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PERFORMANCE AUDIT REPORT OF THE AUDITOR-GENERAL ON DISPOSAL OF PLASTIC WASTE IN GHANA

This report has been prepared in compliance with Article 187(2) of the 1992 Constitution of Ghana and Section 13(e) of the Audit Service Act, 2000 (Act 584) for submission to Parliament in accordance with Section 20 of the Act.

**Johnson Akuamoah Asiedu
Auditor-General
Ghana Audit Service**

The study team comprised:

Timi H. Musah (Team Leader), Wendy Vormawor and Francis T. Osanyongmor under the Supervision of Mr. Aikins Osei (Director, PSAD) and Mr. Lawrence N. Ayagiba (DAG, PSAD).

This report can be found on the Ghana Audit Service website: <https://audit.gov.gh>

For further information about the Ghana Audit Service, please contact:

**The Director, Communication Unit
Ghana Audit Service Headquarters
Post Office Box MB 96,
Accra.**

Tel: 0302 664928/29/20

Fax: 0302 662493/675496

E-mail: info@audit.gov.gh

Location: Ministries Block 'O'

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TRANSMITTAL LETTER

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Office of the Auditor-General

Ministries Block "O"

P. O. Box MB 96

Accra

GA-110-8787

Tel. (0302) 662493

Fax. (0302) 675496

04 July 2024

Dear Rt. Hon. Speaker

PERFORMANCE AUDIT REPORT OF THE AUDITOR-GENERAL ON THE DISPOSAL OF PLASTIC WASTE IN GHANA

I have the honour in accordance with Article 187(2) of the 1992 Constitution of Ghana, Sections 13(e) and 16 of the Audit Service Act, 2000 (Act 584) to submit a Performance Audit Report on the Disposal of Plastic Waste in the country.

2. Ghana generates approximately 840,000 tonnes of plastic waste annually, and approximately 9.5% of what is collected is recycled while the rest is indiscriminately disposed of without regard to the environmental impact. A significant portion of generated used plastics is indiscriminately disposed of through littering, dumping in drains, and uncontrolled burning, contributing to environmental degradation and flooding.

3. The government of Ghana has implemented laws and programs to manage plastic waste effectively. These include a ban on plastic production and

imports in 2008 and the establishment of the Plastic Waste Recycling Fund in 2011, funded through proceeds from the levying of a 10% Environmental Excise Tax on imported plastics and related items.

4. Additionally, government established the Ghana National Plastic Action Partnership (NPAP) and approved the National Plastics Management Policy (NPMP) in March 2020 which aims to implement programs to comprehensively manage used plastics across their life cycle and value-chain as a vehicle for sustainable development.

5. Mr. Speaker, in line with Section 13(e) of the Audit Service Act, 2000 (Act 584), this audit was commissioned to ascertain whether measures MESTI had implemented were effective and to recommend corrective actions for improvement.

6. We carried out the audit from January to June 2024 and covered the period 2019-2023 which focused on the activities of the Policy Planning and Evaluation Directorate of MESTI.

7. We found that the public continues to improperly dispose of plastic waste by dumping them in open drains, littering, and open burning.

8. Notably, MESTI's lack of effective collaboration with stakeholders impeded progress in plastic waste management, resulting in uncoordinated efforts. Consequently, stakeholders operated in isolation, missing opportunities for synergy that could have enhanced the overall effectiveness and impact of addressing plastic waste challenges in the country.

9. Given these outstanding challenges, there is no assurance that plastic waste management as envisaged is effective.

10. We have made recommendations to the MESTI, the details of which are contained in the report, to improve upon their activities.

Yours faithfully,

A handwritten signature in black ink, appearing to read 'Johnson Asiedu', written in a cursive style.

JOHNSON AKUAMOAH ASIEDU
AUDITOR-GENERAL

THE RIGHT HON. SPEAKER OFFICE OF PARLIAMENT
PARLIAMENT HOUSE
ACCRA

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ABBREVIATIONS

ACaRP	Accra Compost and Recycling Plant
AMA	Accra Metropolitan Assembly
ASKMA	Asokwa Municipal Assembly
CBD	Commercial Business Districts
CSIR-IIR	Council for Scientific and Industrial Research - Institute of Industrial Research
DP	Donor Partners
EET	Environmental Excise Tax
EPA	Environmental Protection Agency
GAMA	Greater Accra Metropolitan Area
GoG	Government of Ghana
GPAP	Global Plastic Action Partnership
INTOSAI	International Organisation of Supreme Audit Institutions
IRECOP	Integrated Recycling and Compost Plant
ISSAIs	International Standards of Supreme Audit Institutions
KCARP	Kumasi Compost and Recycling Plant
KMA	Kumasi Metropolitan Assembly
KoKMA	Korley-Klottey Municipal Assembly
MDAs	Ministries, Departments and Agencies
MESTI	Ministry of Environment, Science, Technology, and Innovation
MLGDRD	Ministry of Local Government, Decentralisation and Rural Development.
MMDAs	Metropolitan, Municipal and District Assemblies

MoF	Ministry of Finance
MPO	Municipal Planning Officer
MSWR	Ministry of Sanitation and Water Resources
MTDPs	Medium Term Development Plans
NDPC	National Development Planning Commission
NGO	Non-Governmental Organisation
NORAD	Norwegian Agency for Development Cooperation
NPAP	Ghana National Plastic Action Partnership
NPMP	National Plastic Management Policy
PMA	Plastic Manufacturers Association
PPBME	Policy Planning Budget Monitoring and Evaluation
PPP	Public Private Partnership
PWRF	Plastic Waste Recycling Fund
SMA	Savelugu Municipal Assembly
SMTDP	Sector Medium Term Development Plan
SDGs	Sustainable Development Goals
TaMA	Tamale Metropolitan Assembly
TWG	Technical Working Group
UNDP	United Nation Development Program
UNIDO	United Nation Industrial Development Organisation

GLOSSARY OF TERMS

Buy-backs centre	This is a facility where people bring recyclable plastic materials to exchange them for money.
Collectors	Individuals or entities responsible for gathering plastic waste from various sources to sell at a fee to recyclers and re-manufacturers.
Flake	Small, flat pieces of plastic materials that results from recycling process such as crushing.
Granular	A form of raw material from grounded plastic waste used in the production of plastic products.
Landfill site	A designated low area where waste is buried between layers of earth.
Plastic Baling	The process of compacting plastic material by reducing the volume of plastic waste making it more efficient and cost effective to handle and transport for further processing.
Plastic Collection	The process of gathering plastic materials from various sources for recycling, and proper disposal.
Plastic management value chain	The series of interconnected activities involved in the lifecycle of plastic materials from production and consumption to disposal or recycling.
Pelletised Plastic	Plastic materials that have been processed and formed into standardised units known as pellets.
Plastic Recovery	Facilities dedicated to recovering and processing plastic waste for recycling or proper disposal.
Plastic Re-manufacturing	The process of transforming plastic waste into new products through various manufacturing techniques.
Plastic Sorting	The process of separating different types of plastic materials based on their composition.
Private Sector	Refers to Recyclers, re-manufacturers, and collectors.
Pyrolysis Plant	A plant that converts plastic material into fuel and organic compost.
Segregation	The act of separating different types of waste materials from one another.

EXECUTIVE SUMMARY

In Ghana, the management of plastic waste has become a significant environmental and social issue. Ghana imports about 10,000 metric tonnes of plastic annually (Agbai, 2018) and since most of these plastics are nonbiodegradable, they become waste after their use. Ghana generates approximately 840,000 tonnes of plastic waste per year and approximately 9.5% of what is collected is recycled and the rest are indiscriminately disposed of without regard to its environmental impact.

2. The government of Ghana has implemented laws and programs all in an attempt to manage plastic waste effectively. This includes a ban on plastic production and imports in 2008 and the establishment of the Plastic Waste Recycling Fund in 2011, funded through proceeds from a levy of 10% Environmental Excise Tax on imported plastics and related items. Additionally, the government established the Ghana National Plastic Action Partnership (NPAP) and approved the National Plastics Management Policy (NPMP) in March 2020 which aims to implement programs to comprehensively manage used plastics across their life cycle and value-chain as a vehicle for sustainable development, enabling a shift towards a plastics circular economy. These initiatives aim to promote recycling and implement comprehensive waste management programs, fostering a shift towards a circular economy for plastics. Furthermore, the Government established the Ghana National Plastic Action Partnership (NPAP) that aims at supporting the public, private and civil society sectors to promote recycling of used plastics.

3. Despite these efforts, public awareness on safe and economic disposal practices of used plastic such as segregation, recycling and controlled incineration and landfilling of plastic waste remains a challenge in Ghana. A significant portion of generated used plastics is indiscriminately disposed of through littering,

dumping in drains, and uncontrolled burning, contributing to environmental degradation and flooding.

4. In view of this, the Auditor-General, in line with Section 13(e) of the Audit Service Act, 2000 (Act 584), commissioned this audit to ascertain whether measures MESTI had implemented were effective and to recommend corrective actions for improvement.

What we did.

5. We assessed whether measures put in place by MESTI, to sensitise the public and to promote used plastic segregation, collection and recycling or responsible disposal are ensuring that the environment is not littered with used plastics. We sought to find out whether MESTI:

- i. Created awareness and educated the public on available options for plastic waste disposal,
- ii. Supported the provision of requisite infrastructure for plastic waste collection, recovery, recycling, and final disposal and
- iii. Collaborated with relevant stakeholders in the implementation of plastic waste disposal initiatives.

What we found and the way forward

Awareness creation and education on proper plastic waste disposal

6. MESTI has not developed a cohesive and streamlined communication strategy. The Ministry's efforts to educate the public on plastic waste disposal were disjointed, lacking coordination and consistency. Consequently, the public continues to improperly dispose of plastic waste by dumping them in open drains, littering, and open burning.

7. To achieve an improved practice among the public in the disposal of used plastic, we recommended that MESTI:

- i. Ensure the Director of PPBME develops and disseminates a communication strategy targeting specific audiences, outlining campaign frequency and channels,
- ii. Collaborate with the private sector and MMDAs to integrate awareness creation into their annual action plans and
- iii. Implement a robust monitoring and evaluation mechanism to assess the impact of awareness campaigns and guide future initiatives.

Provision of facilities and logistics to Support Segregation, Collection, and Recycling of plastic waste.

8. MESTI failed to establish guidelines for the utilisation of the Plastic Waste Fund (PWF), which had accumulated GH¢8,593,442.00. This hindered efforts to enhance logistics and infrastructure for private sector recycling companies and provide households with waste segregation bins.

9. To effectively utilise the Plastic Waste Fund for logistics and infrastructure provision, we recommended the following:

- i. The Director of Policy Planning, Budget, Monitoring, and Evaluation should develop internal guidelines in accordance with Act 863 to guide the fund's utilisation,
- ii. MESTI, in collaboration with the MMDAs, should gather information on private sector operations to conduct needs assessments and plan the necessary support for entities involved in plastic waste collection, transportation, and recycling and
- iii. The Chief Director of MESTI should ensure that the Ministry submits quarterly reports to the Ministry of Finance on the use of the Plastic Waste Fund.

Collaboration with relevant stakeholders to support responsible disposal of plastic waste

10. MESTI's lack of effective collaboration with stakeholders impeded progress in plastic waste management, resulting in uncoordinated efforts. Consequently, stakeholders operated in isolation, missing opportunities for synergy that could have enhanced the overall effectiveness and impact of addressing plastic waste challenges in the country.

11. To enhance collaboration with relevant stakeholders in plastic waste management, we recommended that MESTI develop and implement a comprehensive plan to identify key stakeholders and assign specific roles to the identified stakeholders within the plastic waste value chain and routinely monitor and report on progress.

12. MESTI responses to our findings and recommendations have been incorporated into this report.

CHAPTER ONE

INTRODUCTION

Plastics are organic polymers largely made up of non-biodegradable substances that serve a variety of purposes in households and industries¹. Plastics, widely utilised in households and industries for their durable and lightweight characteristics, have resulted in an escalating volume of plastic waste globally since the 1950s ((Drzyzga & Prieto, 2018). This trend poses significant risks of mismanagement and adverse environmental impacts².

2. Plastic waste, or plastic pollution is the accumulation of plastic objects in the environment that adversely affect wildlife and humans. The Sustainable Development Goal 12.5 (SDG 12.5), which Ghana is a signatory to aims to reduce waste generation through prevention, reduction, recycling, and reuse.

3. A United Nations Environmental Program (UNEP)³ report outlines various environmental issues linked to plastic waste, including the mortality of aquatic wildlife due to ingestion and slow decomposition rates, exacerbating environmental pollution. The report further indicated that plastic waste decomposes very slowly taking 20 to 1,000 years to break down, which with the passage of time exacerbates the scale of the problem of generation of environmental pollution with such waste.

4. In Ghana, the management of plastic waste has become a significant environmental and social issue. Ghana imports about 10,000 metric tonnes of plastic annually (Agbai, 2018) and since most of these plastics are nonbiodegradable, they become waste after their use. Ghana generates

¹ ¹Plastic Waste – everything you need to know available at <https://cleanstreets.westminster.gov.uk/plastic-waste-complete-guide/#1>.

² Joint Report on Management of Plastic Waste in Europe (April 2022)

³ Selection, Design, and Implementation of Economic Instruments in the Solid Waste Management Sector in Kenya: The Case of Plastic Bags. United Nations Environment Program. 2005

approximately 840,000 tonnes of plastic waste per year and approximately 9.5 percent of that is collected for recycling⁴. The country contributes approximately 92,000 to 260,000 metric tons to the global marine debris⁵ every year.

5. In response to the environmental impact of plastic waste, the government implemented laws and programs to manage plastic waste effectively. This includes a ban on plastic production and imports in 2008 and the establishment of the Plastic Waste Recycling Fund in 2011, funded by a 10% Environmental Excise Tax. Additionally, the government established the Ghana National Plastic Action Partnership (NPAP) and approved the National Plastics Management Policy (NPMP) in March 2020. These initiatives aim to promote recycling and implement comprehensive waste management programs, fostering a shift towards a circular economy for plastic. The Government also established the Ghana National Plastic Action Partnership (NPAP) that aim at supporting the public, private and civil society sectors to promote recycling of used plastics. In March 2020, cabinet approved the National Plastics Management Policy (NPMP) which aims to implement programs to comprehensively manage used plastics across their life cycle and value-chain as a vehicle for sustainable development, enabling a shift towards a plastics circular economy.

6. Despite these efforts, public awareness of safe and economical disposal practices such as segregation, recycling and controlled incineration and landfilling of plastic waste remains insufficient in Ghana. A significant portion of generated plastic waste is indiscriminately disposed of through littering, dumping in drains, and uncontrolled burning, contributing to environmental degradation and flooding. According to World Economic Forum⁶, Ghana generates approximately

⁴ <https://www.weforum.org/impact/data-benefits-ghana-fight-against-plastic-pollution/>

⁵ Marine debris is defined as any persistent solid material that is manufactured or processed and directly or indirectly, intentionally, or unintentionally, disposed of or abandoned into the marine environment or the Great Lakes. The most common and harmful types of marine debris include plastic, such as cigarette butts, plastic bags, and food wrappers, and derelict fishing gear made of plastic.

840,000 tons of plastic waste per year and approximately 9.5% of that is collected for recycling⁷.

7. The United Nations Development Program (UNDP) stakeholder conference in 2009 identified the challenge of plastic waste cluttering in Ghana. The UNDP added that heavy rainfall exacerbates this issue, leading to urban floods, waterborne illnesses, and adverse impacts on agriculture, water sources, marine life, and human health. This is evidenced through drains choked with plastic waste blocking pathways for rainwater to drain contributing to flooding (Amoako C, Inkoom DKB, 2018).

8. Poor municipal waste management services in urban areas lead residents to regularly burn plastic waste in the open, releasing highly toxic substances into the air. This contributes to air pollution-related premature deaths, with more than 28,000 such deaths reported in Ghana annually by the World Health Organisation⁸.

9. Considering these concerns, the Auditor General initiated an audit into the Disposal of Plastic Waste in Ghana, in accordance with Section 13(e) of the Audit Service Act, 2000 (Act 584).

Purpose of the Audit

10. To ascertain whether measures put in place by the Ministry of Environment Science Technology and Innovation (MESTI) in collaboration with relevant stakeholders to promote a sustainable plastic disposal in the country were effective and where necessary to recommend corrective measures for improvement.

^{7 7} [Data benefits Ghana's fight against plastic pollution | World Economic Forum \(weforum.org\)](https://www.weforum.org).
assessed on 1 November 2023.

⁸ [written_submission_ashesi_university.pdf \(ox.ac.uk\)](https://www.ox.ac.uk)

Scope of the Audit

11. The audit covered the period 2019 to 2023 on the activities of the Policy Planning and Evaluation Directorate of MESTI and was carried out from January to June 2024 on public education, support for the provision of recycling plants, plastic waste segregation bins/containers, and collaboration with stakeholders in ensuring sound disposal of plastic waste.

Audit objectives

12. The objective of the audit was to assess whether measures put in place by MESTI, to sensitise the public, segregate, collect and recycle and dispose of plastic waste are ensuring that the environment is not littered with used plastics. The measures are:

- i. Awareness creation/public education on available options for plastic waste disposal,
- ii. Provision of the requisite infrastructure for plastic waste collection, recovery, recycling, and final disposal and
- iii. Collaboration with relevant stakeholders in the implementation of plastic waste disposal initiatives.

Audit questions and Assessment criteria

13. The audit questions, assessment criteria and the sources of criteria are presented in *Appendix 'A'*.

Audit standards, sampling, and methodology

Audit standards

14. We carried out the audit in accordance with the International Standards of Supreme Audit Institutions (ISSAIs), relevant to performance auditing. These are: ISSAI 100-Fundamental Principles of Public-Sector Auditing, ISSAI 300-Fundamental Principles of Performance Auditing, and ISSAI (3000-3100)-Performance Audit Guidelines.

Audit sampling

15. The team visited Korle Klottey Municipal Assembly (KoKMA), Accra Metropolitan Assembly (AMA), Tamale Metropolitan Assembly (TaMA), Savelugu Municipal Assembly (SMA), Kumasi Metropolitan Assembly (KMA) and Asokwa Municipal Assembly (AsKWA) to establish the level of collaboration with MESTI in ensuring proper disposal of used plastics. The team also visited a total of 13 buy-back centres, recycling, and re-manufacturing companies to obtain information on the assistance they have received from MESTI and 60 households in the selected districts visited to administer questionnaire to obtain information on the level of awareness on available options for disposing off plastic waste and facilities available to collect and store plastic waste. It was also to assess the effectiveness of MESTI's education and awareness initiatives aimed at promoting proper plastic waste management practices among households.

Audit methodology

16. We reviewed documents on how MESTI was ensuring the sustainable ways of disposing of plastic waste; interviewed key players in the plastic waste management process and inspected buy-back centres, recycling and remanufacturing factories.

a. Documents review

17. We reviewed documents related to plastic waste disposal to ascertain whether MESTI planned for and undertook public sensitisation activities, budgeted, and used the approved plastic waste fund to support plastic waste activities and to assess the effectiveness of collaboration with relevant stakeholders in carrying out activities in managing plastic waste. These reviews were done to gather evidence to support our findings and conclusion. See *Appendix 'B'* for list of documents reviewed and reasons for reviewing them.

b. Interviews

18. We interviewed officers of MESTI, that played key roles in terms of planning and implementation of the plastic policy. We interviewed officers to obtain clarifications, confirmations, and explanations on issues we noted from documents review and field inspections.

19. We also interviewed officers of other stakeholder institutions such as MMDAs whose activities are critical in managing plastic waste. This was to assess the extent of MESTI's collaboration with these stakeholders in ensuring the proper coordination of efforts in the disposal of plastic waste. We also interviewed stakeholders within the plastic management value chain to obtain information on the extent of MESTI's collaboration with them and understand their challenges. See *Appendix 'C'* for persons interviewed and reasons for interviewing them.

c. Inspections and observations

20. We carried out physical inspection of 13 recycling and remanufacturing companies in the selected metropolitan and municipal assemblies in the southern, middle, and northern belts of Ghana to ascertain their functionality and individual challenges and needs which can be supported by MESTI.

21. We also visited 60 houses in communities within sampled MMDAs to administer questionnaire to obtain information on the level of awareness on waste disposal options and whether they are segregating their waste and whether they have waste bins to support waste segregation. We also visited landfill and skip sites to find out how plastic waste that end up there are finally treated.

CHAPTER TWO

DESCRIPTION OF PLASTIC WASTE MANAGEMENT

Historical background of plastic waste management

22. Plastics were first introduced in Ghana in the mid-20th century, and their popularity grew rapidly due to their affordability and multiple use. Plastics were used for packaging, construction, and for storage of various consumer goods.

23. In the early 1950s, there was little regulation on the production, use, or disposal of plastics in Ghana⁹. This lack of regulation contributed to the proliferation of plastic waste in the country. Over the years, it became evident that plastic waste was causing significant environmental problems, including littering, clogged drainage systems, and harm to wildlife.

24. In an attempt to resolve the used plastic menace, the government in 2008 banned the importation and manufacture of plastics in the country. The government could not sustain the ban due to public outcry and subsequently lifted the ban.

25. Ghana joined the Global Plastic Action Partnership (GPAP) in October 2019, to form the Ghana National Plastic Action Partnership (GNPAP) a public-private platform dedicated to fostering action to combat the plastic pollution crisis. GNPAP work closely with Ghana 's Ministry of Environment, Science, Technology, and Innovation (MESTI) to promote sustainable ways of managing plastics.

⁹ Okae-anti,d(2018). The Politics of Environmental Policy Implementation in Developing Countries.

26. Furthermore, MESTI formulated the National Plastic Management Policy (NPMP) in 2020 together with relevant stakeholders both in government and private sector to ensure a collaborative and coordinated approach to plastic waste management in the country.¹⁰

27. Ghana has had several interventions from international organizations like the United Nations Environment Program (UNEP) to develop strategies and policies for managing plastic pollution or waste. For instance, in 2021, the United Nations Development Program (UNDP) in collaboration with Coca Cola Foundation funded City Waste Recycling company to expand its plastic recycling business for its contribution in managing plastic waste in the country.¹¹

Mandate of MESTI

28. Section 11 of the Civil Service Act, 1993 (PNDCL 327) as well as Civil Service (Ministries) Instrument 2021, Executive Instrument (E.I) 12 mandate MESTI to initiate and formulate policies on Environment, Science, Technology, and Innovation, as well as coordinate, monitor and evaluate the implementation of plans, programs, and performance of the sector for national development.

Vision of MESTI

29. MESTI envisages to attain “Sustainable Development of Environment, Science, Technology and Innovation for all.”

Functions of MESTI

30. The functions of MESTI regarding plastic waste management are:

- a. Lead the implementation of the National Plastic Management Policy (NPMP);

¹⁰<https://www.graphic.com.gh/news/general-news/ghana-news-release-funds-from-environmental-excise-tax>.

¹¹ UNDP report on *Ghana Plastic Waste menace*, March 2022.

- b. Coordinate the activities of other Ministries and agencies in the plastic management value chain;
- c. Enhance environmental protection services; and
- d. Reduce Environmental pollution.

Laws, Regulations and Policies

31. Ghana has implemented series of laws, regulations and policies aimed at governing the management of plastic waste within its borders. These regulatory instruments are designed to address pressing environmental concerns associated with plastic pollution while promoting sustainable development initiatives. Key among these legal frameworks are:

- i. The National Plastic Management Policy, enacted in March 2020, endeavours to comprehensively regulate the use and disposal of plastics. Its primary objectives include mitigating current environmental challenges posed by plastics and fostering sustainable development practices,
- ii. The Environmental Excise Tax (EET) under the Customs and Excise (Duties and Other Taxes) (Amendment) Act of 2013 (Act 863), which imposes a 10% tax on imported plastics. This regulation aims to incentivise responsible plastic waste management practices by discouraging excessive importation and promoting local recycling efforts,
- iii. The Public Financial Management Act, 2016 (PFMA) Act 921 establishes principles and standards for the management of public finances, aiming to ensure transparency, accountability, and effective use of public funds. It governs budgeting, financial reporting, procurement, and oversight mechanisms to promote fiscal discipline and efficient resource allocation in the public sector and

- iv. The Public Procurement Act, 2003 (Act 663) as amended by Act 914 to ensure a harmonised process of public procurements that ensures public funds are utilised judiciously, economically, and efficiently to achieve value for money, promoting fairness and competition in public procurement and promoting transparency and accountability.

Funding

32. During the period of the audit, the Ministry of Environment, Science, Technology, and Innovation (MESTI) financed initiatives concerning plastic waste through the Plastic Recycling Fund (PRF) and donor sources. The Ministry expended GH¢7,480,804.34 out of a total amount of GH¢8,593,442.00 received from the Fund leaving a balance of GH¢1,112,637.66 as at 31 December 2023. The PRF consists of a 10 percent levy calculated based on the cost, insurance, and freight (CIF) value of imported plastic and plastic products, which is then transferred into the consolidated fund and subsequently allocated to the PRF by the Ministry of Finance (MoF). However, the MoF did not disburse the funds to MESTI during the years 2019 and 2020.

33. During the period 2021 to 2023, MESTI utilised an amount of GH¢1,044,596.61 from donor sources to provide oversight functions in respect of plastic waste management initiatives.

34. A summary detailing the budget, allocation, and expenditure from the PRF and donor sources for plastic waste management initiatives undertaken by MESTI from January 2021 to August 2023 is presented in Table 1.

Table 1: Funding received and expended on Plastic waste management activities from 2021 to August 2023.

Year	G.O.G. PLASTIC RECYCLING FUND	
	Amount received (GH¢)	Amount expended (GH¢)
2021	2,792,227.00	2,370,717.22
2022	3,467,392	3,440,865.56
2023	2,333,823	1,669,221.56
Total	8,593,442.00	7,480,804.34

Source: Audit team's analysis of MESTI's financial statements.

Organisational structure of MESTI.

35. The Directorate of Policy Planning, Budgeting, Monitoring, and Evaluation (PPBME), tasked with overseeing plastic management, is led by a director and supported by three-unit heads. The Director of PPBME reports directly to the Chief Director. Additional support services such as financial management and procurement are provided by the Finance Directorate and Procurement Units respectively. *Appendix 'D'* shows the departments within MESTI in charge of managing plastic waste.

Roles and Responsibilities of Stakeholders

36. The roles and responsibilities of key stakeholders in the management of plastic waste is shown in Table 2.

Table 2: Stakeholders and their roles and responsibilities.

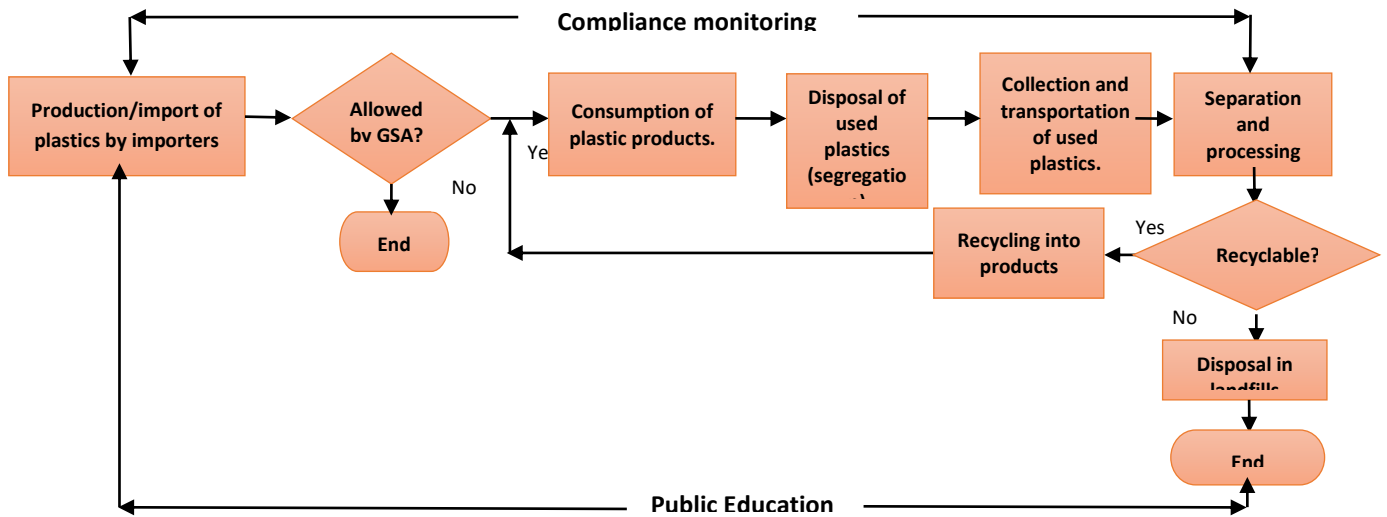
Stakeholders	Roles and Responsibilities
Ministry of Finance (MoF)	<ul style="list-style-type: none"> • Disburses money received from the consolidated fund for plastic waste into the plastic waste recycling fund.
Ghana Revenue Authority (GRA)	<ul style="list-style-type: none"> • Releases funds of the revenue generated from the deduction of 10 percent of cost, insurance and freight of imported plastics into the consolidated fund.
Ministry of Local Government, Decentralisation and Rural Development (MLGDRD)	<ul style="list-style-type: none"> • Facilitating a clean and healthy environment. • Manage plastic waste through its metropolitan, municipal and district assemblies. • Facilitate the effective implementation of the Policy on plastic waste management through development partners.
Metropolitan Municipal and District Assemblies (MMDAs)	<ul style="list-style-type: none"> • Implement waste management policies. • Enact bylaws to regulate disposal of waste including plastics. • Provide municipal solid waste management services, • Prepare solid waste management plans, • Frame byelaws, levy and collect fees, • Provide finance to solid waste management systems, • Create public awareness. • Involve the informal sector in solid waste management. The informal sector comprises of waste recyclers, Non-Government Organisations, Community-based organisations and private partners.
Donors	<ul style="list-style-type: none"> • Provide funding support for research, infrastructure, and awareness campaigns related to plastic waste management. • Allocate resources to support and scale up existing recycling facilities and technologies. • Encourage collaboration between different stakeholders to create holistic and effective plastic waste management solutions.
Plastic Waste Collectors	<ul style="list-style-type: none"> • Collect plastic waste from various sources and sort them based on types. • Transportation of collected plastic waste to recycling facilities and final disposal sites. • Educate the community on proper disposal practices and encourage participation in recycling programs.
Plastic Manufacturers Association	<ul style="list-style-type: none"> • Design products with an emphasis on recyclability and use of eco-friendly materials. • Implement and support take-back programs for the recycling of their products. • Invest in research and development of alternative materials that are biodegradable or easier to recycle.
Consumers	<ul style="list-style-type: none"> • Minimise the use of single-use plastics and opt for reusable alternatives. • Separate plastics waste from other types of waste for proper disposal and recycling.

Source: Compiled from the National Plastic Waste Management Policy (March 2020) and the mandate of the entities.

Process Description.

37. The process description for managing plastic waste is shown in Figure 1 and a detailed description is attached as *Appendix 'E'*.

Figure 1: Process description of managing plastics.



CHAPTER THREE

FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

38. This Chapter presents our findings conclusions and recommendations based on analysis of information obtained through our audit methodology. The findings are presented in line with our lines of inquiry under the following headings:

- a. Awareness Creation to influence behaviours on plastic waste disposal,
- b. Provision of facilities and logistics to Support Segregation, Collection, and Recycling of plastic waste and
- c. Collaboration with relevant stakeholders to support responsible disposal of plastic waste.

a. Awareness Creation to influence responsible plastic waste disposal practices.

The Ministry of Environment, Science, Technology, and Innovation (MESTI) did not effectively conduct public awareness campaigns to sensitize the general public on proper plastic disposal options.

39. Section 3.1 of Strategic Action Plan of the National Plastic Waste Management Policy requires MESTI to create awareness and educate the public on the use, disposal, and opportunities for recycling of plastic waste. To ensure this, the Strategic Action Plan further requires MESTI to develop, disseminate and implement a national communication, education, and mainstreaming strategy that details the targeted audience, frequency of the awareness programs and preferred communication channels. This was to enlighten the public on the negative effects of plastic pollution on the environment, and to encourage responsible disposal of plastic waste.

40. MESTI was required to adopt a collaborative approach to sensitise the public on used plastic disposal options. In this regard, MESTI was required to collaborate with Metropolitan, Municipal, District Assemblies (MMDAs) and the private sector to carryout sustained public awareness aimed at influencing behavioural change to proper disposal of plastics.

41. We found that MESTI did not develop, disseminate, and implement a comprehensive national communication, education, and mainstreaming strategy as required by the Strategic Action Plan.

42. In the absence of strategy on awareness creation, we noted that MESTI annual action plans are not clear on the medium for awareness creation, collaboration, frequency, and targeted audience. See Table 3 for the Annual action plans of MESTI on public awareness and the deficiencies we identified.

Table 3: MESTI annual Action Plans on awareness creation and their status.

Year	Planned awareness creation activity	Medium for communication	Frequency of communication	Targeted audience	Status	Auditor's Comments
2019	-	Not applicable	not applicable	Not applicable	Not applicable-	NPMP was not in existence during year under consideration and therefore no plan was made
2020	-	Not applicable	Not applicable	Not applicable	Not applicable	Year the NPMP was approved, and Action Plan drafted
2021	Develop, disseminate and implement the National Communication, Education and Mainstreaming Strategy using all National Outlets as key instruments	Not indicated	Not indicated	Not indicated	-	MESTI has not developed a strategy for awareness creation
2022	<ul style="list-style-type: none"> • Mandate Private Sector to incorporate awareness creation in their annual action plan. • Promote source segregation. 	Not indicated	Not indicated	Not indicated	MESTI undertook A one-day awareness campaign at Abetifi conducted.	<ul style="list-style-type: none"> • MESTI did not mandate Private Sector to incorporate awareness creation in their annual action plan. • MESTI did not adequately promote source segregation.
2023	<ul style="list-style-type: none"> •Mandate Private Sector to incorporate awareness creation in their annual action plan. •Promote source segregation. 	Not indicated	Not indicated	Not indicated	-	MESTI did not mandate Private Sector to incorporate awareness creation in their annual action plan. MESTI did not promote source segregation.

Source: Audit team's compilation from the National Plastic Management Policy (March 2020).

43. Moreover, we noted that in the absence of a strategy and clear plans, MESTI resorted to ad hoc methods for awareness creation. The Ministry on its own and in some instances, in collaboration with other stakeholders conducted

community awareness creation activities. However, these efforts appeared disjointed and lacked cohesion. For instance, MESTI collaborated with NORAD for a pilot project in Accra in 2022, themed "Plastics Free Schools," wherein selected schools received sensitisation on waste disposal practices. Additionally, in November 2021, MESTI, working with its agent CSIR-IIR, initiated a project in three schools within Greater Accra Metropolitan Area (GAMA) to educate students about responsible plastic waste disposal. Furthermore, during the Easter festivity in 2022, MESTI organised a one-day campaign in Abetifi to raise awareness about waste segregation and proper disposal of used plastics.

44. We further noted that MESTI did not ensure that the activities of the MMDAs we visited were in alignment with MESTI's awareness strategy on waste disposal practices. In this regard, MESTI did not hold stakeholder consultations with the MMDAs to discuss plans on awareness creation and the role the MMDAs are expected to play to enable them to incorporate these roles or activities in their plans to ensure coordinated effort in creating public awareness and continuity of these activities. For instance, MESTI indicated in its 2022 Annual Action Plan to collaborate with some selected MMDAs in GAMA to carryout awareness creation to sensitise the public about source segregation of plastics but was not implemented.

45. We found through the Director of PPBME of MESTI that the Ministry is yet to develop and implement overarching strategy of public awareness to sensitise the public on good practices concerning plastic waste.

46. The absence of guidance and coordination from MESTI in creating public awareness led to disjointed efforts by the MMDAs on awareness, thereby resulting in the public lumping plastic with other forms of solid waste and still littering the environment.

47. Residents in the metropolitan and municipalities we visited engaged in improper plastic disposal practices such as burning, dumping into open spaces and gutters, and mixing plastic waste with other forms of waste as shown in Pictures 1 and 2. Out of the 60 households visited within the selected Assemblies, only 8 households were segregating their plastic waste from other waste. These 8 households were isolated cases and were segregating on the request by individual collectors and not as a result of sensitisation on responsible way of plastic disposal. Table 5 shows the details of data gathered from households visited.

Table 5: Analysis of households visited, the state of waste segregation and sensitisation.

Households within Assemblies visited	Number of households segregating waste on request.	Number of Households who do not segregate their waste at all.	Number of Households who have been sensitised	Number of Households who have not been sensitised.
KMA	2	8	0	10
AsKMA	1	9	0	10
TaMA	0	10	0	10
SMA	0	10	0	10
KoKMA	2	8	0	10
AMA	3	7	0	10



Source: Audit team household inspection in s in the communities within the Assemblies on 23-2-24.

Picture 3 & 4: Plastics littered within some communities visited.



Source: Audit team inspection at Savelugu in Northern Region on 21-2-24 at 09:17am.

48. The absence of coordinated efforts in awareness creation hinders progress towards behavioural change among citizens in achieving responsible waste management practices at the levels of households in the country. Furthermore, despite substantial spending on awareness creation, there were no records to substantiate the execution of these activities.

Recommendations

49. We recommended that MESTI:

- i. should ensure that the Director of PPBME develop and disseminate, through national outlets, a communication strategy specifying target audience, campaign frequency, and communication channels for awareness creation,
- ii. should collaborate with the private sector and MMDAs to incorporate awareness creation into their annual action plan for implementation, and
- iii. should ensure that PPBME implements a robust monitoring and evaluation mechanism to assess the impact of awareness campaigns to inform future initiatives.

Management Response

50. *Management of MESTI agreed to the findings and stated that it has noted the recommendations for implementation.*

b. Provision of facilities and logistics to Support Segregation, Collection, and Recycling of plastic waste.

MESTI did not ensure that the plastic waste fund was used for its intended purpose.

51. Strategic Action 2.3 of Focus Area 2 of the National Plastics Management Policy (NPMP) mandates MESTI to support formalised private sector companies to build capacity in the area of logistics and infrastructure for Plastics Collection, Recovery, Recycling and Re-Manufacturing and incentivise them.

52. We expect MESTI to compile comprehensive data on private sector operations, facilitating a needs assessment and strategic planning to enable the Ministry to provide tailored support for the various stakeholders within the plastic waste value chain.

53. We found that MESTI captured in their Strategic Plans (2020 to 2025), to support and incentivise the private sector in the development of the requisite infrastructure along the entire plastic management value chain (collection, recycling, and remanufacturing) in the management of plastic, in collaboration with the private sector, MDAs, and MMDAs with Ministry playing the leading role.

54. We noted that MESTI did not collect data concerning needs of the operations of private sector entities engaged in plastic waste collection, transportation, and recycling. The Ministry also did not act on request made by the private entities submitted to it seeking support in engaging in plastic waste recycling activities as shown in Table 6. For instance, we found that StarPLAST made a request to MESTI for crushing machines during a visit by management of MESTI to the facility on 22 February 2022. However, MESTI had not responded to the request to provide any support to the company as at the time of this audit.

Table 6: Requests by Recycling Companies requests made to MESTI and their status.

Company visited	Needs of company	MESTI support
Spaceplast Ghana Limited	<ul style="list-style-type: none"> • Unavailability of trucks. • Providing crushing machines. 	None
Informal Waste Collectors Association	<ul style="list-style-type: none"> • Non- existence of price regulation. • Establishment of a buyback centre. 	None
Kpone Landfill Waste Pickers Association	<ul style="list-style-type: none"> • Lack of collaboration on plastic waste management discussions. • Encroachment of land. • Delay in the pick-up of collected plastics 	None
ACARP	<ul style="list-style-type: none"> • Tax incentive 	None
Pyramid Upcycling Limited	<ul style="list-style-type: none"> • Needs plastic waste cleaning (washing and drying) machines. 	None
Plastic Waste Recyclers Association of Ghana	<ul style="list-style-type: none"> • Permission from Government to set up an ultramodern Plastic Hub. 	None
Miniplast	<ul style="list-style-type: none"> • Tax incentives on plastic waste recycling machine imports. 	None
Dophil Group	<ul style="list-style-type: none"> • support to set up buyback centres and crushers in all regional capitals. • Tax incentives. 	None
Star Plastics Ltd	<ul style="list-style-type: none"> • Space/land to operate and install more complex technology. 	None

	<ul style="list-style-type: none"> • Unavailability of financial support to SMEs involved in plastic recycling. • Lack of support for local engineers and manufacturers to produce machines that are required for the processing of certain plastics. 	
Sky plast	<ul style="list-style-type: none"> • Lack of machines for washing machines, mixers, crushers, pelletisers of PET plastics. • Lack of capital to undertake export of crushed plastics on their own. 	None
Sulhassan Plastic Ent	<ul style="list-style-type: none"> • Limited operation due to Cost of production. 	None
NELPLAST ECO Ghana Ltd	<ul style="list-style-type: none"> • No word has been received following the submission of a proposal to the 1D1F initiative by the government. • Financial assistance to expand operations and employ and train more people. • Unavailability of space and resources to expand and absorb additional raw materials to meet the 20,000kg target and also satisfy its customers or clients. 	None
SRG Industries Ghana Limited	<ul style="list-style-type: none"> • Reducing taxes for their company. 	None
Zenith Plastics Ghana Limited	<ul style="list-style-type: none"> • Incentives to collectors. • Government collaboration. 	None
Coliba Waste Management Services Limited	<ul style="list-style-type: none"> • Access to funding. • Expensive custom cost on importing recycling 	None
Sesa recycling limited	<ul style="list-style-type: none"> • The tax on the import of machines. 	None
Informal Waste Workers Association	<ul style="list-style-type: none"> • Lack of source segregation culture. • Lack of local markets to produce finished products from recovered plastic waste. • Lack of Engineered landfills in Ghana 	None

Source: Audit team compilation of requests submitted to MESTI soliciting for support in the management of plastic waste.

55. Schedule 1 of the Customs and Excise (Duties and Other Taxes) (Amendment) Act, 2013, (Act 863) requires MESTI to dedicate the Plastic Waste Recycling Funds (the Fund) to the recycling of plastic waste and the production of plastic waste bins, bags and the use of biodegradable plastics. Policy Objective 3.3.4 of the National Plastic Management Policy mandates MESTI to clearly define the modalities of disbursement of the fund and ensure accountability in the disbursement of the fund.

56. According to the Ministry of Finance, MESTI was expected to develop a guideline in accordance with the Act (Act 863) to guide them in the utilisation of the fund which was not done. MESTI's Medium-Term Development Plan (MTDP) 2022-2025 and the 2022 budget showed that, MESTI did not indicate

how they were going to utilise the fund in supporting recycling of plastic waste and the production of plastic waste bins, bags, and the use of biodegradable plastics.

57. The Director of Policy Planning Monitoring and Evaluation (PPBME) and the Accountant at MESTI indicated that there was no clear direction as to how to expend the plastic fund. The Chief Internal Auditor confirmed that MESTI did not put in place an internal guideline in accordance with Act 863 to guide MESTI in the utilisation of the fund.

58. The Schedule Officer of the PWF at the Public Investment Directorate under MoF revealed that MESTI failed to file returns on expenditures of the fund for the period 2021 to 2023 to enable it to track the use of the fund for compliance as required by the Environmental Excise Tax (EET) Act 2013 (Act 863). According to the officer, filing of the returns would have provided the Ministry of Finance with information on how MESTI was utilising the Fund to provide the needed advice. We also noted that the Ministry of Finance did not request or prompt the MESTI to submit the returns and continued to release funds to MESTI over the period of the audit.

59. We noted from the six assemblies visited that, there were no designated containers or bins for plastic waste segregation within the communities in the assemblies to collect plastic waste. Our visit to communities within Savelugu Municipality in the Northern Region showed that, there were no recycling or plastic collection points or buy back centres to cater for the plastics generated in the communities. As a result, households dispose their solid waste without segregating them in waste skip containers provided by Zoomlion placed within the communities which ultimately end up on the landfills sites without any effort to recycle them.

60. For communities with recycling, and re-manufacturing infrastructure, we noted that, most of these recycling facilities were small scaled with limited capacity to recycle the volumes of plastic waste generated as indicated by the Secretary at Assorted Waste Alliance in Accra. According to the Secretary, the facility lacked storage for collected plastic awaiting crushing and bagging, hence collected plastics are often washed into storm drains at Odorna in Accra as shown in Picture 3.

61. We further found that, plastic waste collectors faced limited access to transport facilities to convey collected plastic waste to recycling facilities causing delays and subsequent re-cluttering into the environment (Refer to Picture 4 for collected plastics awaiting transportation to recycling plants).

Picture 5: Plastic kept in the open by the Odorna drainage due to lack of storage facility.



Source: Audit team Team's visit to recycling and buyback centres on 15-2-24 at 10:20am

Picture 6: Bagged plastics awaiting transportation to recycling facility.



Source: Audit team Team's visit to recycling and buyback centres on 27-2-24 at 02:34pm

62. We noted during our visit to households that most did not have adequate bins to segregate waste and hence were not separating plastics from other solid waste materials. Eight out of 60 households visited had bins which they purchased on their own to store their waste before collection and transportation to final disposal sites. Fifty-two out of the 60 households did not have any waste

bins to segregate plastic waste from other forms of waste and according to them would collect and dispose of their waste either by burning, dumping in open drains usually during rainy days, dumpsites and within the communities as seen in Picture 7 and 8.

Picture 7: Plastic waste with other forms of Waste dumped together within a community at Korle Klottey, Accra.



Source: Audit team inspection at Savelugu in Northern Region on 21-2-24 at 09:17am.

Picture 8: Open drain filled with plastics waste.



Source: Audit team inspection at SSNIT flats in Tamale, Northern Region on 22-2-24 at 11:24am.

Conclusion

63. The Ministry failed to develop guidelines for the utilisation of the plastic fund, which had accumulated GH¢8,593,442.00 as inflows. Also, quarterly, or annual financial returns on the Fund were not submitted to MoF to enhance accountability.

64. MESTI's failure to develop Guidelines for the Fund's utilisation led to lack of support in terms of improving logistics and infrastructure for private sector recycling companies and providing households with waste segregation bins to facilitate proper utilisation of used plastics.

65. The absence of Fund utilisation guidelines led to arbitrary utilisation of the Funds for other activities, and this impeded MESTI's capacity to perform a comprehensive needs assessment, formulate adequate support strategies as

stipulated by the National Plastics Management Policy (NPMP) and delineated in its Strategic Plan (2020 to 2025) and the PWF Act. Consequently, MESTI's efforts to facilitate and incentivise private sector enterprises in enhancing the logistical and infrastructural capabilities for plastic waste management did not yield the required results.

Recommendation

66. We recommended that:

- i. PPBME should develop an internal guideline in accordance with Act 863 to guide the utilisation of the PWF,
- ii. MESTI in collaboration with the MMDAs should collect information on the operations of the private sector to facilitate the conduct of needs assessment, to plan and provide the required support for entities engaged in plastic waste collection, transportation, and recycling and
- iii. Chief Director of the MESTI should ensure that Ministry at the end of each quarter and the financial year submit returns to the Ministry of Finance on the use of the PWF.

Management Response

67. *Management of MESTI agreed to the findings and added that they have noted the recommendations for implementation. Management further stated that the Plastic Waste Recycling Fund was scrapped by Parliament in 2023.*

c. Collaboration with relevant stakeholders to support responsible disposal of plastic waste

MESTI did not ensure adequate and sustained collaboration with relevant stakeholders in plastic management.

68. The National Plastic Waste Management Policy requires MESTI together with the MMDAs through the MLGRD to work in close collaboration in managing plastic waste. MESTI is further required to foster

closer collaboration with the private sector for the purposes of supporting them in the activities aimed at recycling waste plastics. We expected MESTI to identify and clearly define the roles of these key players in plastic management.

69. We found that MESTI in an attempt to collaborate with relevant stakeholders, formed a Technical Working Group (TWG) made of representatives from the Ministry of Local Government, Rural Integration and Development (MLGRID), Ministry of Sanitation and Water Resources (MSWR), Environmental Protection Agency (EPA) and the private sector (recycling and remanufacturing companies) to facilitate a pilot project on management of plastics within the Greater Accra Metropolitan Area (GAMA) in seven selected municipalities. The TWG was tasked to monitor and evaluate the assemblies' performance and recommend ways for improvement. These municipal assemblies were Ayawaso East and North Municipal Assembly, Korle Klottedey Municipal Assembly, La Dade-Kotopon Municipal Assembly, Ablekuma West, Ashaiman Municipal Assembly and Okaikwei North Municipal Assembly. MESTI based on a predetermined criteria selected KoKMA to pilot the project which was to be replicated across the country.

70. However, we noted that on 25 April 2023, the Minister for MESTI put the project on hold citing lack of financial capacity to continue with the pilot project. The Municipal Planning officer of KoKMA revealed that MESTI requested for a revised financial proposal from KoKMA to pilot the said project. However, after submission of the revised financial proposal and series of follow-ups with the Ministry, there was no response from MESTI to continue with the pilot project.

71. We noted that there was poor collaboration between MESTI and the assemblies. Activities related to plastic waste was centralised at MESTI with little role given to MLGRD who oversees the Metropolitan, Municipal and

District Assemblies (MMDAs) in the implementation of waste management policies.

72. We noted that, there was no harmonisation of plans with key stakeholders in the plastic waste management chain. The plans of the various stakeholders were in variance with each other. For instance, MESTI planned to invest an amount of GH¢6,000,000.00 within six years (2020–2025) in building capacity for plastic collection, recovery, recycling and re-manufacturing facilities. MESTI intended to undertake the capacity building in collaboration with the MMDAs and the private sector companies. However, the Chief Directors of the various MMDAs we visited indicated that, MESTI had not communicated such plans to them. Furthermore, the Ministry hadn't executed these plans at the time of the audit.

73. We noted that the Bye laws implemented by the assemblies did not include measures/ guidelines for plastic waste segregation and disposal options at the household level. Furthermore, in MSWR 2022 annual action plan, the ministry planned to construct five recycling plants across the country by 2025 but this did not reflect in the annual plans of MESTI even though the two ministries are required to collaborate in the management of plastic waste in the country.

74. We further found that, MESTI did not effectively collaborate with the producers, recyclers, and re-manufacturers on efforts to segregate, collect, transport, and recycle plastic waste. Despite letters and proposals from Private Companies for support and partnership with MESTI for the establishment of recycling plants, there were no evidence of MESTI's feedback or engagements with these companies. For instance, we noted from a proposal from Kofam Resources Limited seeking to collaborate

with MESTI on a Public Private Partnership (PPP) arrangement to construct a pyrolysis plant to convert plastic materials into fuel and organic compost.

75. In another instance, another proposal received on the 26 May 2022 from K.B Media in collaboration with Coliba requested MESTI to partner with them in providing financial support to manufacture ten thousand plastic waste bags¹² in a week to be placed in public transports for collecting plastics waste for recycling and creating awareness on plastic littering within the GAMA (See *Appendix 'F'* for Coliba's budget details submitted to MESTI).

76. We again noted a letter from Plastic Producers Responsibility Organisation dated 14 March 2022 requesting a ministerial directive to implement a charge of GH¢0.05 (5 Pesewas) per plastic carry bag at supermarkets and shopping malls to raise revenue into a fund designated to be disbursed to recycling companies for plastic recycling (See *Appendix 'G'* for requests submitted to MESTI and status).

77. However, MESTI did not act on any of these requests and initiatives to ensure that plastic waste is managed effectively.

78. As a result, there is limited capacity to collect, transport and recycle plastic waste in the country. As of 2023, 1.1 million tonnes of plastic waste is generated annually, and the available recycling facilities have the capacity to recycle only 5 percent of the generated waste. The remaining plastics waste are found littered in the environment, burned openly or dumped in open drains.

Conclusion

79. MESTI's lack of effective collaboration with stakeholders hindered progress towards coordinated efforts, undermining the overall effectiveness of plastic waste management. Consequently, stakeholders operated in isolation, missing out on synergistic opportunities that collaborative efforts could provide in addressing plastic waste challenges and achieving the desired impact.

Recommendation

80. We recommended that MESTI develop and implement a comprehensive plan to identify and assign roles to key stakeholders within the plastic waste value chain.

Management Response

81. *Management of MESTI agreed to the finding and accepted the recommendation for implementation. Management further stated that it will strengthen the collaboration with all relevant stakeholders and ensure that all stakeholders play their assigned roles and responsibilities to ensure effective management of plastic waste in the country.*

Overall Conclusion

82. To a large extent, the initiatives the Ministry of Environment Science and Technology and Innovation (MESTI) has put in place to manage plastic waste pollution has not ensured that the environment is protected and safe. The failure to execute comprehensive awareness programs, build capacity, monitor effectiveness, and collaborate with stakeholders led to improper disposal practices of plastic waste. This does not only pose environmental hazards but also undermines efforts towards sustainable plastic waste management in the country. Additionally, the lack of guidelines for utilising the plastic fund reflects poor governance and management practices within the Ministry and further derailing efforts to promote proper disposal of used plastics in the country.

APPENDICES

APPENDIX 'A'

Audit questions audit criteria and sources of criteria

No	Audit question	Audit criteria	Sources of criteria
1	<p><u>Objective 1 - Awareness Creation</u></p> <ul style="list-style-type: none"> • Did MESTI plan to create public awareness? • Did MESTI collaborated with Private sector, and the MMDAs in the awareness creation to ensure alignment of activities to national plans? • Did MESTI monitored and evaluated for corrective action? 	<ul style="list-style-type: none"> • MESTI is to develop and disseminate a sustained National Communication, and Mainstream Strategy on awareness creation using all National Outlets as key instruments. • MESTI is to collaborate with Private sector, and the MMDAs in the awareness creation to ensure alignment of activities to national plans. • MESTI shall monitor and evaluate for correction action. 	<ul style="list-style-type: none"> • Strategic Action 1.1(1) of the National Plastic Management Policy (March 2020). • Strategic Action 1.1(4) of the National Plastic Management Policy (March 2020) and the National Plastic Policy Implementation Plan 2020-25. • Strategic Action 2.4(3) of the National Plastic Management Policy (March 2020).
2	<p><u>Objective 2 - Provision of facilities for disposal of plastic waste</u></p> <ul style="list-style-type: none"> • Did MESTI identified and conducted a needs assessment of households, the plastic recyclers and re-manufacturing companies? • Did MESTI support based on the needs assessments conducted households, formalised private sector companies in the establishment of recycling companies and waste bins to support separation at source, collection and transportation to the recycling facilities? • Did MESTI utilise the Plastic Waste Recycling Fund for its intended purpose? 	<ul style="list-style-type: none"> • MESTI is expected to identify and conduct needs assessment of plastic recyclers and re-manufacturing companies. • MESTI is to support formalised private sector companies in the establishment of recycling companies and waste bins to support separation at source. • MESTI is to dedicate the Fund to the recycling of plastic waste and the production of plastic waste bins, bags and the use of biodegradable plastics and expected to clearly define the modalities of disbursement of the fund and ensure accountability in the disbursement of the fund. 	<ul style="list-style-type: none"> • Strategic Action 2.1 (1) of the National Plastic Management Policy (NPMP). • Strategic Action 2.3 (1) of the National Plastic Management Policy (NPMP). • Section 1, subsection C 2 of the Customs and Excise (Duties and Other Taxes) (Amendment) ACT, 2013, (Act 863).

<p>3</p>	<p><u>Objective 3 – Collaboration with stakeholders in the implementation of plastic waste disposal measures.</u></p> <ul style="list-style-type: none"> • Did MESTI Identify relevant stakeholders to collaborate with in the implementation of plastic waste disposal measures? • Did MESTI ensure that roles and responsibilities of the identified stakeholders were clearly defined? • Did MESTI ensure that stakeholders played their expected roles and responsibilities through sustained monitoring? 	<ul style="list-style-type: none"> • MESTI as the lead implementor of the policy is expected to collaborate with all relevant stakeholders in the management of plastics waste. 	<ul style="list-style-type: none"> • Focus Area 2 of the National Plastic Management Policy (NPMP) National Plastic Management Policy.
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APPENDIX 'B'

List of documents reviewed and the reasons for review.

Document	Reasons for review
Annual, Progress and Performance Reports (2019-2022).	To obtain information on MESTI's planned activities and performance on disposal of plastic waste for the period under review.
Sector Medium-Term Development Plan 2022 - 2025 of MESTI	To obtain information on what MESTI planned to implement/achieve within the audit period in relation to managing and disposing used plastics across the country.
Minutes of meetings	To obtain information on the deliberations and interactions with regards to plastic waste management.
Correspondence file	To obtain information on MESTI's engagements with stakeholders.
National Plastic Waste Management Policy.	To know the mandate, responsibilities and functions of MESTI and other stakeholders involved in the implementation of policy and also obtain criteria for our assessment.
Environmental Excise Tax (EET) Customs and Excise (Amendment) ACT, 2013 (Act 863)	To obtain information on how the fund was to be utilised.
National Plastic Waste Management Policy Implementation Plan (2020-2025).	To obtain information on MESTI's plan of activities on plastic management.
Financial Statements and Cashbooks	To obtain financial information on the fund.
Procurement files	To obtain information on plastic projects within the audit period.
Budget Performance Report	To ascertain whether MESTI budgeted for plastic waste programs or projects.

APPENDIX 'C'

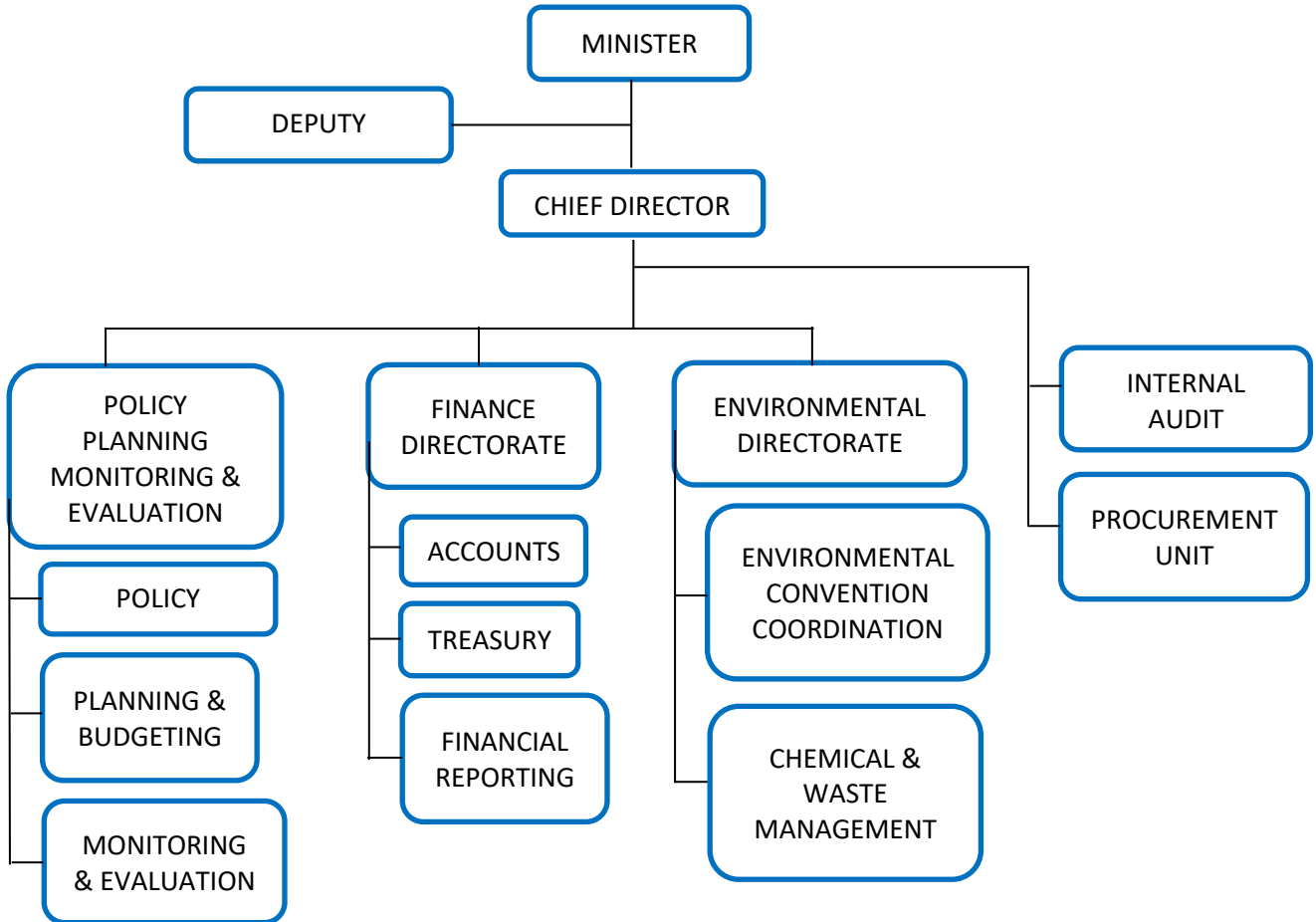
List of Officers interviewed and the reasons for interview.

Interviewee	Reason for the Interview
Chief Director	To obtain information on the measures and strategies MESTI has put in place in managing plastic waste.
Director of PPBME	To obtain information on the status of implementation of programs and projects and performance relating to plastic management.
Director of Environment Department	To obtain information on the standards and programs put in place for managing plastic waste.
Chief Accountant	To obtain information in the utilisation and accountability of the fund.
Chief Internal Auditor	To obtain information on the internal controls in the utilisation and accountability of the fund.
Assistant Director of Budget Unit	To find out the allocation of funds for planned activities on plastic management.
Principal Procurement Manager, Procurement Unit	To find out the process of procurement and number of procurement activities undertaking, and challenges encountered in the implementation of the policies.
Assistant Program Officer -PPBME	To know the number of programs and projects for implementation.
Director of Built Environment - EPA	To ascertain the extent of collaboration between MESTI and EPA in the implementation of the NPMP.

Senior Public Health Engineer, Environment and Health Directorate- MSWR	To ascertain the extent of collaboration between MESTI and MSWR in the management of plastics.
Schedule Officer, Public Investment Directorate, Ministry of Finance (MoF)	To obtain information on the modalities for the disbursement of the fund and mechanism in place accounting for the utilisation of the Fund.
Ministry of Local Government, Decentralisation, and Rural Development. (MLGDRD)	To ascertain the extent of collaboration between MESTI and MLGDRD in the management of plastics.
PRIVATE SECTOR	
Manufacturers, Recyclers, Collectors.	To obtain information on the kinds of plastic material used in making the various kinds of plastic products and to know their level of collaboration with MESTI.
Consumers	To obtain the level of awareness on the proper disposal of plastic waste and the challenges they encounter in the disposal of plastic waste.

APPENDIX 'D'

Structure of MESTI in relation to plastic waste management.



Source: Audit Team (March 2024).

APPENDIX 'E'

Process Description

1. The management of plastic in Ghana is a multisectoral activity that require key stakeholders' collaboration throughout the entire plastic management value chain. MESTI coordinates activities of stakeholders and ensures that there is collaboration among all players to achieve an effective integrated management of plastic waste. Develop and disseminate eligibility criteria for plastics management for certification along the value chain.

Production or import of plastics.

2. Plastic producers coordinate with importers by arranging shipping logistics and ensuring compliance with import regulations and custom clearance procedures. Where the standards are met and approved by Ghana Standards Authority, 10% of the Cost Insurance and freight amount is deducted at the point of entry to be used for recycling and management of plastic waste.

Consumption of plastic products (Plastic users)

3. Plastic products are acquired by consumers for various purposes such as packaging of food and beverages, storing items and other convenient applications. MESTI is to collaborate with public and private sector the MSWR and MLGRD through the MMDAs to ensure compliance with regulations, awareness creation and education on the impacts of plastics on health and the environment.

Disposal of plastic products

4. After usage or consumption of the product, the plastics are disposed off. Source segregation is expected at this stage where the consumer of the plastic product separates the plastic waste from other forms of waste and store in plastic-labelled bins for collection and transportation to the receiving points. MESTI is to ensure the provision of bins, and availability of buy-back centres

through the MMDAs, MSWR and the private sector and monitor to ensure compliance.

Collection and transportation of plastics waste

5. Waste management services companies then collect the segregated plastic waste from the consumer storage point (buy-back centres) and transport it to the storage section of a plastic recycling facility. MMDAs are expected to ensure that the waste management companies who collect waste do not mix up the plastic waste with other forms of waste during the collection and transportation. MESTI through the recycling fund is expected to provide infrastructure support and incentives for collectors and plastic pickers.

Separation and processing

6. The stored plastic waste at the recycling facility is then examined and separated into recyclable and non-recyclable plastics components. The recyclable plastics components are cleaned of any contaminants and processed for recycling. MESTI must ensure that it collaborates with private recycling companies to create the infrastructure and enabling environment for recycling of the plastic waste generated.

Recycling and Disposal

7. At the recycling stage, the plastics are crushed into flakes, washed and processed into plastic pellets and granular which are sent to the production section or facility as raw material to begin the production or consumption process again. The non-recyclable plastics components are disposed of in landfill sites or broken down into biodegradable constituents by the addition of additives, thus ending the process. MESTI is to collaborate with partners in the industry to establish recycling targets, trading platforms resource mobilisation strategy create database on plastic generated, recyclers, and re manufacturers to provide support to boost operations.

Compliance Monitoring and Public Education

8. The policy planning, monitoring and evaluation directorate of MESTI in collaboration with the MLGRD, EPA, MSWR monitor for compliance of regulation throughout the plastic management value chain. MESTI is mandated to ensure the entire continuous process takes place in an environment of education and compliance monitoring.

Budget details of KB Media.

BUDGET:

The budget has been calculated with the one-yard size of material cloth because they are sold in yards. One yard size produces two "*Plastic Waste Bags*".

DESCRIPTION	NUMBER	AMOUNT UNIT (GHS)	TOTAL AMOUNT (GHS)
Materials per yard:			
African traditional print	1 Yard (makes two garbage bags)	15.00	15.00
Rubber inner lining material	1 yard (makes two garbage bags)	20.00	20.00
	TOTAL		35.00
Print media:			
Full-colour screen printed design to educate, create awareness of sponsorship and advertisement fixed on plastic waste bags.	2 Prints. (Two prints for two plastic waste bags)	2.5 per print	5.00
	TOTAL		5.00
Workmanship:			
Plastic waste bag makers.	2 bags	10.00 per bag	20.00
	TOTAL		20.00
	GRAND TOTAL		60.00 <i>(for two plastic waste bags)</i>
			30.00 <i>(for 1 plastic waste bag)</i>

The minimum production of plastic waste bags is **five hundred**.

APPENDIX 'G'

Requests by Recycling Companies visited by MESTI.

Company visited	Needs of company	MESTI support
Spaceplast Ghana Limited	<ul style="list-style-type: none"> • Unavailability of trucks. • Interception of tricycles or Borla Taxis and extortion by the police. • Providing crushing machines. 	None
Informal Waste Collectors Association	<ul style="list-style-type: none"> • Non- existence of price regulation. • Establishment of a buyback centre. 	None
Kpone Landfill Waste Pickers Association	<ul style="list-style-type: none"> • Lack of collaboration on plastic waste management discussions. • Encroachment of land. • Delay in the pick-up of collected plastics 	None
ACARP	<ul style="list-style-type: none"> • Tax incentive 	None
Pyramid Upcycling Limited	<ul style="list-style-type: none"> • Needs cleaning (washing and drying) machines. 	None
Plastic Waste Recyclers Association of Ghana	<ul style="list-style-type: none"> • Permission from Government to set up an ultramodern Plastic Hub. 	None
Miniplast	<ul style="list-style-type: none"> • Tax incentives on machine imports. 	None
Dophil Group	<ul style="list-style-type: none"> • Intend to set up buyback centres and crushers in all regional capitals. • Tax incentives. 	None
Star Plastics Ltd	<ul style="list-style-type: none"> • Space/land to operate and install more complex technology. • Unavailability of financial support to SMEs involved in plastic recycling. • Lack of support for local engineers and manufacturers to produce machines that are required for the processing of certain plastics. 	None
Sky plast	<ul style="list-style-type: none"> • Lack of machines for washing machines, mixers, crushers, pelletisers of PET plastics. • Lack of capital to undertake export of crushed plastics on their own. 	None
Sulhassan Plastic Ent	<ul style="list-style-type: none"> • Limited operation due to Cost of production. 	None
NELPLAST ECO Ghana Ltd	<ul style="list-style-type: none"> • No word has been received following the submission of a proposal to the 1D1F initiative by government. • Financial assistance to expand operations and employ and train more people. • Unavailability of space and resources to expand and absorb additional raw materials to meet the 20,000kg target and also satisfy its customers or clients. 	None
SRG Industries Ghana Limited	<ul style="list-style-type: none"> • Reducing taxes and electricity cost for their company. 	None
Zenith Plastics Ghana Limited	<ul style="list-style-type: none"> • Incentives to collectors. • Government collaboration. 	None
Coliba Waste Management Services Limited	<ul style="list-style-type: none"> • Access to funding. • Expensive custom cost on importing recycling 	None
Sesa recycling limited	<ul style="list-style-type: none"> • The tax on the import of machines. • Unstable power supply. 	None
Informal Waste Workers Association	<ul style="list-style-type: none"> • Lack of source segregation culture. • Lack of local markets to produce finished products from recovered plastic waste. • Lack of Engineered landfills in Ghana 	None

APPENDIX 'H'

Cashbook Extract.

PLASTIC WASTE RECYCLING PROJECT- MESTI CASHBOOK- APRIL 2022

							Apr-22
DATE	PV. NO.	CHEQUE NO.	PAYEE	PARTICULARS	DEBIT GH¢	CREDIT GH¢	BALANCE ¢
01/04/2022				Balance brought forward			1,270,607.78
01/04/2022	MESTI/PWRF/037/2022		CHIEF DIRECTOR	Being payment for T&T, logistics and publicity to Kwahu Abetifi iro the Launch of Plastic Waste Management Campaign		57,046.19	1,213,561.59
01/04/2022	MESTI/PWRF/039/2022		CHIEF DIRECTOR	Being payment for food and refreshment to Kwahu Abetifi iro the Launch of Plastic Waste Management Campaign		15,450.46	1,198,111.13
01/04/2022	MESTI/PWRF/039/2022	000067/8	GRA	WHT & WVAT		2,209.54	1,195,901.59
01/04/2022	MESTI/PWRF/040/2022		BEN ASOMANI	Being payment to Mr. Ben Asomani, technical advisory consultancy at the Resource Recovery Secretariat for the month of February 2022		16,650.00	1,179,251.59
01/04/2022	MESTI/PWRF/040/2022	72	GRA	WHT		1,350.00	1,177,901.59
05/04/2022	MESTI/PWRF/041/2022		CHIEF DIRECTOR	Ministers of Inter-Ministerial Committee Discussions & Stakeholder Consultation for 14-days iro the Launch of the Plastic Waste Management Campaign		200,000.00	977,901.59

PLASTIC WASTE RECYCLING PROJECT- MESTI CASHBOOK- MAY 2022

							May-22
DATE	PV. NO.	CHEQUE NO.	PAYEE	PARTICULARS	DEBIT GH¢	CREDIT GH¢	BALANCE ¢
01/05/2022				Balance brought forward			673,711.59
14/05/2022	MESTI/PWRF/021/2022	73	PRINT PUBLICATION LT	Being payment for the printing of national plastic management policy documents for (MESTI)		23,239.08	650,472.51
		79	GRA	WHT		690.27	649,782.24
							649,782.24
13/05/2022	MESTI/PWRF/046/2022	81	CHIEF DIRECTOR	Reimbursable for Ministers of Inter-Ministerial Committee in respect of the Plastic Pollution implementation for other Sectors 2nd Quarter Sensitization and Operations		450,000.00	199,782.24
							199,782.24
				Closing balance			199,782.24

MISSION STATEMENT

The Ghana Audit Service exists

To Promote

Good governance in the areas of transparency, accountability and probity in Ghana's Public financial management system

By auditing

to recognised international standards

And

reporting audit results to Parliament

