regulatory framework of councils and his roles & responsibilities in the devolution process.
Local Government Finance Department	Director	To understand his roles & responsibilities and the amounts allocated to each LCs.
	Economist	To know his roles & responsibilities. To acquire knowledge of the formula and calculations of grants allocated to LCs.
	Accountant	To confirm the method of disbursement to LCs.
Councils visited	Chief Administrator	To understand the administrative and management dynamics of LCs.
	Procurement Officer	To understand the application of the procurement regulations and obtain knowledge of procurement undertaken by LC.
	Finance Officer	To know the sources of revenues collected and whether they were used for the development of the locality.
	Development & Planning Officer	To have an idea of the development plans of LCs and activities undertaken.
	Environmental Health Officer	To properly understand his roles and responsibilities in solid waste management.
	Resident Technical Facilitator	To know the different forms of capacity building activities and how they were implemented
	Chairpersons (Councillors) of Ward Committees	To know their involvement in the developmental activities undertaken by LCs.
	Traditional Authorities	To assess their involvement in the developmental activities undertaken by LCs.
Njala University, Bo Campus	Dr. Bashiru Koroma (Deen of School of Community Health Sciences, and a Consultant to Bo City Council on Solid Waste Management)	To know the hazards associated with solid waste if not properly managed.
Freetown Waste Management Company.	General Manager Operations Manager Finance Officer	To get an understanding on how solid waste was being managed in the Freetown Municipality

Ministry of Health and Sanitation.	Principal Sanitary Engineer, Health Superintendent and Environmental Health Officer/Inspector	To investigate their roles and responsibilities in relation to solid waste management activities
Klin Salone Waste Management Youth Group based in Bo.	Consultants	To know what they do regarding management of Solid Waste in Sierra Leone

### APPENDIX III: RESPONSIBILITIES OF KEY PLAYERS IN WASTE MANAGEMENT

DEVELOPMENT PARTNERS	RESPONSIBILITIES
Ministry of Health and Sanitation	<ul style="list-style-type: none"> <li>• The Ministry of Health and Sanitation shall continue to be responsible for ensuring that the Environmental Health Division acts as the leading body to oversee the waste management activities in the country, using the National Environmental Health Policy. It will also be responsible for developing waste management and sanitation strategies.</li> <li>• It will closely work with the Ministries of Internal Affairs, Local Government and Rural Development which is responsible for leading the implementation of the sanitation strategies, together with the Ministry responsible for water ( policy and planning section) to ensure that integrated water, sanitation and hygiene education/promotion programmes are implemented by local councils and urban and rural communities according to the Policy objectives.</li> </ul>
Environmental Health Division	<ul style="list-style-type: none"> <li>• The Environmental Health (EHD) has the overall responsibility for the integrated waste management programmes, including waste collection, hazardous waste determination, packaging, storage, disposal, training, inspection, and record keeping.</li> </ul>
Donor Organisations and Development Partners	<ul style="list-style-type: none"> <li>• Development of waste management and sanitation schemes needs substantial financial investments. Such investment could only be available and accessible to the Government of Sierra Leone from donor organization and developing partners, if national guidelines and a strategic plan are in place.</li> <li>• The Government of Sierra Leone will collaborate with these institutions and ensure the availability of the needed funds for waste management and the sanitation sector.</li> <li>• The Government of Sierra Leone will ensure there is coordination and synergies are obtained from the various developments.</li> </ul>

<p>Non-Governmental and Civil Society Organisation</p>	<ul style="list-style-type: none"> <li>• Non- governmental organisations (NGOs) have, over many years, played an important role in Sierra Leone’s environmental health sector. Their contribution to waste management is more pronounced in rural areas where many NGOs have been working, providing all types of water and sanitation services.</li> <li>• The Government of Sierra Leone will closely collaborate with NGO’s through the planning section of the MoHS to enhance the role of NGO’s and CSOs in the waste management and sanitation activities.</li> <li>• Specifically, the Government will seek the assistance of NGOs in Sierra Leone to effectively carry out various waste management, sanitation and hygiene activities including: <ul style="list-style-type: none"> <li>a) Training and capacity building</li> <li>b) Assisting communities with the planning and implementation of waste management and sanitation projects</li> <li>c) Providing health, hygiene and sanitation education project, and</li> <li>d) Financing of waste management and sanitation projects.</li> </ul> </li> </ul>
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### APPENDIX III: CONTINUED

Households	<ul style="list-style-type: none"> <li>• Primary responsibility for house waste management and sanitation provision rests with the household itself, and all levels of government interventions are basically in the role of facilitating this, or of carrying out those functions which are more efficiently executed at the community, district or national level. Households will be required to observe this responsibility.</li> </ul>
Private Sector	<ul style="list-style-type: none"> <li>• The intention of the Environmental Health Policy is to, wherever possible; increase the role of the private sector in the development and provision of waste disposal services and sanitation (WMS).</li> <li>• The improvement of waste management and sanitation services cannot be seen as a government obligation by itself. While many of the water supply and sanitation improvement may require significant support from government and agencies, it is intended that in carrying out such activities there will be partnerships between public and private sector organizations.</li> </ul> <p>The private sector contribution could include, but is not limited to:</p> <ol style="list-style-type: none"> <li>a. Project design and contract supervision</li> <li>b. Construction by large and small contractors</li> <li>c. Construction, operation and maintenance of facilities such as sewage works and public toilets</li> <li>d. Preparation of behavioural change communication materials</li> <li>e. Training and capacity building</li> <li>f. Supply of materials and equipment for waste management and sanitation</li> <li>g. Research on improvement of WMS facilities and approaches</li> <li>h. Provision of consultancy services (technical assistance) on WMS</li> <li>i. Monitoring and evaluation of existing WMS projects</li> <li>j. Project financing</li> </ol>

#### APPENDIX IV: PLACES VISITED DURING AUDIT

Freetown	<ul style="list-style-type: none"> <li>• Kingtom Dumpsite</li> <li>• Granvill Dumpsite</li> <li>• Lumley</li> <li>• Aberdeen Back of Bintumani Hotel</li> <li>• Calabatown</li> <li>• Shell New Road Cline town</li> <li>• College Road Freetown</li> <li>• Guard Street Market</li> <li>• Wilkinson Road</li> <li>• Wilberforce Street,</li> <li>• Rawdon Street</li> <li>• Ecowas Street</li> <li>• Newcastle Street</li> <li>• Bombey Market</li> </ul>
Bo	<ul style="list-style-type: none"> <li>• Mile 5</li> <li>• Nyagorehum by Bo-Kenema Highway</li> <li>• Manjama Market By Old Koribondo Highway</li> <li>• Prince Williams Street</li> <li>• Lyon Road</li> <li>• Bo-Freetown Highway</li> <li>• Bo-Kenema Highway</li> <li>• Bojon Street</li> <li>• Fenton Road</li> <li>• Dambara Road</li> <li>• Ngalu Road</li> <li>• Old Railway Line</li> </ul>
Kenema	<ul style="list-style-type: none"> <li>• Hanga Road</li> <li>• Blama Road</li> <li>• Dama Road</li> <li>• Jabbie Street</li> <li>• Maxwell Cobe Street</li> </ul>
Makeni	<ul style="list-style-type: none"> <li>• Bishop Azolini Road</li> <li>• Mess Road</li> <li>• University of Makeni</li> <li>• Makumptoro Village</li> <li>• Makama</li> <li>• Water Works Area</li> </ul>
Pujehun	<ul style="list-style-type: none"> <li>• Dumpsite</li> <li>• Gobaru Town</li> <li>• The Town Market</li> </ul>

WARD-C	<ul style="list-style-type: none"><li>• Dumpsite</li><li>• Goderich</li><li>• Tombo</li></ul>
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