

PERFORMANCE AUDIT REPORT

**ON COLLECTION OF SOLID WASTE BY
WASTE MANAGEMENT COMPANIES IN
PUNJAB (SOUTH)**

AUDIT YEAR 2023-24



AUDITOR-GENERAL OF PAKISTAN

**SERVING THE NATION BY PROMOTING ACCOUNTABILITY, TRANSPARENCY AND
GOOD GOVERNANCE IN THE MANAGEMENT AND USE OF PUBLIC RESOURCES**

FOR THE CITIZENS OF PAKISTAN

PREFACE

The Auditor-General conducts audit subject to Articles 169 and 170 of Constitution of the Islamic Republic of Pakistan, 1973 read with Sections 8, 12 and 15 of Auditor-General's (Functions, Powers and Terms and Conditions of Service) Ordinance, 2001 and Section 90 of the Punjab Local Government Act, 2022. The Performance Audit of Waste Management Companies in District Bahawalpur, Dera Ghazi Khan, Faisalabad and Multan was carried out accordingly.

The Directorate General of Audit, Local Governments, the Punjab (South), Multan conducted Performance Audit "On Collection of Solid Waste by Waste Management Companies" during February 2024 for the financial years 2013-14 to 2022-23 with a view to reporting significant findings to stakeholders. Audit examined the economy, efficiency and effectiveness aspects of Waste Management Companies. In addition, Audit also assessed, on test check basis, whether the management complied with applicable laws, rules and regulations to ensure collection of solid waste by these companies. The Performance Audit Report indicates specific actions that, if taken, will help the management to realize the objectives of the establishment of these companies. Most of the observations included in this Report have been finalized in the light of written replies and decisions taken during three DAC meetings.

The Performance Audit Report is submitted to Governor of the Punjab in pursuance of Article 171 of Constitution of the Islamic Republic of Pakistan 1973, read with Section 90 of Punjab Local Government Act, 2022 for causing it to be laid before Provincial Assembly of the Punjab.

Islamabad
Dated:

(Muhammad Ajmal Gondal)
Auditor-General of Pakistan

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ABBREVIATIONS AND ACRONYMS

AIR	Audit and Inspection Report
AoA	Articles of Association
BoDs	Board of Directors
BWMC	Bahawalpur Waste Management Company
CDG	City District Government
CEO	Chief Executive Officer
DAC	Departmental Accounts Committee
DWMC	Dera Ghazi Khan Waste Management Company
EIA	Environmental Impact Assessment
EPA	Environment Protection Agency
EPD	Environment Protection Department
FWMC	Faisalabad Waste Management Company
GM	General Manager
HR	Human Resource
HR&A	Human Resource and Administration
ICT	Information and Communication Technology
INTOSAI	International Organization of Supreme Audit Institutions
ISWM	Integrated Solid Waste Management
KPIs	Key Performance Indicators
LD	Liquidated Damages
LG	Local Government
LG&CD	Local Government and Community Development
MD	Managing Director
MoA	Memorandum of Association
MWMC	Multan Waste Management Company

NOC	No Objection Certificate
OHS	Occupational Health and Safety
PAO	Principal Accounting Officer
PFC	Punjab Finance Commission
PLGA	Punjab Local Government Act
POL	Petroleum, Oil and Lubricants
PPP	Public-Private-Partnership
RGP	Revenue Generation Plan
SAAMA	Services and Asset Management Agreement
SWM	Solid Waste Management
TMA	Tehsil Municipal Administration
UC	Union Council
US	United States
WMCs	Waste Management Companies

EXECUTIVE SUMMARY

The Directorate General Audit, Local Governments, the Punjab (South), Multan conducted a Performance Audit "On Collection of Solid Waste by Waste Management Companies" operating in Bahawalpur, Dera Ghazi Khan, Faisalabad and Multan for the financial years 2013-14 to 2022-23, during February 2024. The primary objective was to evaluate the economy, efficiency and effectiveness aspects of the Solid Waste Management (SWM) services provided by the Waste Management Companies (WMCs). The audit was conducted in accordance with the auditing standards of International Organization of Supreme Audit Institutions (INTOSAI).

WMCs undertake their operations in accordance with the provisions of Articles of Association (AoA) for the objectives mentioned in Memorandum of Association (MoA). The companies are managed by the Board of Directors (BoDs). The Managing Director (MD) of each WMC is Chief Executive Officer (CEO) who is also a member of the BoDs. Funds of the companies comprise the government grants and income from their own sources. The main objectives of the WMCs are to improve and enhance the existing SWM system and develop an Integrated Solid Waste Management (ISWM) system in order to address environmental and public health issues along with the treatment and disposal of entire municipal waste.

Audit findings exhibited in the report underscore several critical issues that demand immediate attention. The performance of WMCs has been marked by both notable efforts and significant shortcomings. Despite certain initiatives taken by WMCs have brought some level of improvement in the urban waste collection, however, these efforts often confront failure due to systemic inefficiencies, inadequate funding, and lack of incessant government support. Many cities still experience irregular waste collection leading to heaps of undisposed off waste in residential and commercial areas, contributing to environmental pollution and health hazards.

Further, the effectiveness of these WMCs is hindered by mismanagement of resources. The waste management infrastructure remains underdeveloped with insufficient landfill sites and recycling facilities e.g. Faisalabad and Multan face disruption in the process of collection and disposal of waste by logistical challenges and labor issues that exacerbate the waste management crisis. Additionally, there

is a lack of comprehensive waste segregation at the site which limits the efficiency of recycling programs and waste-to-energy initiatives.

To enhance the performance of WMCs, concerted efforts are required to streamline operations, enforce accountability, and foster public-private partnerships. Furthermore, educating the public on the importance of waste segregation and reduction of quantity coupled with enforcement of stringent regulatory regime could lead to hazard free sustainable waste management. This performance audit has raised forty-nine (49) audit observations embodied in the succeeding sections of this report. These audit observations merit careful attention of the management and compliance of the recommendations put forward by Audit. A summary of key audit findings and recommendations is given below.

Key Audit Findings:

- a. Inefficient operations for provision of SWM services and insolvent position of WMCs, relying on government loans instead of achieving financial solvency through implementation of Revenue Generation Plans (RGPs);
- b. Inadequate waste collection due to scanty deployment of resources in the field operations, insufficient operational vehicles and equipment, coupled with vacant key positions;
- c. Absence of liaison of WMCs with stakeholders for minimization of waste generation resulting in open dumping and burning of waste causing hazardous emissions;
- d. Objective of segregation of waste could not be achieved due to lack of ISWM system;
- e. Dearth of Occupational Health and Safety (OHS) measures during collection and dumping of waste;
- f. Scientific landfill sites aimed at dumping solid waste sans assessment of environmental perils;
- g. Violation of Service and Asset Management Agreement (SAAMA) and corporate rules, and
- h. Failure to complete benchmarking, fixing of targets and establishing of KPIs.

Recommendations:

- a. Maximize operational efficiency in collection and dumping of waste by using innovative Information and Communication Technology (ICT) platforms and Public-Private-Partnership (PPP) models for financial self-sustainability;
- b. Ensure efficient utilization of available human and material resources according to operational needs;
- c. Take necessary initiatives for engagement of citizens through awareness campaigns for adherence to by-laws for proper dumping of waste;
- d. Develop ISWM system by integrating multiple approaches and best practices to address the entire waste lifecycle – from generation to disposal;
- e. Address OHS issues on priority to mitigate health risks to the field staff and the public at large;
- f. Construct scientific landfill sites according to international standards along with enforcement and compliance of environmental rules and regulations;
- g. Ensure compliance of SAAMA and corporate rules, and
- h. Carryout benchmarking in order to bring efficiency in operational processes, fixing of targets and establishing KPIs.

1. INTRODUCTION

Before incorporation of Waste Management Companies (WMCs), the functions of collection and disposal of solid waste were entrusted to Solid Waste Management (SWM) sections of local government institutions. In order to develop an Integrated Solid Waste Management (ISWM) system, WMCs were established under Section 42 of erstwhile Companies Ordinance 1984 (now Companies Act 2017) at Bahawalpur, DG Khan, Faisalabad and Multan. The functions and assets of SWM sections of the local government institutions of Bahawalpur, Faisalabad and Multan were transferred to these WMCs through execution of Services and Asset Management Agreement (SAAMA) on 27th March, 2014. Whereas, in case of Dera Ghazi Khan Waste Management Company (DWMC), SAAMA was executed on 2nd September, 2020.

WMCs are governed by their respective BoDs. According to Clause-III of the MoA, WMCs were incorporated as not-for-profit organizations. The main objectives of the WMCs are to provide sustainable, efficient and affordable waste management services and to enhance quality of the existing SWM system of Bahawalpur, DG Khan, Faisalabad and Multan.

The companies conduct their operations in accordance with the provisions of AoA for the objectives mentioned in the MoA. BoDs comprise not more than thirteen directors including a Chairman. Five directors are ex-officio members; four directors are nominated from private sector. The remaining four positions are filled by technical experts.

MDs/CEOs are the Principal Accounting Officers (PAOs) responsible for the management and operations of their respective WMC. The responsibilities of the MD include implementation of strategies and policies approved by the BoDs, making appropriate arrangements to ensure that resources are properly safeguarded and used economically, efficiently and effectively in accordance with all statutory provisions and obligations.

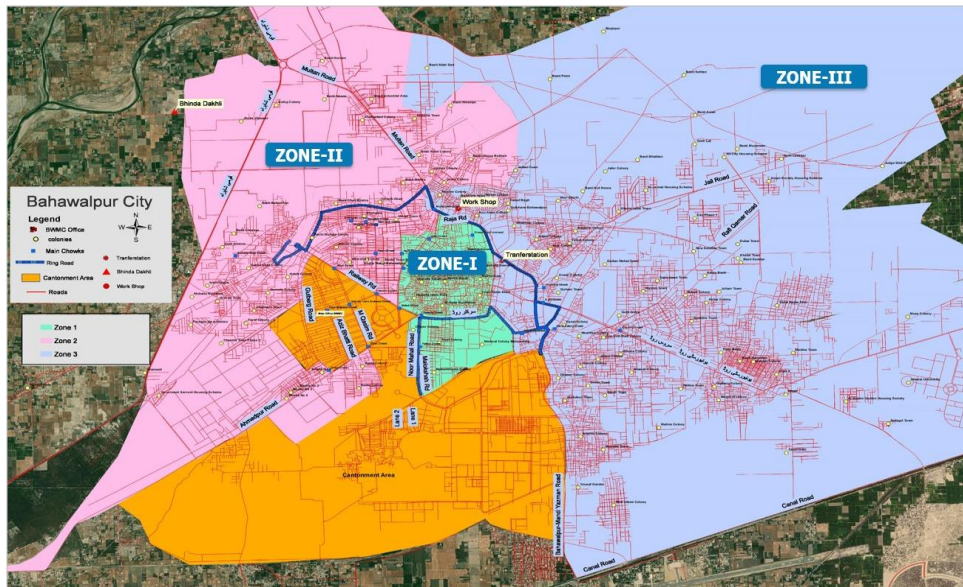
1.1 Objectives of WMCs

The objectives are:

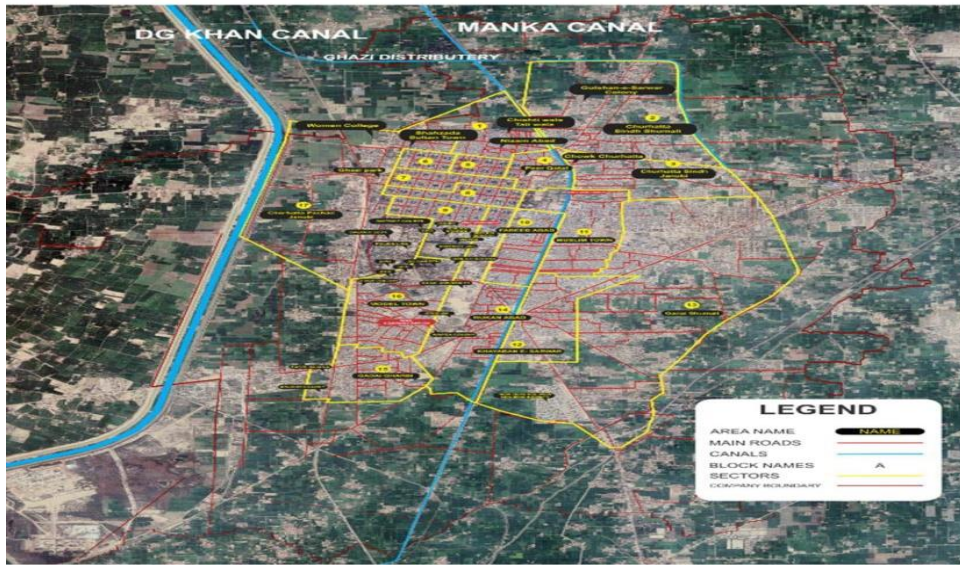
- a. Implementation of programs and projects for improvement and enhancement of SWM system;
- b. Establishment and functioning of ISWM system;
- c. Private sector participation for waste collection services;
- d. Provision of sustainable, efficient and affordable waste management services; and
- e. Treatment of waste by using techniques and technologies in line with environmental protection and economy.

1.2 Territorial Jurisdiction of WMCs

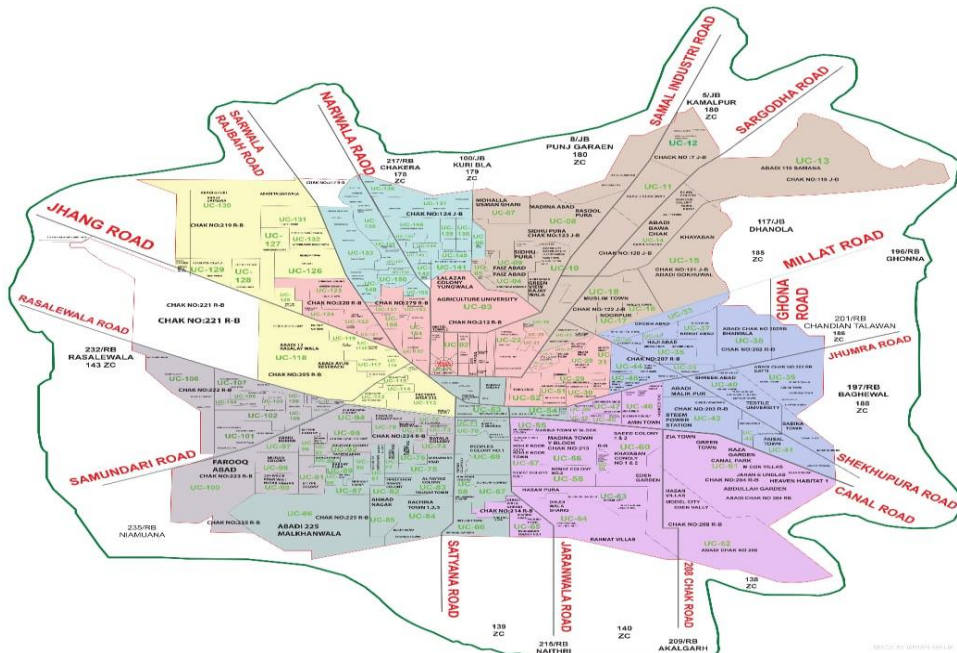
- a. **BWMC** operates in the city of Bahawalpur, managing waste across 21 Union Councils (UCs) as mentioned in the map below:



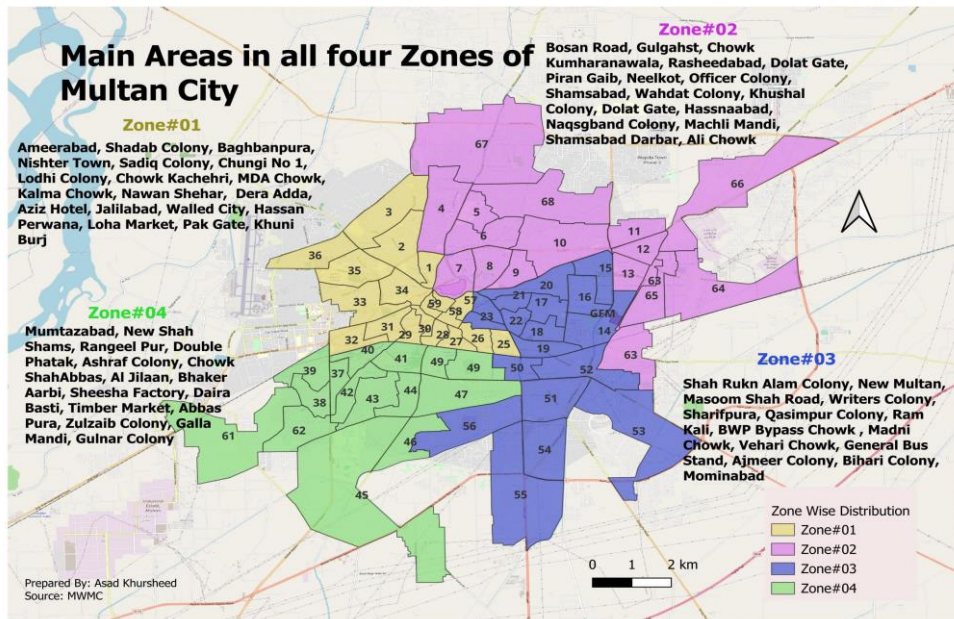
- b. DWMC operates in the city of DG Khan, managing waste across 17 UCs as mentioned in the map below:



- c. FWMC operates in the city of Faisalabad, managing waste across 157 UCs as mentioned in the map below:



- d. MWMC operates in the city of Multan, managing waste across 68 UCs as mentioned in the map below:



1.3 Responsible Authorities

- Sponsoring:** According to Clause-23 of the AoA of the WMCs and relevant provisions of SAAMA, the sponsoring agencies are Government of the Punjab and City District Governments (CDGs) of Faisalabad and Multan, and Municipal Corporations of Bahawalpur and Dera Ghazi Khan.
- Operations:** According to Clause-22 of the AoA, functioning of the WMCs' affairs shall be administered by the BoDs which shall have the responsibility to determine the direction and scope of activities. Executive Committee comprising MD / CEO and senior management shall be responsible for operation and maintenance activities of the WMCs.

1.4 Financial Resources

The detail of budget, receipt and expenditure of each WMC is given at **Annexure-I**, however, summarized position for the financial years 2013-14 to 2022-23 is mentioned below:

(Rupees in million)

FY	Funds Received			Funds Utilized / Expenditure				Balance
	From Govt.	Own Sources	Total	Salary	Non-Salary	Dev.	Total	
2013-14	330.195	29.405	359.600	78.612	32.799	36.271	147.682	211.918
2014-15	2,819.595	64.344	2,883.939	1,400.561	293.061	79.669	1,773.291	1,110.648
2015-16	2,615.584	123.043	2,738.627	1,606.882	273.209	145.108	2,025.199	713.428
2016-17	2,515.921	92.014	2,607.935	1,731.414	397.672	146.427	2,275.513	332.422
2017-18	2,254.940	91.296	2,346.236	1,974.686	566.807	199.078	2,740.571	(394.335)
2018-19	2,265.170	123.100	2,388.270	2,098.577	579.533	176.096	2,854.206	(465.936)
2019-20	2,254.940	167.279	2,422.219	2,363.837	604.420	20.148	2,988.405	(566.186)
2020-21	3,405.363	118.423	3,523.786	2,521.979	636.044	61.355	3,219.378	304.408
2021-22	3,310.328	101.905	3,412.233	2,864.840	848.162	153.196	3,866.198	(453.965)
2022-23	4,148.388	156.393	4,304.781	3,422.441	1,114.386	27.232	4,564.059	(259.278)
Total	25,920.424	1,067.202	26,987.626	20,063.829	5,346.093	1,044.580	26,454.502	533.124

2. AN OVERVIEW OF SOLID WASTE SECTOR

2.1 SWM Profile of Pakistan

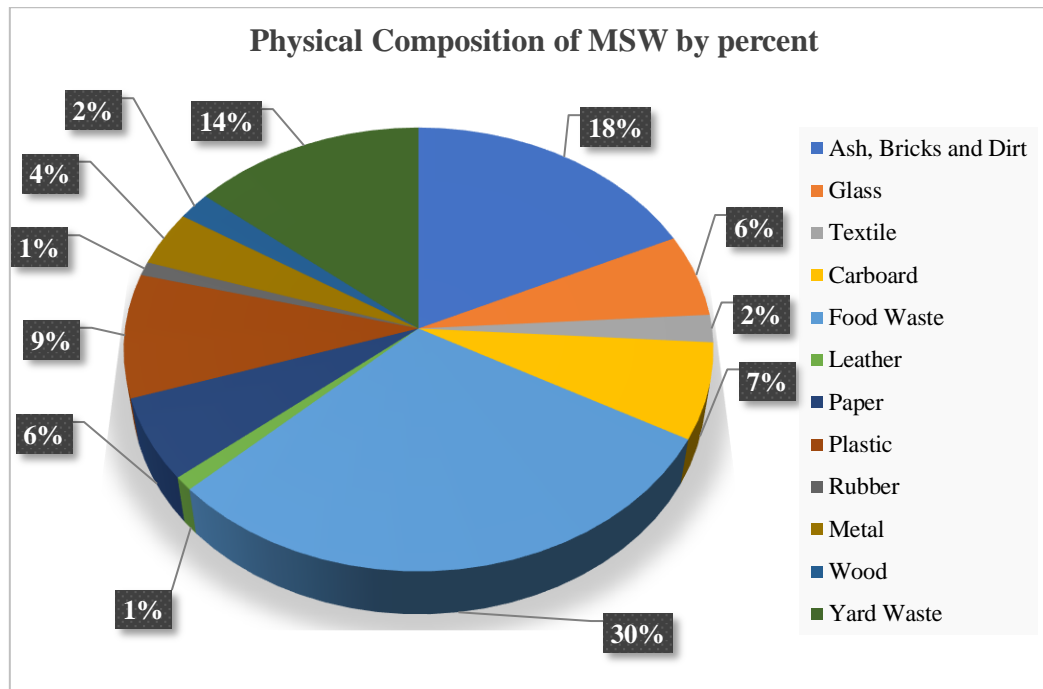
SWM in Pakistan faces critical challenges like rapid population growth, sprawling urbanization, inadequate physical infrastructure, absence of civic amenities, and non-prevalence of civic sense and responsibilities. The country generates approximately 49.6 million tons of solid waste annually¹, with urban areas contributing a significant portion due to density of population and industrial waste. Despite efforts by municipal authorities and private waste management companies, the current system struggles with inefficiencies in waste collection, transportation, and disposal. Overall, about 50% of this generated waste is collected². Urban waste is typically left uncollected or dumped on open ground inviting health and environmental hazards. Most of the waste is disposed off through burning, dumping and burying in empty areas posing significant risks to the health and wellbeing of the population. Most cities lack proper landfill sites, and waste segregation at source is minimal leading to environmental pollution and health

¹ International Trade Administration. Pakistan-Waste Management. Published on January 01, 2024. <https://www.trade.gov/country-commercial-guides/pakistan-waste-management>

² Mihai, F.-C., and A. Grozavu. 2019. Role of Waste Collection Efficiency in Providing a Cleaner Rural Environment. Sustainability. 11 (23). 6855.

hazards. Furthermore, financial constraints, mismanagement, and absence of public awareness exacerbate the situation highlighting the urgent need for a comprehensive and sustainable approach to SWM. Following is the composition of municipal solid waste in Pakistan:

Composition of Municipal Solid Waste in Pakistan



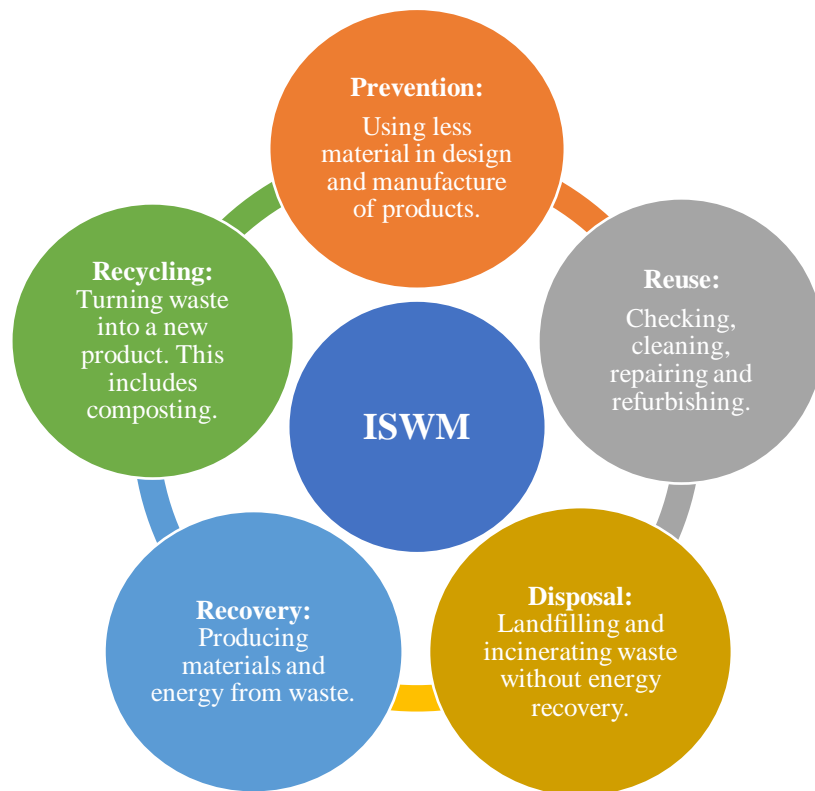
Source: United Nations Environment Program, report on waste management in Pakistan.

Sorting out these issues requires a multifaceted and integrated approach, including infrastructure development, public awareness, enforcement of rules and regulations, and increased investment in waste management technology.

2.2 Integrated Solid Waste Management

ISWM represents a contemporary and systematic approach to SWM. The Environmental Protection Agency (EPA) of United States (US) defines ISWM as “A complete waste reduction, collection, composting, recycling, and disposal system”. ISWM recognizes that a single approach cannot handle all types of waste efficiently; it needs integrated multiple approaches and practices to address the entire waste lifecycle – from generation to disposal. By integrating these components, ISWM aims to minimize environmental impact, maximize resource efficiency, and enhance the overall sustainability of waste

management practices. The five components of ISWM are presented in the chart below:



Through the combination of these strategies, ISWM provides a holistic and adaptable framework for managing waste in a way which balances environmental, economic, and social considerations.

2.3 International Best Practices

Countries known for their best practices in waste management include Germany, Sweden, Japan, and South Korea. Germany leads with an advanced recycling system and strict regulations achieving high recycling rates and minimal landfill use. Sweden excels with its innovative waste-to-energy programs, converting nearly all non-recyclable waste into energy. Japan's meticulous waste sorting and recycling systems, along with its emphasis on reducing waste at the source, set a global standard. South Korea's food waste recycling initiatives and rigorous waste separation policies significantly reduce landfill use and promote

resource recovery. These nations exemplify effective strategies in reducing waste and enhancing sustainability.

South Asian countries are increasingly adopting innovative waste management practices to address growing environmental challenges. India has made strides with its Swachh Bharat Abhiyan (Clean India Mission), promoting sanitation, waste segregation, and recycling initiatives. Sri Lanka has introduced community-based waste management programs and composting projects to handle organic waste effectively. In Bangladesh, the Waste Concern initiative focuses on converting waste into compost and energy, improving both waste management and livelihoods. Nepal is implementing zero-waste projects in cities like Kathmandu, emphasizing recycling and public awareness. These efforts highlight the region's commitment to sustainable waste management and environmental protection.

2.3 Use of Information and Communication Technology in SWM

ICT is shaping the way in which SWM is carried out across the world and demonstrating that waste infrastructure alone is not enough to manage the waste.

Recyclebank, a waste-focused behavior change program in US combines education, incentives, technology and community engagement to encourage more than four million members to make better purchasing and disposal habits. By taking green actions and registering online, residents can earn points towards rewards. Recyclebank creates PPP with municipalities, communities and businesses to power this platform. This initiative has recycled nearly 1.5 Billion pounds of materials and pledged to take 216 million green actions while earning more than \$60 million in rewards in 2014 alone.

I Got Garbage, a mobile and web platform in Bangalore, India empowers waste pickers by connecting them with households. Households enter into long-term relationships with them for recyclables pickup and can buy tools from them for home composting. This model of citizen participation puts waste pickers away from the dangers of open dumps while enabling more comprehensive and efficient waste collection. It converts waste pickers into recycling managers. Currently, the platform supports over 10,000 waste pickers, has generated over 100 million Indian Rupees in collective revenue, and is expanding to 27 cities.

3. AUDIT OBJECTIVES / PSR

The main objectives of the performance audit are to evaluate:

- a. Solid waste collection by implementing integrated waste collection system;
- b. Private sector participation for waste collection services;
- c. Mechanized road sweeping and washing of public places; and
- d. Alignment of service delivery goals with regards to the aspects of economy, efficiency and effectiveness.

4. AUDIT SCOPE AND METHODOLOGY

4.1 Audit Scope

Performance Audit was conducted for the period from March, 2014 to June, 2023 to examine the performance of the companies during planning, execution and implementation phases of the activities related to collection of solid waste and comment on operational functions performed to achieve their objectives. The audit was conducted keeping in view the rules and regulations framed by the Provincial Government from time to time.

4.2 Audit Methodology

The methodology for the execution of performance audit involved several phases. In the planning phase, preliminary survey was carried out to gain an understanding of the objectives, policies, and regulatory framework of WMCs. Various documents such as AoA, MoA and SAAMA were consulted and perused. Accordingly, key risk areas and audit objectives were identified.

During the fieldwork phase, relevant data, documents, and records related to the operations, performance, and compliance were gathered. Interviews and discussions were conducted with management, staff, and stakeholders to amass information and insight of the issues approved in PSR. On-site inspections were carried out at dumping areas, workshops and parking lots to assess operational activities, physical infrastructure, equipment used for operational activities, and mechanism for collection and disposal of waste.

During the data analysis phase, the collected data and information were analyzed to assess the compliance with regulatory frameworks and standards. The

utilization of financial and human resources, efficiency of processes, and effectiveness of waste management services were evaluated. Any discrepancies, deficiencies, or areas of non-compliance were identified, reported and discussed with management.

Audit also carried out literature review from international journals, research articles, reports and studies on the subject by various development organizations and SAIs to understand international best practices for municipal SWM.

5. AUDIT FINDINGS AND RECOMMENDATIONS

5.1 Organization and Management

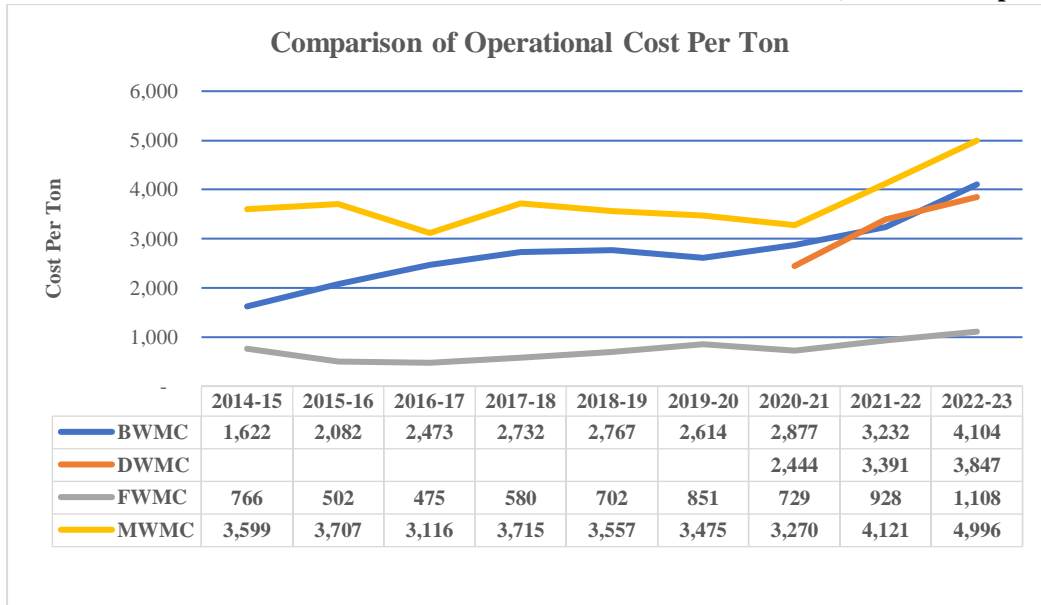
5.1.1 Inefficient operations for provision of SWM services

According to Clause-V, Sub-clauses-5 and 23 of MoA, “The objective of the company was to develop, manage and maintain such infrastructure as is considered necessary for the smooth functioning of the company and to purchase machinery and any other moveable or immovable property of any kind necessary for the purpose of providing sustainable, efficient and affordable waste management services for the citizens.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that the management did not perform its operations efficiently. Analysis revealed that collection and dumping of waste had decreasing trend whereas, operational, administrative, labour and overall costs had increasing trends. Audit held that operational inefficiencies had resulted in less collection of waste, reduced organizational productivity and hampered WMCs’ ability to meet their goals. Instances of operational inefficiencies are analyzed below:

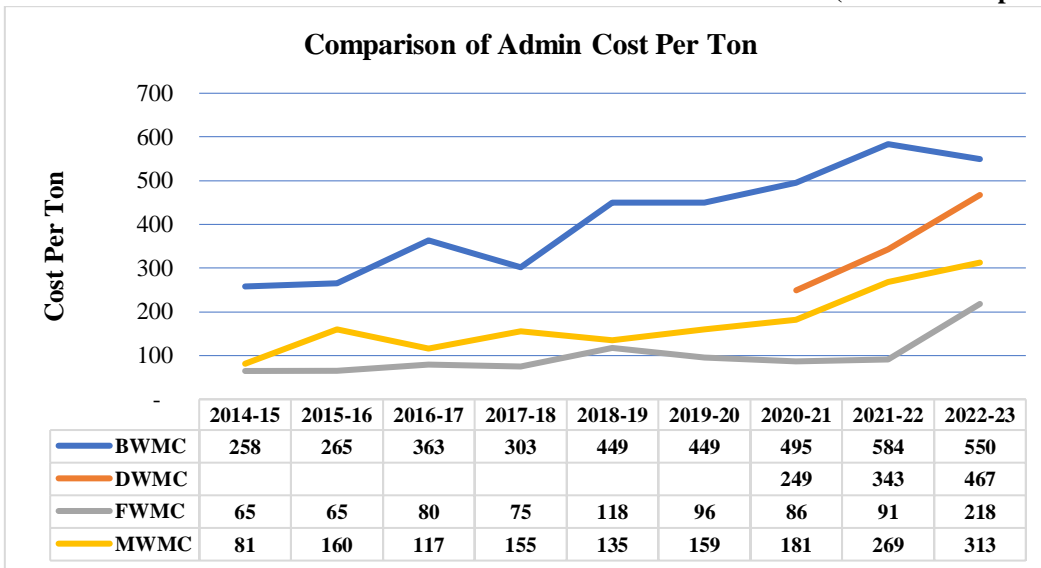
- a. Increase in operational cost as compared to waste collected and dumped is detailed below:

(Amount in rupees)



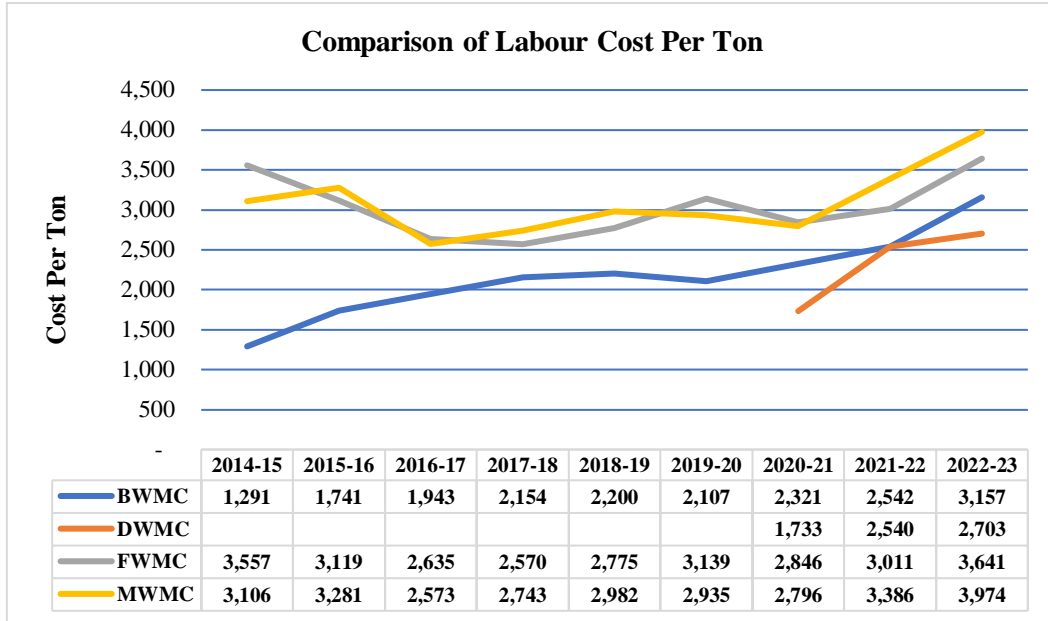
- b. Increase in administrative cost as compared to waste collected and dumped is detailed below:

(Amount in rupees)



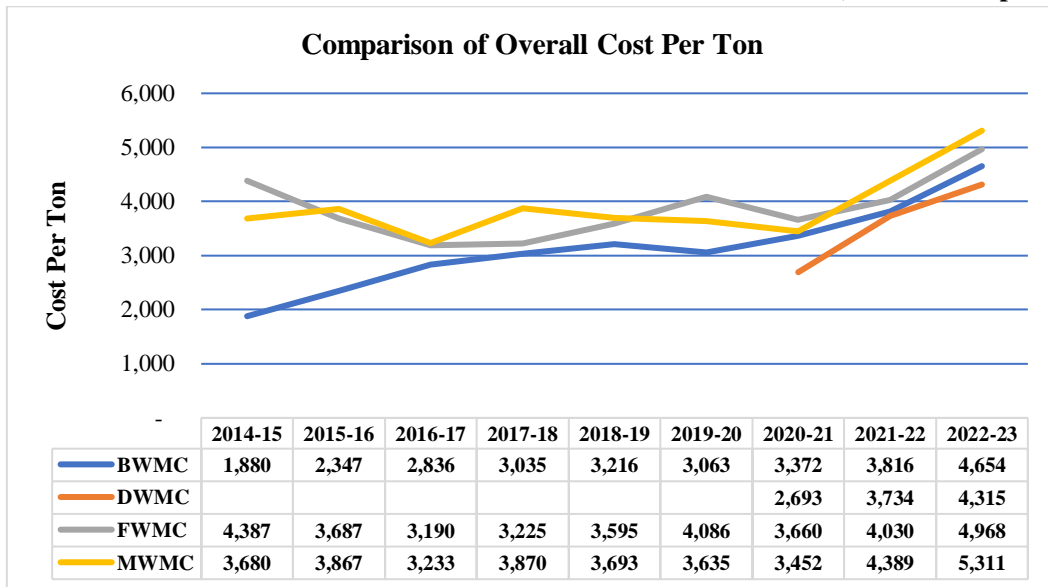
- c. Increase in labour cost as compared to waste collected and dumped is detailed below:

(Amount in rupees)



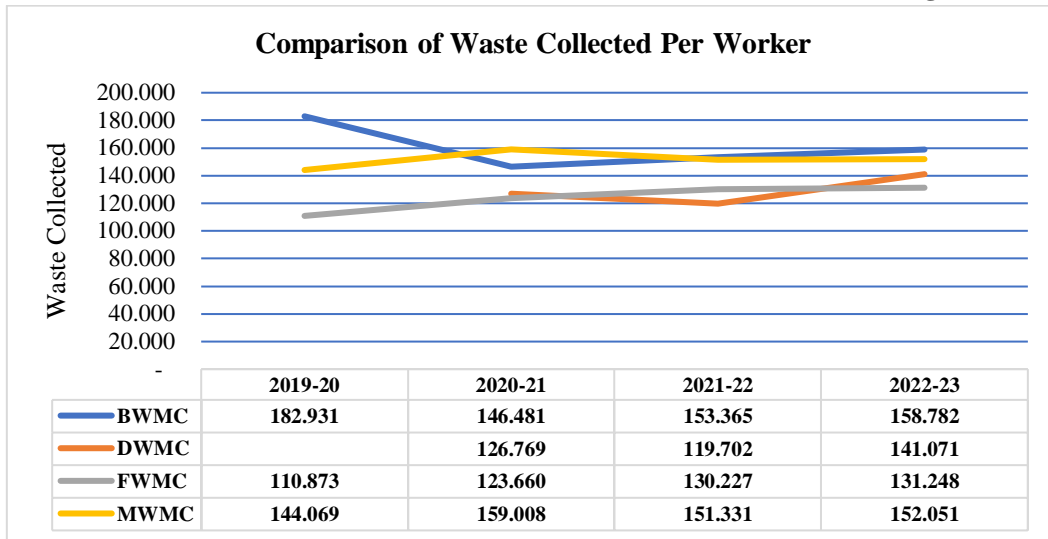
- d. Increase in overall cost per ton as compared to waste collected and dumped is given below:

(Amount in rupees)



e. Analysis of waste collected per worker is detailed below:

(Figure in ton)



Due to weak internal controls and negligence, resources were not utilized efficiently which resulted in increasing trend of cost per ton collected and dumped in every forthcoming year.

The matter was reported to the PAO in April, 2024. The management replied that increase in cost of waste collection was due to inflation. 80% to 90% expenditure was incurred on labour and POL. The reply was not tenable as analysis revealed that operational cost increased 153%, administrative cost 113%, labour cost 145% and overall cost increased by 83% whereas employees' efficiency deputed for primary collection of solid waste had decreased as compared to financial year 2015-16.

The matter was discussed in DAC meeting held on 6th May, 2024. DAC decided to refer the matter to the BoDs to evaluate the performance and submit report besides efficient utilization of resources to provide the best SWM services to the general public. No progress was intimated till finalization of this Report.

Audit recommends ensuring proper planning for utilization of available resources efficiently for collection and dumping of waste besides initiating action against the responsible(s).

[AIR Para No. BWMC/28]

5.1.2 Inadequate deployment of HR in field operations

According to Rule-4.1.1 of HR Manual of WMCs, “The recruitment of the employees shall be the responsibility of the HR department. Every department head within WMC shall prepare their annual recruitment plan identifying staffing needs of their respective departments and submit the same to the General Manager (GM) Human Resource and Administration (HR&A). These will be prepared, as HR plan, annually by the GM (HR&A) in line with the annual business plan of WMCs.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that the companies did not ensure the deployment of required HR i.e. sanitary workers, supervisors and managerial staff in proportion to increase in waste generation due to increase in population over the years. According to Environment Protection and Climate Change Department, Government of the Punjab, solid waste generation in Pakistan ranges between 0.283 to 0.612 kg/capita/day and the waste generation growth rate is 2.4% per year³, therefore, required number of operational staff was to be deployed accordingly. However, the same was not done to maintain the service delivery standards. The detail is given at **Annexure-II**.

Due to mismanagement, HR was not deployed in proportion to increase in waste generation due to increase in population which resulted in less collection of waste and poor service delivery.

The matter was reported to the PAOs in April 2024. The management of WMCs replied that sanitary workers were not hired according to increase in population due to non-availability of funds and non-approval of RGP by the government. However, efforts were being made to induct resources for bringing equilibrium with requirements. The replies were not tenable because operational resources were not deployed in proportion to population increase and in accordance with KPIs approved by the BoDs. No reply was submitted by the management of DWMC.

³ Environment Protection and Climate Change Department, Government of the Punjab’s website https://epd.punjab.gov.pk/solid_waste#:~:text=Solid%20waste%20generation%20in%20Pakistan,rate%20is%202.4%25%20per%20year accessed on June 26, 2024.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC directed the management to initiate necessary steps for deployment of required operational resources to improve efficiency of the companies. No progress was intimated till finalization of this Report. DAC meeting was not convened by the management of DWMC despite repeated requests by Audit.

Audit recommends initiating necessary steps for deployment of required human resources in field operations.

[AIR Para No. BWMC/13, 26, DWMC/02, FWMC/14, MWMC/06]

5.1.3 Suboptimal waste collection due to non-operational vehicles and equipment

According to Rule-4(3) of the Public Sector Companies (Corporate Governance) Rules, 2013, “The Chief Executive is responsible to implement and make appropriate arrangements to ensure that funds / resources are properly safeguarded and are used economically, efficiently and effectively in accordance with all statutory obligations.” Furthermore, according to Clause-V(5) of MoA, “The objective of the company was to develop, manage and maintain such infrastructure as is considered necessary for the smooth functioning of the company.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that waste collection activities in the field were being performed at suboptimal level due to non-utilization of available operational vehicles and machinery. It was noted that FWMC and MWMC had total of 199 and 223 operational vehicles and machinery, respectively, out of which 18 and 7 vehicles were out of order. Furthermore, MWMC had total of 250 containers and 647 hand carts out of which 76 and 270 were non-operational, respectively.

Due to weak internal controls and negligence, operational vehicles and machinery were not maintained which resulted in interruption in field operation activities and poor performance of the company.

The matter was reported to PAOs in April, 2024. The management of WMCs replied that the machinery and equipment were either too old or unserviceable but efforts were being made to bring repairable machinery in working condition to achieve maximum waste collection efficiency. The replies were not tenable because neither any report of condemnation of vehicles and equipment was produced during record verification nor

documentary evidence produced justifying the efforts made by the WMCs for bringing the equipment in operational condition.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC directed the management to accelerate the process of auction of unserviceable machinery and ensure optimal utilization of resources. No progress was intimated till finalization of this Report.

Audit recommends early disposal of unserviceable machinery and equipment besides operationalization of repairable vehicles and machinery.

[AIR Para No. FWMC/10, MWMC/10]

5.2 Service Delivery

5.2.1 Open dumping and burning of waste leading to hazardous emissions

According to Section-2(g) of SAAMA agreement, “All steps have been taken deemed necessary and expedient by the company for effective management of solid waste in order to safeguard public health, ensure that the waste is reduced, collected, stored, transported, recycles, reused or disposed of in an environmentally sound manner and promoting safety standards in relation to such waste and issuing specific directions to persons and entities to arrange SWM in the manner determined by the company.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was noticed through site visits that heaps of waste were lying on main roads and open plots, waste containers were overflowing, waste being burnt in residential areas and its dumping in drains, etc. Further, construction and demolition material was also dumped at different roadsides. Audit observed that open burning of waste and open disposal was commonly practiced in the jurisdictional areas of WMCs. According to an estimate, almost 40% of the total urban waste in Pakistan was disposed of in dumpsites that were designated as dumping grounds. The rest went to unauthorized open dumps, water bodies, and other open spaces in and around the cities⁴. For example, in Faisalabad, only about 56% of the generated waste was collected; 43% was disposed of in open dumping sites without

⁴ Ferronato, N., and V. Torretta. 2019. Waste Mismanagement in Developing Countries: A Review of Global Issues. *International Journal of Environmental Research and Public Health*. 16 (6). 1060.

precautionary measures or treatment⁵. Following are some of the glimpses of open dumping in Faisalabad:



⁵ Yasin, H., M. Usman, H. Rashid, A. Nasir, L. Anjum, and I. A. Randhawa. 2017. Alternative Approaches for Solid Waste Management: A Case Study in Faisalabad, Pakistan. *Earth Sciences Pakistan*.1(2). pp.7–9.





Audit consulted various studies and found that improper disposal was one of the contributing factors in Greenhouse Gas (GHG) emissions leading to health hazards. It was estimated that GHG emissions from the country's solid waste sector stood at 10.5 metric tons of carbon dioxide equivalent⁶, with open dumping contributing around 73% of this total⁷. GHG emissions from the SWM sector make up about 3% of the total GHG emissions from various source sectors in Pakistan⁸. However, no scientific data was available with WMCs to gauge the impact of GHG due to open dumping and burning of waste.

Due to poor performance, weak monitoring controls and negligence, waste was dumped in open spaces, plots and along roadsides which resulted in emission of GHGs leading to health hazards for the citizens.

The matter was reported to PAOs in April, 2024. The management replied that the operational plan was in place with monitoring mechanism. Continuous efforts were made to clear the waste dumped at roadsides and in open plots with the deployment of special machinery. Containers and waste bins were available in various streets of city. However, general public threw waste in open plots and nearby places. The replies were not acceptable as waste containers and temporary waste collection stations were not according to need and populated areas even after lapse of nine years of inception of the companies.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC directed the management to visit the dumpsites and resolve the matter. DAC further directed to improve operations and placement of containers in open plots. No progress was intimated till finalization of this Report.

Audit recommends taking necessary steps for zero waste, removal of dumped solid waste from city areas besides taking initiatives for engagement of citizen for adherence to byelaws for proper dumping of waste.

[AIR Para No. FWMC/15, MWMC/15]

⁶ Stiebert, S. 2016. Pakistan Low Carbon Scenario Analysis: GHG Reference Case Projection. Briefing Note. International Institute for Sustainable Development (IISD), Canada, and Energy Research Centre of the Netherlands (ECN), with the support of the Climate and Development Knowledge Network (CDKN).

⁷ Ilmas, B., K. A. Mir, and S. Khalid. 2018. Greenhouse Gas Emissions from the Waste Sector: A Case Study of Rawalpindi in Pakistan. *Carbon Management*. 9 (6). pp. 645–654.

⁸ Mir, K. A., P. Purohit, and S. Mehmood. 2017. Sectoral Assessment of Greenhouse Gas Emissions in Pakistan. *Environmental Science and Pollution Research*. 24 (35). pp. 27345–27355.

5.2.2 Non-existent citizen engagement policies for minimization of waste generation

According to Rule-5(7)(b) of the Public Sector Companies (Corporate Governance) Rules, 2013, “The BoDs shall also formulate significant policies of the Public Sector Company including the implementation of an effective communication policy with all the stakeholders of the Public Sector Company.” Furthermore, according to Clause-V (38) of the MoA, “The objects for which the company is established was to develop and sustain public awareness and community participation in the working of system of SWM.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that no citizen engagement policies were developed for creating awareness about reduction in solid waste generation. Neither any community participation plan was developed nor was any public awareness campaign launched through either traditional media platforms like advertisements and pamphlets or using ICT platforms. Furthermore, no efforts were on record to assess WMCs communication strategy about their operational hours, collection points and schedule for collection of waste from households of different zones. According to World Bank⁹, “Accessible online platforms, applications, and citizen surveys are shaping how SWM services are conducted around the world, and they show that, for proper waste management, having waste infrastructure alone is simply not enough. These interactive platforms provide incentives, quantify actions, and increase pressure on service providers, and thereby improve waste management with greater citizen engagement.” Audit held that WMCs could not meet their very objective of establishment and were no different from the previous regimes.

Due to poor performance of management, public awareness, community participation and other policies could not be developed which resulted in non-achievement of objectives of WMCs.

The matter was reported to PAOs in April, 2024. The management replied that finalization of policies regarding public awareness was in progress. The reply was not

⁹ Kaza, S., L. Yao, and C. Markgraf. 2016. Five Ways to Increase Citizen Participation in Local Waste Services. *Sustainable Cities* (blog). World Bank. <https://blogs.worldbank.org/sustainablecities/five-waysincrease-citizen-participation-local-waste-services>.

tenable as WMCs neither developed policies even after a decade of their establishment nor engaged citizens through awareness campaigns for minimization of waste.

The matter was discussed in DAC meeting held on 6th May, 2024. DAC directed the management for compliance besides issuing a show-cause notice to the manager operations for non-development of public awareness and community participation policies. No progress was intimated till finalization of this Report.

Audit recommends fixing responsibility on the person(s) at fault besides effective measures for developing public awareness, community participation and other policies of WMCs.

[AIR Para No. DWMC/10, MWMC/11]

5.2.3 Ineffective redressal of complaints for collection of waste

According to Rule-5(5)(c)(i) of Public Sector Companies (Corporate Governance) Rules, 2013, “The principle of relationship with stakeholders requires the surety that the directors and executives uphold the reputation of the company by treating the general public, institutional investors and other stakeholders with courtesy, integrity and efficiency, and ensuring service quality.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, audit observed that the complaint handling mechanism was ineffective. A complaint could be received via Helpline 1139, through online portals like PM Citizen’s Portal, Khidmat Apki Dehleez Par, Health Service Content Management System (CMS), Special Branch Information System, Local Government and Community Development (LG&CD) Department’s portal and Citizens Relationship Management. Certain weaknesses in the processes for reviewing and resolving complaints had been identified. There was a lack of documentation to support compliance against complaints i.e. time elapsed between the filing of a complaint and the action taken on it. The companies lacked an approved Standard Operating Procedure (SOP) for its public complaint mechanism. Without this SOP, the workflow for registering and resolving complaints became unclear, making it difficult to understand how complaints would be initially recorded, executed for resolution, and who would be accountable for the entire process. No software was accessible for recording public complaints (1139), necessitating manual recording for all complaints received through various channels.

Due to weak monitoring controls, the redressal of complaints mechanism was ineffective and led to dissatisfaction of end users and affected the reputation of the company.

The matter was reported to PAO in April, 2024. The management replied that SOP for complaint mechanism was operational since August, 2020 which was further amended in October 2021. MWMC had signed an MOU for development of Android Based Complaint Redressal System with PITB which was still awaited. The reply was not tenable as neither approved SOPs were provided nor any monitoring mechanism for verification of redressal of complaints established since incorporation of the company.

The matter was discussed in DAC meeting held on 6th May, 2024. DAC directed for re-verification of company's view point from Audit within seven days. No progress was intimated till finalization of this Report.

Audit recommends production of approved SOPs for verification besides developing effective strategies to improve the grievance redressal system.

[AIR Para No. MWMC/20]

5.3 Regulatory Framework

5.3.1 Non-development of Integrated Solid Waste Management System

According to Clause-V, sub-clause 35 of MoA of WMCs, "The main objective of the company is to develop an improved ISWM System to address the growing environment and public health issue in the Punjab." Furthermore, according to Sr. No. iv of the SAAMA, WMC has been formed and incorporated for the purposes of establishing an ISWM system and it is also mandated through its MoA to enter into agreements with other entities. Government of the Punjab has provided and has committed to continue to provide additional resources for the purpose to achieve the objectives of ISWM system."

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that the companies did not establish an ISWM system despite lapse of a decade since their inception. Audit held that ISWM was the fundamental policy requirement. An integrated system encompasses a well-designed network of components for segregated waste storage at the point of generation, door-to-door collection of waste to avoid littering and storage at roadside, closed vehicles for environment-friendly waste collection and

transport, waste sorting to secure recyclables, use of composting technologies for waste treatment and disposal, and gas or energy production or engineered land filling with proper leachate collection and gas capturing mechanisms. Resultantly, 6.817 million tons compost, recyclable and non-useable municipal waste was collected and transported to dump site without segregation during the financial years 2014-15 to 2022-23. (**Annexure-III**)

Due to inefficiency on the part of management, ISWM system was not established which resulted in poor performance regarding management of solid wastes.

The matter was reported to PAOs in April, 2024. The management replied that the companies were committed to maintain the ideal level of cleanliness and significant progress was made to achieve the objective of ISWM through consistent efforts. Companies also faced hurdles in the waste collection and final disposal due to shortage of resources. The replies were not acceptable as not being supported by any documentary evidence.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC directed the management to take up the matter with the Secretary LG&CD for early establishment of ISWM system in WMCs. No progress was intimated till finalization of this Report.

Audit recommends effective measures for establishment of ISWM besides fixing responsibility on the person(s) at fault.

[AIR Para No. DWMC/01, FWMC/01, MWMC/01]

5.3.2 Non-completion of benchmarking of existing SWM services and fixing of targets

According to Clause-11 and 12 of SAAMA, “The WMC shall within three months after the signing of this Agreement, complete the benchmarking of existing SWM services and also fix targets for the improvements in SWM services for the next year.” Further, according to Sr. No. 3 of Annex-F of SAAMA, “Waste collection efficiency was required to be increased up to 95% by December, 2015.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that the companies did not complete the benchmarking of existing SWM services for bringing improvement in level of services. The goal

was to identify areas where improvements could be made to establish performance standards and to implement best practices. However, the same was not carried out and as a result, WMCs were performing the same functions at the same level of performance which were performed by erstwhile SWM sections of local government institutions.

Due to weak internal and monitoring controls, the benchmarking of existing SWM services was not completed and targets of the companies were not fixed, which resulted in absence of structured data and standards for evaluating the performance of WMCs.

The matter was reported to PAOs in April, 2024. The management replied that BWMC had developed Benchmarks and KPI of all staff including CEO for the financial year 2020-21 onwards. The management of FWMC replied that the company gradually inducted need-based resources according to the availability of budget. The CEO, MWMC replied that the company had adopted HR Manual of LWMC and finalization of HR manual of MWMC was in progress. The replies were not tenable as neither any benchmarking was carried out nor documentary evidence provided in support of reply.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC directed the management to submit a report regarding non-formulation of KPIs despite lapse of nine years of establishment of companies. DAC further directed to take up the matter with their respective BoDs for achievement of waste collection targets. No progress was intimated till finalization of this Report.

Audit recommends completion of benchmarking, fixing of targets and establishing of KPIs besides fixing responsibility on the person(s) at fault.

[AIR Para No. BWMC/06, 07, DWMC/05, FWMC/07, 08,13 MWMC/09]

5.3.3 Absence of occupational health and safety measures during collection and dumping of waste

According to Section-XI and XIII of MoA of WMCs, “The objectives of the WMCs are to define and frame the output indicators, quality assurance plan, environmental management and monitoring plan, OHS plan, etc. and treatment of waste, using techniques and technologies, offering optimum advantages of public health, environment protection and economy.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that companies could not implement various plans and initiatives to address OHS issues for the field staff engaged in waste collection and dumping. The management had not ensured that field staff working at landfill sites were appropriately equipped with the necessary clothing and basic equipment to handle various types of waste. Audit noticed through site visits and interviews of waste workers that OHS issues presented significant challenges for workers who often operate in hazardous conditions. These workers were exposed to various risks, including physical injuries from handling sharp objects, heavy lifting, and exposure to harmful chemicals, pathogens, and toxic substances. Such exposure could lead to respiratory problems, skin diseases, and other long-term health issues. The lack of proper protective equipment and inadequate training had exacerbated these risks. Waste workers reported that they were handling infectious waste from private clinics, and dispensaries along with household waste without segregation or by using alternative disposal means. Moreover, there was no rest area, toilets or drinking water facility at the landfill sites. Due to absence of fencing, there was free access to public and scavengers at dumpsites leading to significant public health risks for scavengers and community at large. The poor OHS condition is depicted in the pictures below:





Audit also observed that there was no coordination among WMCs and health department or any other environmental agency to cope with health-related risks of infectious waste generated and collected. The situation contributed to increased hazardous and infectious waste generation and its careless disposal by residents and medical institutions.

Research further corroborated Audit's analysis that waste workers in Pakistan, similar to those in other South Asian countries, often lacked the necessary safety measures and health benefits, contributing to their vulnerability. They faced severe social discrimination, financial insecurity, and limited access to healthcare, which further compounded their occupational hazards¹⁰.

Due to weak internal controls and negligence, OHS issues were not addressed to safeguard field staff and general public which resulted in compromised service delivery and increased health risks.

The matter was reported to PAOs in April, 2024. The management replied that multiple initiatives had been taken as far as health, safety and environment was concerned and the required Personnel Protective Equipment (PPEs) were provided to the field staff keeping in view the potential risks. The reply was not tenable as neither the field staff was wearing any PPEs nor any documentary evidence provided in support of management's stance.

The matter was discussed in DAC meeting held on 14th May, 2024. DAC directed the management to refer the matter to the BoDs for formulation of OHS policies besides initiating practical steps for ensuring health and well-being of workers deployed on collection, transportation and dumping of solid waste and submit report to this effect. No progress was intimated till the finalization of this Report.

Audit recommends addressing OHS issues at the earliest besides fixing responsibility on the person(s) at fault for the negligence.

[AIR Para No. FWMC/12]

¹⁰ Sharior, F. et al. 2023. Occupational health and safety status of waste and sanitation workers: A qualitative exploration during the COVID-19 pandemic across Bangladesh. <https://doi.org/10.1371/journal.pwat.0000041>

5.3.4 Non-compliance of corporate rules

According to Rule-5 and 21 of Public Sector Companies (Corporate Governance) Rules, 2013, “The directors shall be persons who, in opinion of the government, shall assist the public sector company to achieve its principal objective and the Board shall accordingly exercise its powers and carry out its fiduciary duties with a sense of objective judgment and in the best interest of the company.” Furthermore, according to Clauses-37 and 56 of AoA, “The Board shall meet at least once in each quarter of every year. The directors shall be required by Section-223 of the Act to be prepared and to be laid before the company in annual general meeting such financial statements duly audited.”

During performance audit of WMCs for the financial years 2020-21 to 2022-23, audit noticed that annual accounts of the companies were neither got audited from chartered accountant firm nor were uploaded on website and the same were not published in any print or electronic media for general public information which resulted hiding of company accounts / performance. Moreover, no directors’ training program was initiated / programmed for their capacity building.

Due to poor management, the companies did not fulfil their corporate responsibilities.

The matter was reported to PAOs in April, 2024. The management replied that annual accounts of the companies will be provided after audit from chartered accountant firm. The reply was not tenable as no documentary evidence was provided in support of management’s stance.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC directed the management to refer the matter to the BoDs for early engagement of chartered accountant firm and submission of annual accounts of the companies. No progress was intimated till the finalization of this Report.

Audit recommends finalization of annual accounts of companies besides fixing responsibility on the person(s) at fault.

[AIR Para No. BWMC/01, DWMC/08, FWMC/16, MWMC/16]

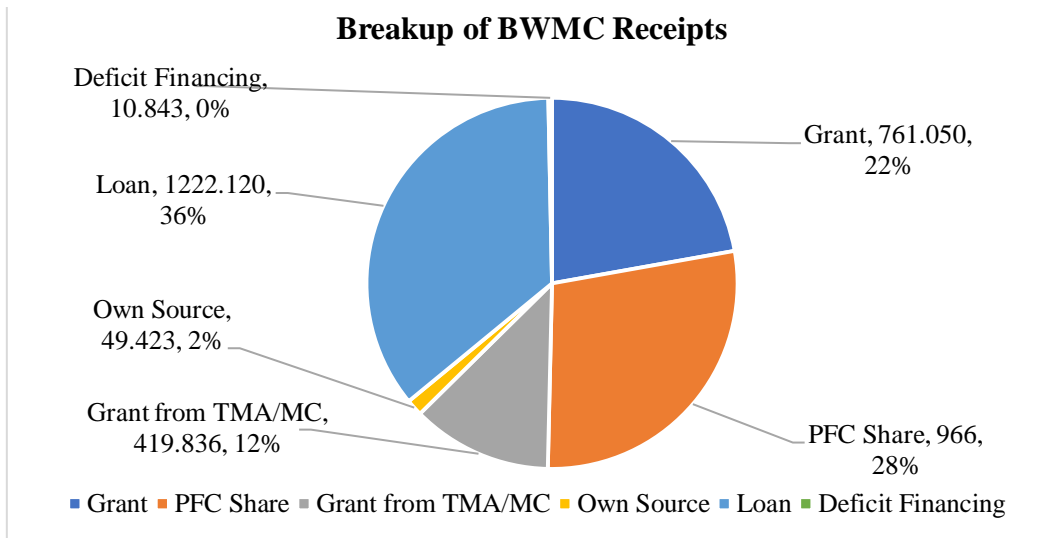
5.4 Financial Management

5.4.1 Insolvent position of WMCs

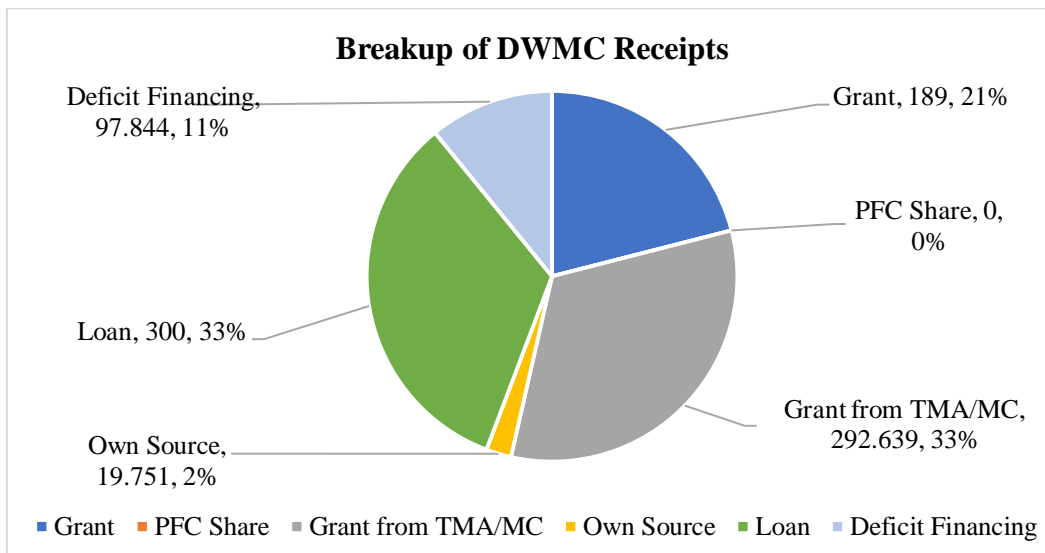
According to Rule-4(3) of the Public Sector Companies (Corporate Governance) Rules, 2013, “The Chief Executive is responsible for the management of the Public Sector Company and for its procedures in financial and other matters, subject to the oversight and directions of the BoDs, in accordance with the ordinance and these rules. His responsibilities include implementation of strategies and policies approved by the BoDs, making appropriate arrangements to ensure that funds and resources are properly safeguarded and are used economically, efficiently and effectively and in accordance with all statutory obligations.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that the companies remained dependent on government grants, funds received from Tehsil Municipal Administrations (TMAs), share from Punjab Finance Commission (PFC) and loans from the government (**Annexure-IV(A)**). It is also pertinent to mention that WMCs have not developed any mechanism for generating their own sources of income through imposition of structured service charges. The detail of own source income of WMCs is given at **Annexure-IV(B)**.

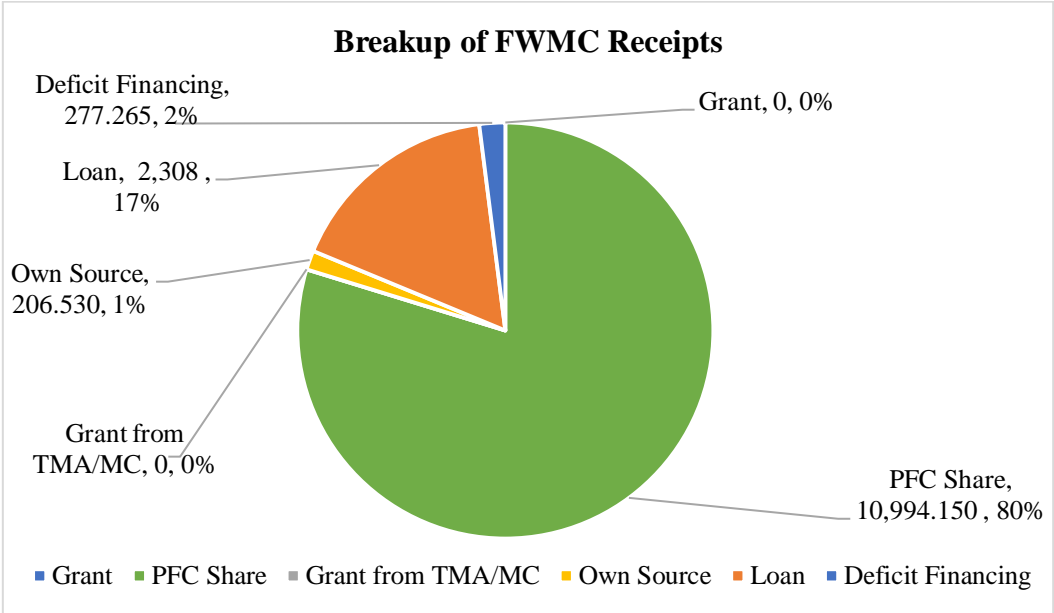
In case of BWMC, only Rs 49.423 million revenue was generated from their own sources against expenditure of Rs 3,429.272 million during ten years from financial years 2013-14 to 2022-23. Audit held that BWMC was not financially sustainable as it was meeting almost 50% of its expenditure through loans from the government since financial year 2017-18. BWMC had accumulated an amount of Rs 1,222.120 million since then. It had no sustainable source of income to repay such huge amount. Breakup of total receipts of BWMC to meet its expenditures for the period from financial years 2013-14 to 2022-23 is as under:



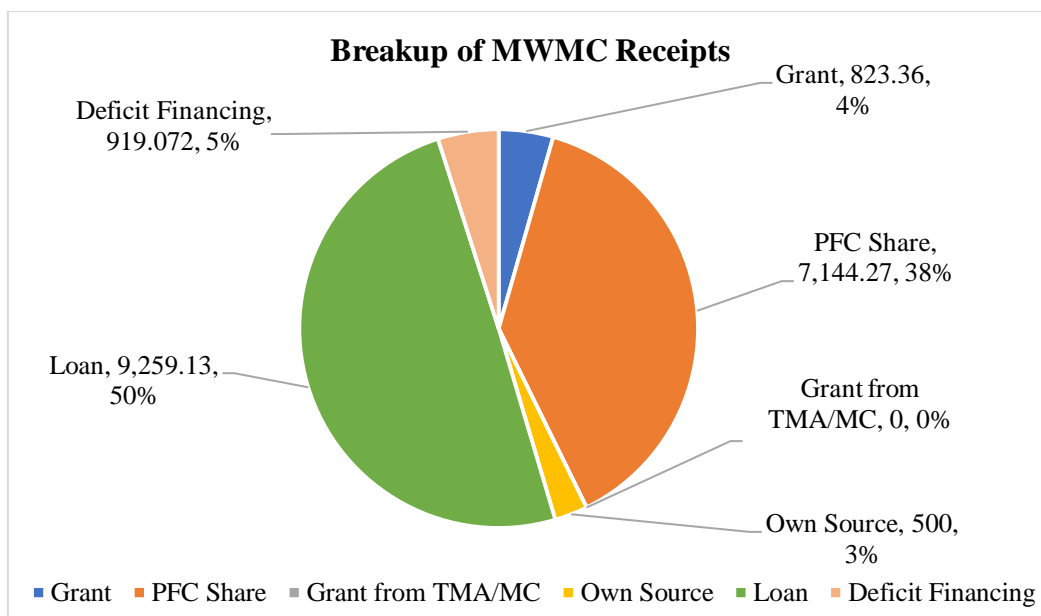
Similar data was also collected for other three WMCs. In case of DWMC, only Rs 19.751 million revenue was generated from their own sources against expenditure of Rs 899.230 million during three years from financial years 2020-21 to 2022-23. DWMC was meeting almost 78% of its expenditure through loans from the government during financial year 2022-23. The company had accumulated an amount of Rs 300 million since then and had no sustainable source of income to repay such huge amount. Breakup of total receipts of DWMC to meet its expenditures for the period from financial years 2020-21 to 2022-23 is as under:



In case of FWMC, only Rs 206.530 million revenue was generated from their own sources against expenditure of Rs 13,785.945 million during ten years from financial years 2013-14 to 2022-23. Audit held that FWMC was not financially sustainable as it was meeting almost 41% of its expenditure through loans from the government since financial year 2020-21. FWMC had accumulated an amount of Rs 2,308 million since then having no sustainable source of income to repay the amount of loan. Breakup of total receipts of FWMC to meet its expenditures for the period from financial years 2013-14 to 2022-23 is as under:



In case of MWMC, only Rs 791.498 million revenue was generated from their own sources against expenditure of Rs 8,340.055 million during ten years from financial years 2013-14 to 2022-23. The company was meeting almost 37% of its expenditure through loans from the government during financial year 2022-23. MWMC had accumulated an amount of Rs 500 million since then and had no sustainable source of income to repay such huge amount. Breakup of total receipts of MWMC to meet its expenditures for the period from financial years 2013-14 to 2022-23 is as under:



Due to poor financial management, companies' resources were not utilized efficiently which resulted in insolvent position of the WMCs particularly due to debt financing and without having any repayment plans.

The matter was reported to the PAOs in April, 2024. The management replied that funds were received as grants from government of the Punjab till 2017. In 2018, the mode of grant changed into loan which was the main reason for insolvent position of WMCs. Further, RGPs were submitted to the government but the same were not approved. The replies were not tenable as efforts were not made by the management to generate revenue as per procedure laid down in SAAMA.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC directed the management to refer the matter to Administrative Department through BoDs for approval of RGPs, efficient utilization of companies' resources as well as to devise repayment plan of debt received from Government of the Punjab. No progress was intimated till finalization of this Report.

Audit recommends formulation of strategies for repayment of loans and efficient utilization of companies' resources to address sustainability challenges.

[AIR Para No. BWMC/16]

5.4.2 Financial loss due to non-selling of waste for production of refuse-derived fuel

According to Sr. No. 4 of Annex-F to Clause-12 of the SAAMA, “Company was required to sell the waste (50% of the total waste generated) to private sector for processing, treatment and disposal. According to Clauses-10 and 12 of the SAAMA, company shall achieve self-sufficiency through cost recovery measures in respect of SWM services.” Further, according to Clause-V, Objective No. 44 and 45 of MoA, “Segregation of waste was to be made by using environment friendly techniques and technologies as an integral part of company’s objectives to ensure treatment of waste, using techniques and technologies, to offer optimum advantages of public health, environment protection and economy.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that decisions regarding sale of waste (50% of total waste collected) to private sector for processing, treatment and disposal could not be implemented despite execution of agreement between CDGs and M/S DG Khan Cement @ Rs 62 per ton for production of Refuse-Derived Fuel (RDF). Audit held that converting inorganic waste into RDF to be used in cement factories, brick kilns, or other fuel-intensive industries could reduce dependence on fossil fuels and minimize the need for landfilling. Audit worked out that total saleable waste valuing Rs 211.340 million was collected during the financial year 2014-15 to 2022-23. On the other hand, WMCs met their operational expenses by receiving loans from Government of the Punjab amounting to Rs 4,330.120 million. Further, dumping of solid waste up to 3.409 million tons (50%) could be decreased besides saving of dumping and leveling cost. Detail is given below:

(Rupees in million)

Company name	Loan	Waste Collected (Ton)	Saleable Waste (Ton)	Per ton rate in Rs	Amount
BWMC	1,222.120	1,018,368	509,184	62	31.569
DWMC	300.000	218,645	109,323	62	6.778
FWMC	2,308.000	3,488,666	1,744,334	62	108.149
MWMC	500.000	2,091,741	1,045,871	62	64.844
Total	4,330.120	6,817,420	3,408,711		211.340

Non-selling of waste for production of RDF resulted in financial loss to companies due to weak financial management.

The matter was reported to the PAOs in April, 2024. The management replied that tangible efforts were made to sell the waste and to generate the revenue but no investor had shown interest. Land was also acquired for scientific landfill sites but due to non-availability of funds the same could not be developed. The replies were not tenable as waste was not segregated and saleable portion of waste was not sold despite lapse of more than ten years.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC directed the management for compliance by formulating operational policies for proper waste segregation besides initiating steps to use already available staff for segregation of valuables during primary collection. No progress was intimated till finalization of this Report.

Audit recommends taking effective measures for efficient segregation of waste and selling its saleable portion to the private sector besides development of scientific landfill sites.

[AIR Para No. BWMC/09, 14, FWMC/04, MWMC/21]

5.4.3 Excess consumption of POL of operational vehicles

According to Rule-4(3) of the Public Sector Companies (Corporate Governance) Rules, 2013, “The chief executive’s responsibilities include implementation of strategies and policies approved by the BoDs, making appropriate arrangements to ensure that funds and resources are properly safeguarded and are used economically, efficiently and effectively and in accordance with all statutory obligations.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that the companies did not utilize services of fleet of operational vehicles in an efficient manner. Operational vehicles were being utilized for collection and transfer of waste to primary collection points and from primary collection points to the dumping site. However, year-on-year analysis of same number of vehicles covering same distance depicted excessive utilization of POL, ranging from 11% to 28%, to transfer per ton waste at dumping site. Audit analyzed the data of different years and observed that 1.714 million liters of POL was excess used in the operational vehicles for collection and transfer of solid waste to landfill site during the FYs 2016-17 to 2022-23. The details are given at **Annexure-V**.

Due to weak financial management, excess POL was used in operational vehicles for waste collection and dumping which resulted in inefficient utilization of resources.

The matter was reported to the PAOs in April, 2024. The management of WMCs replied that operational vehicles were purchased in 2013-14 or 2014-15. The road access to the dumpsite was damaged which caused increase in POL consumption. Moreover, waste collection capacity was also enhanced which resulted in increased consumption of fuel accordingly. The replies were not tenable as average fuel consumption certificates of vehicles during financial years 2016 to 2023 remained same, whereas, POL consumption per ton of waste disposed had increased.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC directed the management to refer the case to the BoDs for inquiry besides initiating measures for efficient utilization of resources and implementation of strict internal controls while issuing and consuming POL. No further progress was intimated till finalization of this Report.

Audit recommends inquiry and fixing responsibility on the person(s) at fault besides taking steps for efficient utilization of resources.

[AIR Para No. BWMC/24, FWMC/02, MWMC/02]

5.4.4 Non-imposition of liquidated damages

According to Condition No. 27 of General Conditions of Contract read with sub-clause 27.1 of Particular Conditions of the Contract of bidding document, “The liquidated damage (LD) shall be 0.1% per day of contract amount. The maximum amount of liquidated damages shall be up to maximum limit of 10% of contract amount.”

During performance audit of BWMC for the financial years 2013-14 to 2022-23, it was observed that the management of company purchased different items but delivery of goods was not received within stipulated period as mentioned in the purchase order. The management did not impose penalty on late delivery amounting to Rs 7.458 million in violation of terms and conditions of tender document. The details are given at **Annexure-VI**.

Due to weak financial controls, LD charges were not deducted owing to late supply which resulted in inefficient and uneconomic use of company's resources and loss.

The matter was reported to the PAO in April, 2024. The management replied that all items were procured as per PPRA Rules 2014 and *ibid* rules did not discuss about the LD charges. Further, no penalty was mentioned in the work order. The reply was not tenable as clause of LD charges was mentioned in the bidding document and supply orders were issued by violating conditions of the bidding document.

The matter was discussed in DAC meeting held on 6th May, 2024. DAC decided to refer the matter to the BoDs of BWMC for inquiry of the matter besides recovery of LD charges within a month. No progress was intimated till finalization of this Report.

Audit recommends fixing responsibility on the person(s) at fault besides recovery of LD charges from the concerned.

[AIR Para No. BWMC/20]

5.5 Environment

5.5.1 Non-construction of scientific landfill site and dumping of solid waste without assessment of environmental impact

According to Rule-5(7)(m) of the Public Sector Companies (Corporate Governance) Rules, 2013, "The BoDs shall also formulate significant policies of the Public Sector Company, which may include health, safety and environment." Furthermore, according to Section-12 of the Punjab Environmental Protection Act 1997, "A project falling under any category specified in Schedule-I, requires the proponent to file an Environmental Impact Assessment (EIA) with the Federal EPA or provincial agency for obtaining the No Objection Certificate (NOC). In case of the proposed Project, Environment Protection Department (EPD) Punjab based in Lahore will be the main government agency responsible for the issuance of an NOC."

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that scientific landfill sites with required ISWM system could not be established despite lapse of ten years since the inception of WMCs. EIA study for construction of landfill site situated in Bahawalpur was conducted and report containing recommendations was submitted in 2015. Accordingly,

certificate was issued by the EPA dated September 14, 2017 with the directions to comply with the recommendations of EIA study report. But no further progress was made. The site for scientific landfill site of 13 acres in Multan was filled during 2016-17. The 86 acres government land was identified and handed over to DWMC for construction of landfill site, but no progress was made. Furthermore, it was also observed that the companies did not formulate the policy on the environmental issues. The collected waste was dumped without soil, water and air tests or obtaining certificate from the EPD that exposed the local community to hazardous environment.

Audit consulted the research on hazards of non-scientific landfill sites and found that the level of hazard depends on three major factors; leachate composition, quantity of leachate and distance from ground water recharge source. Two out of three landfill sites of Multan were situated along the banks of River Chenab. The Saddar landfill site is located along the Chenab River and continually pollutes the soil, groundwater and river water. Shah Rukne Alam Landfill site is also popular dumping site situated along the road running from main Shah Rukne Alam Bridge on bank of River Chenab. This is very hazardous from environmental point of view as waste generated in Multan was dumped at these sites without proper treatment¹¹.

Due to weak internal controls and non-observing the spirit of SAMAA agreement, scientific landfill sites were not constructed and solid waste was dumped at various sites without necessary tests from approved labs which resulted into serious health and environmental threats to nearby localities and workers.

The matter was reported to the PAOs in April, 2024. The management replied that companies acquired lands for scientific landfill sites but due to non-availability of funds the same could not be developed. The replies were not tenable as main objective of the companies was construction of landfill sites which was not achieved despite lapse of considerable time.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC showed serious concern on dumping the hazardous waste in open trenches and directed the management to obtain a certificate from Environmental

¹¹ Murtaza, G., Habib, R., Shan, A., Sardar, K., Rasool, F., Javid, T., Municipal Solid Waste and its relation with groundwater contamination in Multan, Pakistan. International Journal of Applied Research 2017; 3(4): 434-441

Agency that this activity was not dangerous to public health. No progress was intimated till finalization of this Report.

Audit recommends construction of scientific landfill sites according to the international standards and formulate policies on health, safety and environment besides fixing of responsibility on the person(s) at fault.

[AIR Para No. BWMC/04, 05, 15, DWMC/04, MWMC/03, 08]

5.5.2 Lack of legislation by the government regarding ISWM

According to Para 3.3 (d, g, h and i) of National Environmental Policy 2005, “Pollution caused by liquid and solid waste in the country would be prevented and reduced. For this purpose, the government may devise and implement National Sanitation Policy, encourage reduction, recycling and reuse of municipal and industrial solid and liquid waste, develop and enforce rules and regulations for proper management of municipal, industrial, hazardous and hospital wastes and develop and implement strategies for integrated management of municipal, industrial, hazardous and hospital waste at national, provincial and local levels.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that laws, policies, rules and regulations were framed by Government of the Punjab, Environment Protection and Climate Change Department regarding industrial waste, hospital waste, hazardous waste, bio safety, plastic management, air and noise pollution etc. in the light of recommendations contained in National Environmental Policy 2005 but no specific law, rules, regulations and strategies were framed by Government of the Punjab to regulate and implement the integrated management of municipal solid waste in the Punjab. On the other hand, Sindh Government had framed Sindh SWM Board Act, 2014 and Sindh SWM Act, 2021.

Due to lack of interest and negligence, legislation regarding SWM was not done by the government which resulted in ineffectiveness of companies.

The matter was reported to the PAO in April, 2024. The management replied that ninth schedule of the Local Government Act, 2022 had imposed fine for littering on waste and the act covered the SWM requirement. But the powers of fines were vested with the concerned MC. The reply was not tenable being

irrelevant as neither any policy nor legislation was carried out by the government so far regarding integrated management of solid waste in Punjab.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC directed the management to refer the matter to the Administrative Department through BoDs to take up the matter with government for making policies as described in National Environmental Policy, 2005 at the earliest. No progress was intimated till finalization of this Report.

Audit recommends implementation of DACs decision at the earliest.

[AIR Para No. BWMC/02]

5.6 Sustainability

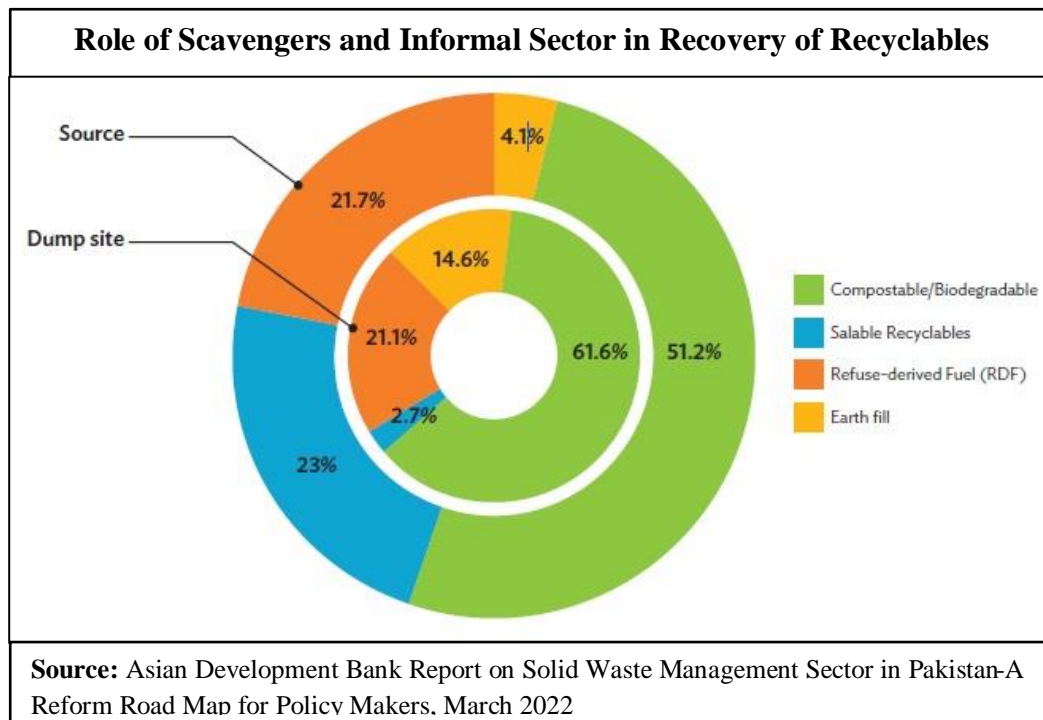
5.6.1 Non-segregation and recycling of waste

According to sub-clause 16, 44 and 45 of Clause-V of MoA of WMCs, “Main objective of the company was to conduct surveys, studies and research into various fields and best practices of management and operations of management services at national or international level. Segregation of waste to recover recyclables, using environment friendly techniques and technologies. Treatment of waste, using techniques and technologies offering optimum advantages of public health, environment protection and economy.”

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that 6.817 million tons of solid waste was collected and dumped by WMCs during the audit period without adopting any techniques for segregation and recycling. It was noticed that slackness of WMCs had resulted in growth of informal sector for segregating and recycling waste for generating revenues. According to the Polymer Waste Importers and Recyclers Association in Punjab, up to 90% of the polyethylene terephthalate (PET) bottles in urban waste were collected and recycled¹². Moreover, Waste Analysis and Characterization surveys carried out at source and at dump sites revealed that more than 80% of the valuable recyclables (paper, plastic, glass, metal, and rubber) were taken away by

¹² Haider, A., A. Amber, S. Ammara, K. S. Mahrukh, and B. Aisha. 2015. Knowledge, Perception and Attitude of Common People towards Solid Waste Management: A Case Study of Lahore, Pakistan. *International Research Journal of Environmental Sciences*. 4 (3). pp. 100–107.

the informal sector before they reach the dump sites¹³. Chart below shows the role of scavengers and informal sector in recovery of recyclable from waste:



Despite the fact that a city-level waste sorting, recycling, and composting plant, with a waste processing capacity of 200 tons per day, was recently inaugurated at Sahiwal by Urban Unit, Government of the Punjab but WMCs were not leveraging the available facility for generating revenues. The Urban Unit had estimated that the revenue from sale of recyclables and compost over three months to be over Rs 5.76 million which would be over Rs 8.2 million when the plant would process 50 tons per day as targeted. Moreover, saving on landfill handling costs (indirect saving on 60% waste diversion) would be Rs 1.4 million per month besides reducing surface and groundwater pollution¹⁴. Audit held that WMCs were meant to take such technological solutions to harness the potential revenue sources for self-sustainability but they failed to do so.

¹³ Japan International Cooperation Agency (JICA). 2015. Project for Integrated Solid Waste Management Master Plan in Gujranwala: Final Report. Punjab, Pakistan.

¹⁴<https://www.thenews.com.pk/print/1104148-plant-designed-to-recycle-waste-in-sahiwal> accessed on June 27, 2024

Due to poor management, technology was not used for segregation and recycling of waste for revenue generation which resulted in non-achievement of self-sustainability.

The matter was reported to the PAOs in April, 2024. The management replied that due to non-provision of required funds by the government, new techniques were not adopted. The reply was not tenable as no efforts were made to harness the informal sector or PPP model for segregating recyclable items and converting those into valuable products.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC directed to refer the matter to the BoDs for inquiry for fixing responsibility besides initiating steps by the management to use already available staff for segregation of valuables during primary collection. No progress was intimated till finalization of this Report.

Audit recommends implementation of DAC's decision at the earliest.

[AIR Para No. BWMC/12]

5.6.2 Inadequate waste management due to non-achievement of financial viability

According to Clause-10 of SAAMA agreement, "The Company shall, from time-to-time, propose cost recovery measures in respect of SWM services and may propose to CDG / TMA for imposition of new taxes, fees, user charges, surcharges, cesses, rents, rates, fines and forfeitures or revision of their rates or their abolition." Furthermore, according to letter No.SO (Companies) LG 9-2/2019 (P-VII) (RGP) Government of the Punjab, LG&CD Department dated December 01, 2020, companies were directed to finalize RGPs till December 05, 2020.

During performance audit of WMCs for the financial years 2013-14 to 2022-23, it was observed that the companies could not implement RGP to meet their financial needs on self-sustainable basis. Consequently, they remained unable to provide for adequate operational resources to perform waste collection activities efficiently. Scrutiny of record revealed that comprehensive RGPs based on field survey were prepared by the WMCs during the financial years 2020-21 and 2021-22 but the same could not be implemented causing non-collection of own source income amounting to Rs 6,708.807 million per annum. Audit concluded that financial viability had direct relationship with service delivery and effectiveness of

resources already deployed. The estimated revenue figures of respective RGPs of WMCs are as under:

(Rupees in million)

Sr. No.	Company	Amount
1	BWMC	595.000
2	DWMC	363.970
3	FWMC	3,947.187
4	MWMC	1,802.650
Total		6,708.807

Due to weak management and negligence, RGPs were not implemented which resulted in financial constraints, inefficiency and non-achievement of objectives of waste collection as desired.

The matter was reported to the PAOs in April, 2024. The management replied that RGPs were submitted to the Government of Punjab, which were pending at the level of cabinet for consideration since June, 2023. LG&CD Department had initiated a summary for Chief Minister's approval on June 9, 2023. The replies were not acceptable as no RGPs were formulated since inception of WMCs.

The matter was discussed in DAC meetings held on 6th and 14th May, 2024. DAC directed the management to take up the matter with higher ups through BoDs for approval and implementation of RGP to attain self-sustainability. No progress was intimated till finalization of this Report.

Audit recommends implementation of RGPs for financial viability besides exploring new avenues through use of PPP and ICT models.

[AIR Para No. BWMC/03, DWMC/06, FWMC/06, MWMC/05]

6. OVERALL ASSESSMENT

The companies were established with the aim of consolidating efforts to enhance the existing SWM system by introducing an ISWM system and implementing RGPs independently. However, these objectives remained unmet due to the failure to establish the ISWM system and the absence of an integrated planning and monitoring mechanism for waste collection activities and field operations. Furthermore, there was a lack of efforts in achieving KPIs and objectives.

i. Relevance

WMCs are essential for safe disposal of waste and creating clean environment in cities, but they have performed inadequately to achieve the desired outcomes.

ii. Efficiency

WMCs did not properly implement the desired policies and both human and material resources were underutilized, operating below their full capacity. Consequently, this inefficiency led to an increase in the dumping cost per ton.

iii. Economy

Proper allocation of financial and human resources are fundamental principles of economic management. WMCs did not optimally utilized their operational resources nor upgraded operational equipment to absence of RGPs. The delay hindered operational activities, hence, service delivery.

iv. Effectiveness

WMCs did not achieve the intended objectives and were unable to fulfill their primary responsibility of collecting and disposing of solid waste for the general public in an effective way. WMCs were unable to make the most of the solid waste by turning its disposal into a source of income rather than a liability.

v. Performance rating of WMCs

The performance of companies remained less than satisfactory

vi. Risk rating of WMCs

High

7. CONCLUSION

The performance audit has uncovered serious flaws in the way WMCs operate, such as non-development of ISWM system, non-segregation and non-recycling of waste, inadequate management of operational resources, and disregard for regulatory framework etc. These flaws not only jeopardize environmental sustainability but also put public health at risk and raise operating expenses for the WMCs.

The root causes identified include, use of outdated technology, mismanagement of resources and weak regulatory enforcement etc. To address these issues effectively, Audit recommends that WMCs should prioritize investments in modern technologies, create awareness and engage in PPPs, and strengthen compliance with regulatory requirements. By implementing these measures, WMCs can enhance efficiency in waste handling, reduce environmental impact, and garner public trust.

Stakeholders should urgently implement these recommendations in order to reduce the adverse impacts of poor waste management practices. By doing this, we can provide the groundwork for future generations to benefit from sustainable waste management strategies and pave the way for better, cleaner and healthier environment.

ACKNOWLEDGEMENT

We wish to express our appreciation to the Management and staff of the BWMC, DWMC, FWMC and MWMC for their assistance and cooperation extended to the auditors during this assignment.

ANNEXURES

Annexure-I

Budget, expenditure and receipts data

(Rupees in million)

FY	Funds Received			Funds Utilized / Expenditure				Balance
	From Govt.	Own Sources	Total	Salary	Non-Salary	Dev.	Total	
BWMC								
2013-14	87.410	0.158	87.568	20.653	5.317	5.226	31.196	56.372
2014-15	348.592	0.266	348.858	108.265	28.308	46.891	183.464	165.393
2015-16	328.928	0.158	329.086	191.560	32.427	102.570	326.557	2.530
2016-17	320.216	0.657	320.873	247.954	49.412	63.870	361.236	(40.363)
2017-18	294.000	0.787	294.787	276.394	55.271	0.330	331.995	(37.208)
2018-19	304.230	4.174	308.404	301.258	57.185	-	358.443	(50.038)
2019-20	294.000	11.270	305.270	299.973	54.726	-	354.699	(49.429)
2020-21	405.920	8.399	414.319	318.827	59.833	19.590	398.250	16.068
2021-22	470.970	6.064	477.034	369.363	81.543	62.140	513.046	(36.012)
2022-23	514.740	17.490	532.230	449.923	120.463	-	570.386	(38.155)
Total	3,369.006	49.423	3,418.429	2,584.170	544.485	300.617	3,429.272	(10.842)
DWMC								
2020-21	211.503	10.523	222.026	114.330	49.890	12.330	176.550	45.476
2021-22	179.438	5.234	184.672	186.080	69.000	80.940	336.020	(151.348)
2022-23	390.698	3.994	394.692	260.420	125.000	1.240	386.660	8.032
Total	781.639	19.751	801.390	560.830	243.890	94.510	899.230	(97.840)
FWMC								
2013-14	179.560	-	179.560	56.150	0.780	28.680	85.610	93.950
2014-15	1,510.660	0.626	1,511.286	726.299	169.683	28.677	924.659	586.627
2015-16	1,245.380	35.448	1,280.828	798.640	145.310	41.769	985.719	295.109
2016-17	1,202.600	41.006	1,243.606	893.815	208.765	52.850	1,155.430	88.176
2017-18	1,142.660	45.195	1,187.855	1,054.250	268.850	190.547	1,513.647	(325.792)
2018-19	1,142.660	30.698	1,173.358	1,114.258	376.494	158.853	1,649.605	(476.247)
2019-20	1,142.660	21.819	1,164.479	1,292.644	393.432	6.688	1,692.764	(528.285)
2020-21	1,969.660	13.018	1,982.678	1,287.912	370.892	2.009	1,660.813	321.865
2021-22	1,841.640	8.920	1,850.560	1,390.236	476.660	9.292	1,876.188	(25.628)

FY	Funds Received			Funds Utilized / Expenditure				Balance
	From Govt.	Own Sources	Total	Salary	Non-Salary	Dev.	Total	
2022-23	1,924.670	9.800	1,934.470	1,643.060	574.150	24.300	2,241.510	(307.040)
Total	13,302.150	206.530	13,508.680	10,257.264	2,985.016	543.665	13,785.945	(277.265)
MWMC								
2013-14	63.225	29.247	92.472	1.809	26.702	2.365	30.876	61.597
2014-15	960.343	63.452	1,023.795	565.997	95.070	4.101	665.168	358.626
2015-16	1,041.276	87.437	1,128.713	616.682	95.472	0.769	712.923	415.791
2016-17	993.105	50.351	1,043.456	589.645	139.495	29.707	758.847	284.609
2017-18	818.280	45.314	863.594	644.042	242.686	8.201	894.929	(31.335)
2018-19	818.280	88.228	906.508	683.061	145.854	17.243	846.158	60.349
2019-20	818.280	134.190	952.470	771.220	156.262	13.460	940.942	11.529
2020-21	818.280	86.483	904.763	800.910	155.429	27.426	983.765	(79.001)
2021-22	818.280	81.687	899.967	919.161	220.959	0.824	1,140.944	(240.978)
2022-23	1,318.280	125.109	1,443.389	1,069.038	294.773	1.692	1,365.503	77.887
Total	8,467.629	791.498	9,259.127	6,661.565	1,572.702	105.788	8,340.055	919.074

Consolidated Budget, expenditure and receipts data of Four WMCs

(Rupees in million)

FY	Funds Received			Funds Utilized / Expenditure				Balance
	From Govt.	Own Sources	Total	Salary	Non-Salary	Dev.	Total	
2013-14	330.195	29.405	359.600	78.612	32.799	36.271	147.682	211.918
2014-15	2,819.595	64.344	2,883.939	1,400.561	293.061	79.669	1,773.291	1,110.648
2015-16	2,615.584	123.043	2,738.627	1,606.882	273.209	145.108	2,025.199	713.428
2016-17	2,515.921	92.014	2,607.935	1,731.414	397.672	146.427	2,275.513	332.422
2017-18	2,254.940	91.296	2,346.236	1,974.686	566.807	199.078	2,740.571	(394.335)
2018-19	2,265.170	123.100	2,388.270	2,098.577	579.533	176.096	2,854.206	(465.936)
2019-20	2,254.940	167.279	2,422.219	2,363.837	604.420	20.148	2,988.405	(566.186)
2020-21	3,405.363	118.423	3,523.786	2,521.979	636.044	61.355	3,219.378	304.408
2021-22	3,310.328	101.905	3,412.233	2,864.840	848.162	153.196	3,866.198	(453.965)
2022-23	4,148.388	156.393	4,304.781	3,422.441	1,114.386	27.232	4,564.059	(259.278)
Total	25,920.424	1,067.202	26,987.626	20,063.829	5,346.093	1,044.580	26,454.502	533.124

Annexure-II [Para: 5.1.2]

Inadequate deployment of HR in field operations

Table-A (Less deployment of Sanitary Workers)

FY	Company	Required Sanitary Workers	Sanitary Workers Deployed	Sanitary Workers Less Deployed	
				No.	%age
2013-14	BWMC	616	438	178	29%
	FWMC	3,311	3,142	169	5%
2014-15	BWMC	637	615	22	3%
	FWMC	3,432	3,111	321	9%
2015-16	BWMC	659	614	45	7%
	FWMC	3,553	3,226	327	9%
2016-17	FWMC	3,799	3,499	300	8%
2017-18	BWMC	782	700	82	10%
	FWMC	3,918	3,385	533	14%
	MWMC	1,862	1,804	58	3%
2018-19	BWMC	793	681	112	14%
	FWMC	3,976	3,825	151	4%
	MWMC	1,899	1,796	103	5%
2019-20	BWMC	804	667	137	17%
	FWMC	4,044	3,727	317	8%
	MWMC	1,937	1,773	164	8%
2020-21	BWMC	815	646	169	21%
	DWMC	491	481	10	2%
	FWMC	4,166	3,666	500	12%
	MWMC	1,976	1,732	244	12%
2021-22	BWMC	826	651	175	21%
	FWMC	4,288	3,570	718	17%
	MWMC	2,016	1,718	298	15%
2022-23	BWMC	837	647	190	23%
	FWMC	4,300	3,438	862	20%
	MWMC	2,056	1,686	370	18%

Table-B (Less deployment of Supervisors)

FY	Required Supervisors	Supervisors Deployed	Supervisors Less Deployed	
			No.	%age
BWMC				
2013-14	36	30	6	17%
2014-15	36	19	17	47%
2015-16	36	19	17	47%
2016-17	36	23	13	36%
2017-18	42	23	19	45%
2018-19	42	26	16	38%
2019-20	42	26	16	38%
2020-21	42	20	22	52%
2021-22	42	18	24	57%
2022-23	42	17	25	60%
DWMC				
2020-21	29	15	14	48%
2021-22	29	20	9	31%
2022-23	29	26	3	10%
FWMC				
2014-15	113	89	24	21%
2015-16	157	90	67	43%
2016-17	157	89	68	43%
2017-18	157	87	70	45%
2018-19	157	90	67	43%
2019-20	157	85	72	46%
2020-21	157	89	68	43%
2021-22	157	85	72	46%
2022-23	157	85	72	46%
MWMC				
2014-15	136	76	60	44%
2015-16	136	73	63	46%
2016-17	136	72	64	47%
2017-18	136	68	68	50%
2018-19	136	68	68	50%
2019-20	136	68	68	50%
2020-21	136	66	70	51%
2021-22	136	65	71	52%
2022-23	136	64	72	53%

(Source: Data provided by respective WMCs)

Table-C (Less deployment of Managerial Staff)

Designation (DWMC)	Grade	Staff less deployed
Chief Executive Officer	M-1	1
Chief Financial Officer	M-3	1
Manager Operation	M-5	1
Manager Workshop and Fleet Management	M-5	1
Manager Landfill Site and Transfer Station	M-5	1
Manager Procurement and Contract	M-5	1
Assistant Manager Procurement and Contract	M-7	1
Assistant Manager HR	M-7	1
Assistant Manager Admin	M-7	1
Assistant Manager Audit	M-7	1
Assistant Manager Finance	M-7	1
Assistant Manager Accounts	M-7	1
Assistant Manager Operation	M-7	1
Management Executive - Workshop	M-8	1
Management Executive - Procurement and Contract	M-8	1
Management Executive - HR	M-8	1
Management Executive - Admin	M-8	1
Management Executive - Finance	M-8	1
Management Executive - Accounts	M-8	1
Management Executive – Company Secretary	M-8	1
Data Entry / Computer Operator	M-8	3
Total		23

(Source: Data provided by DWMC)

Annexure-III [Para: 5.3.1]

Non-development of Integrated Solid Waste Management System

(Figure in ton)

Year	Detail of sites	Waste Dumped
BWMC		
2014-15	Badar Sher	75,191
2015-16	Badar Sher	101,816
2016-17	Bhinda Dakhli	114,832
2017-18	Bhinda Dakhli	118,061
2018-19	Bhinda Dakhli	118,461
2019-20	Bhinda Dakhli	122,015
2020-21	Bhinda Dakhli	113,395
2021-22	Bhinda Dakhli	108,865
2022-23	Bhinda Dakhli	112,098
2020-21	Uch Sharif Road	3,937
2021-22	Uch Sharif Road	14,134
2022-23	Uch Sharif Road	15,563
Total BWMC		1,018,368
DWMC		
2022-23	9 KM Wadoor Road 86 Acer	60,976
2021-22	9 KM Wadoor Road 86 Acer	68,230
2020-21	9 KM Wadoor Road 86 Acer	89,439
Total DWMC		218,645
FWMC		
2014-15	Muhammad Wala, Jaranwala road	204,214
2015-16	Muhammad Wala, Jaranwala road	256,044
2016-17	Muhammad Wala, Jaranwala road	376,120
2017-18	Muhammad Wala, Jaranwala road	410,274
2018-19	Muhammad Wala, Jaranwala road	459,310
2019-20	Muhammad Wala, Jaranwala road	413,224
2020-21	Muhammad Wala, Jaranwala road	453,339
2021-22	Muhammad Wala, Jaranwala road	464,911
2022-23	Muhammad Wala, Jaranwala road	451,230
Total FWMC		3,488,666
MWMC		
2014-15	Habiba Sial, Vehari Road	179,627
2015-16	Habiba Sial, Vehari Road	184,165
2016-17	Habiba Sial, Vehari Road	225,554
2017-18	Boa Pur, Khanewal Road	230,788
2018-19	Boa Pur, Khanewal Road	224,426
2019-20	Khad Factory, Khanewal Road	255,435
2020-21	Khad Factory, Khanewal Road	275,402
2021-22	Khad Factory, Khanewal Road	259,986
2022-23	Khad Factory, Khanewal Road	256,358
Total MWMC		2,091,741
Grand Total		6,817,420

Annexure-IV (A) [Para: 5.4.1]

Insolvent position of WMCs

(Rupees in million)

FY	Grant	PFC Share	Grants from TMA/MC	Own Source	Loan	Total Receipts	Total Exp.	Saving / Deficit	Loan to Exp. %age
BWMC									
2013-14	87.410	-	-	0.158	-	87.568	31.196	56.372	0%
2014-15	286.150	-	62.442	0.266	-	348.858	183.464	165.394	0%
2015-16	235.382	-	93.546	0.158	-	329.086	326.557	2.529	0%
2016-17	152.108	102.000	66.108	0.657	-	320.873	361.236	(40.363)	0%
2017-18	-	144.000	-	0.787	150.000	294.787	331.995	(37.208)	45%
2018-19	-	144.000	10.230	4.174	150.000	308.404	358.443	(50.039)	42%
2019-20	-	144.000	-	11.270	150.000	305.270	354.699	(49.429)	42%
2020-21	-	144.000	51.920	8.399	210.000	414.319	398.250	16.069	53%
2021-22	-	144.000	64.850	6.064	262.120	477.034	513.046	(36.012)	51%
2022-23	-	144.000	70.740	17.490	300.000	532.230	570.386	(38.156)	53%
Total BWMC	761.050	966.000	419.836	49.423	1,222.120	3,418.429	3,429.272	(10.843)	
DWMC									
2020-21	125.000	-	86.503	10.523	-	222.026	176.550	45.476	0%
2021-22	64.000	-	115.438	5.234	-	184.672	336.020	(151.348)	0%
2022-23	-	-	90.698	3.994	300.000	394.692	386.660	8.032	78%
Total DWMC	189.000	-	292.639	19.751	300.000	801.390	899.230	(97.840)	
FWMC									
2013-14	-	179.560	-	-	-	179.560	85.610	93.950	0%
2014-15	-	1,510.660	-	0.626	-	1,511.286	924.659	586.627	0%
2015-16	-	1,245.380	-	35.448	-	1,280.828	985.719	295.109	0%
2016-17	-	1,202.600	-	41.006	-	1,243.606	1,155.430	88.176	0%
2017-18	-	1,142.660	-	45.195	-	1,187.855	1,513.647	(325.792)	0%
2018-19	-	1,142.660	-	30.698	-	1,173.358	1,649.605	(476.247)	0%
2019-20	-	1,142.660	-	21.819	-	1,164.479	1,692.764	(528.285)	0%
2020-21	-	1,142.660	-	13.018	827.000	1,982.678	1,660.813	321.865	50%

FY	Grant	PFC Share	Grants from TMA/MC	Own Source	Loan	Total Receipts	Total Exp.	Saving / Deficit	Loan to Exp. %age
2021-22	-	1,134.640	-	8.920	707.000	1,850.560	1,876.188	(25.628)	38%
2022-23	-	1,150.670	-	9.800	774.000	1,934.470	2,241.510	(307.040)	35%
Total FWMC	-	10,994.150	-	206.530	2,308.000	13,508.680	13,785.945	(277.265)	
MWMC									
2013-14	63.225	-	-	29.247	-	92.472	30.876	61.596	0%
2014-15	261.000	699.343	-	63.452	-	1,023.795	665.168	358.627	0%
2015-16	328.630	712.646	-	87.437	-	1,128.713	712.923	415.790	0%
2016-17	170.505	822.600	-	50.351	-	1,043.456	758.847	284.609	0%
2017-18	-	818.280	-	45.314	-	863.594	894.929	(31.335)	0%
2018-19	-	818.280	-	88.228	-	906.508	846.158	60.350	0%
2019-20	-	818.280	-	134.190	-	952.470	940.942	11.528	0%
2020-21	-	818.280	-	86.483	-	904.763	983.765	(79.002)	0%
2021-22	-	818.280	-	81.687	-	899.967	1,140.944	(240.977)	0%
2022-23	-	818.280	-	125.109	500.000	1,443.389	1,365.503	77.886	
Total MWMC	823.360	7,144.269	-	791.498	500.000	9,259.127	8,340.055	919.072	

(Source: Financial Statements for the financial years 2013-14 to 2022-23)

Annexure-IV(B) [Para: 5.4.1]

Detail of Own Source Receipts of WMCs

(Rupees in million)

FY	Receipt from Services	Bank Profits	Other Income	Sale of Waste	Total
BWMC					
2013-14	-	0.158	-	-	0.158
2014-15	-	0.006	0.260	-	0.266
2015-16	-	0.004	0.154	-	0.158
2016-17	0.551	0.004	0.102	-	0.657
2017-18	0.646	-	0.141	-	0.787
2018-19	0.728	3.189	0.257	-	4.174
2019-20	1.624	8.597	1.049	-	11.270
2020-21	2.549	5.192	0.658	-	8.399
2021-22	3.374	2.491	0.199	-	6.064
2022-23	5.490	4.057	7.943	-	17.490
Total BWMC	14.962	23.698	10.763	-	49.423
DWMC					
2020-21	-	10.468	0.055	-	10.523
2021-22	-	5.190	0.044	-	5.234
2022-23	-	3.668	0.326	-	3.994
Total DWMC	-	19.326	0.425	-	19.751
FWMC					
2013-14	-	-	-	-	0
2014-15	-	-	0.626	-	0.626
2015-16	0.737	34.497	0.214	-	35.448
2016-17	0.839	39.989	0.178	-	41.006
2017-18	1.199	39.216	4.780	-	45.195
2018-19	2.946	27.027	0.725	-	30.698
2019-20	4.755	14.208	2.856	-	21.819
2020-21	4.991	4.608	3.419	-	13.018
2021-22	3.299	4.634	0.987	-	8.920
2022-23	5.326	4.474	0	-	9.800
Total FWMC	24.092	168.653	13.785	-	206.530
MWMC					
2013-14	1.737	-	0.076	27.434	29.247
2014-15	4.228	-	1.852	57.372	63.452
2015-16	4.207	14.213	2.058	66.959	87.437
2016-17	5.760	28.542	2.193	13.856	50.351
2017-18	6.263	38.804	0.247	-	45.314
2018-19	6.890	81.165	0.173	-	88.228
2019-20	7.578	126.456	0.156	-	134.190
2020-21	8.336	77.945	0.202	-	86.483
2021-22	9.272	72.250	0.165	-	81.687
2022-23	10.379	114.524	0.206	-	125.109
Total MWMC	64.650	553.899	7.328	165.621	791.498

Annexure-V [Para: 5.4.3]

Excess consumption of POL of operational vehicles

(Amount in rupees)

Year	Operational Vehicles	POL consumed (Liters)	Waste Dumped (Tons)	Standard POL as per base year (Liters)	Excess POL consumed (Liters)	POL increased%
BWMC (Bhinda Dakhli Bahawalpur)						
2016-17	92	170,284	114,832	170,284	-	
2017-18	92	194,833	118,061	175,165	19,668	11%
2018-19	92	200,808	118,461	175,758	25,050	14%
2019-20	92	207,551	122,015	181,031	26,520	15%
2020-21	92	205,422	113,395	168,241	37,181	22%
2021-22	92	195,065	108,865	161,521	33,544	21%
2022-23	92	203,594	112,098	166,318	37,276	22%
Total BWMC		1,377,557	807,727	1,198,318	179,239	
FWMC (Muhammad Wala, Jaranwala Road)						
2018-19	199	1,608,107	459,310	1,608,107		
2019-20	199	1,857,472	413,224	1,446,754	410,718	28%
2020-21	199	1,839,797	453,339	1,587,202	252,595	16%
2021-22	199	1,955,970	464,911	1,627,717	328,253	20%
2022-23	199	1,830,632	451,230	1,579,818	250,814	16%
Total FWMC		9,091,978	2,242,014	7,849,598	1,242,380	
MWMC (Habiba Sial, Vehari Road)						
2014-15	135	533,185	179,627	533,185		
2015-16	135	689,230	184,165	546,656	142,574	26%
2016-17	135	742,934	225,554	669,511	73,423	11%
MWMC (Khad Factory, Khanewal Road)						
2020-21	223	663,765	275,402	663,765		
2021-22	223	703,028	259,986	626,610	76,418	12%
Total MWMC		3,332,142	1,124,734	3,039,727	292,415	
Grand Total		13,801,677	4,174,475	12,087,643	1,714,034	

Annexure-VI [Para: 5.4.4]

Non-imposition of liquidated damages

(Rupees in million)

Cheque No. / Date	Supplier Name	Description	Supply Order No. and Date	Time Allowed (days)	Due Date	Actual Date of Receiving	Late Days	Amount	LD Charges
132257319/1 4.07.2014	M/s Husnain and CO	Wheelie Bins	BWMC/2014/145 dated 20.05.2014	15	04.06.14	11.07.14	36	1.320	0.048
132257363/0 9.09.2014	M/s A&A Associate	Furniture	BWMC/2014/193 dated 28.06.2014	45	12.08.14	08.09.14	26	0.971	0.025
132257371/1 7.09.2014	M/s A&A Associate	Furniture	BWMC/2014/193 dated 28.06.2014	45	12.08.14	17.09.14	35	0.833	0.029
132257381/2 5.09.2014	M/s A&A Associate	Furniture	BWMC/2014/193 dated 28.06.2014	45	12.08.14	22.09.14	40	0.311	0.012
1304213228/ 02.02.2015	M/s Colibrative Ind	Mini Dumpers	BWMC/2014/306 dated 03.09.2014	30	03.10.14	25.11.14	52	4.500	0.234
1304990527/ 10.04.2015	M/s Multi Business	Wheelie Bins	BWMC/2015/P&C/12 dated 11.02.2015	15	27.02.15	18.03.15	18	1.154	0.021
1308390007/ 16.06.2016	M/s Master Motor	Garbage Compactors 7-8 M3	BWMC/P&C/18 dated 24.02.2015	30	25.03.15	05.05.16	405	4.068	0.407
1309101127/ 30.08.2016	M/s Master Motor	Garbage Compactors 7-8 M3	BWMC/P&C/18 dated 24.02.2015	30	25.03.15	21.04.16	391	4.068	0.407
1307541919/ 19.02.2016	M/s Ghandhara Ind	Trucks Chassis	BWMC/P&C/44 dated 13.04.2015	30	13.05.15	19.09.15	128	5.200	0.520
1306670147/ 10.11.2015	M/s HI Tech	Weighbridge	BWMC/P&C/53 dated 30.04.2015	30	30.05.15	15.06.15	15	2.749	0.041
1307541940/ 04.03.2016	M/s Suleman Engineering	Front Blade with 385 (4x4)	BWMC/PC/102 dated 14.07.2015	15	29.07.15	15.09.15	48	0.094	0.004
1307541942/ 08.03.2016	M/s Suleman Engineering	Buckets	BWMC/PC/101 dated 14.07.2015	15	29.07.15	14.09.15	47	1.448	0.068
1305511395/ 30.07.2015	M/s Millat Tractor	385 (4x4) Tractor Massey Ferguson	BWMC/PC/124 dated 04.08.2015	15	29.07.15	12.09.15	45	7.040	0.317
1308091614/ 18.04.2016	M/s Multiwear Garments	Uniforms	BWMC/PC/204 dated 03.11.2015	30	03.12.15	19.12.15	16	1.157	0.019
1310621079/ 25.05.2017	M/s Multiwear Garments	Uniforms	BWMC/PC/438 dated 28.11.2016	30	27.12.16	10.01.17	14	0.721	0.010

Cheque No. /Date	Supplier Name	Description	Supply Order No. and Date	Time Allowed (days)	Due Date	Actual Date of Receiving	Late Days	Amount	LD Charges
1308099161 5/18.04.2016	M/s Abdul Gafar	Waste Containers 0.8 M3	BWMC/PC/233 dated 16.12.2015	30	15.01.16	06.04.16	80	5.280	0.422
1311157744/ 23.06.2017	M/s Abdul Gafar	Waste Containers 0.8 M3	BWMC/PC/233 dated 16.12.2015	30	15.01.16	01.03.17	409	5.280	0.528
1308390089/ 17.08.2016	Hafiz Traders	Tyres, Tubes, Rims	BWMC/PC/269 dated 10.02.2016	10	20.02.16	08.03.16	16	1.798	0.029
1309101123/ 29.08.2016	M/s Bilal Engineering	Superstructure of Arm Roll 5M3	BWMC/PC/294 dated 03.03.2016	45	16.04.16	21.07.16	96	8.500	0.816
1305511320/ 10.06.2015	M/s Kissan Engineering	Waste Containers 0.8 M3	BWMC/2015/P &C/14 dated 11.02.2015	30	29.03.15	21.04.15	23	4.938	0.114
1307094855/ 16.01.2016	M/s Kissan Engineering	Trucks and Containers	BWMC/P&C/44 dated 13.04.2015	30	13.05.15	19.09.15	128	6.358	0.636
1309791979/ 23.01.2017	M/s Kissan Engineering	Superstructure of Garbage Compactor 7-8 M3	BWMC/PC/292 dated 03.03.2016	45	16.04.16	08.09.16	145	4.200	0.420
1309791979/ 23.01.2017	M/s Kissan Engineering	Superstructure of Garbage Compactor 7-8 M3	BWMC/PC/292 dated 03.03.2016	45	16.04.16	03.10.16	170	4.200	0.420
1310248000/ 08.04.2017	M/s Kissan Engineering	Superstructure of Garbage Compactor 7-8 M3	BWMC/PC/292 dated 03.03.2016	45	16.04.16	15.02.17	305	5.600	0.560
1309791980/ 23.01.2017	M/s Kissan Engineering	Superstructure of Garbage Compactor 13M3	BWMC/PC/293 dated 03.03.2016	45	16.04.16	21.11.16	219	4.100	0.410
1309791978/ 23.01.2017	M/s Kissan Engineering	Arm Roll Super Structure and Garbage Container 5 M3	BWMC/PC/291 dated 03.03.2016	40	11.04.16	09.09.16	151	3.900	0.390
1309101145/ 09.09.2016	M/s Kissan Engineering	Super Structure Mining Tipper 1 M3	BWMC/PC/290 dated 03.03.2016	60	03.05.16	23.07.16	80	5.460	0.437
4184406843/ 06.05.2021	M/s Kissan Engineering	Garbage Compactor 8M3	BWMC/PC/380 dated 04.02.2021	60	06.04.21	30.04.21	23	4.950	0.114
Total								100.198	7.458