



**Environmental Audit Report
on
Solid Waste Management
in
City District Gujranwala**

Audit Year 2016-17

AUDITOR GENERAL OF PAKISTAN

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Abbreviations and Acronyms

ASOSAI	Asian Organization of Supreme Audit Institutions
BOD	Board of Directors
CDGG	City District Government Gujranwala
COSO	Committee of Sponsoring Organizations
DO	District Officer
EIA	Environmental Impact Analysis
EPA	Environment Protection Agency
EPCO	Environmental Pollution Control Organization
EPD	Environment Protection Department, Punjab
EPO	Environment Protection Order
FD	Finance Department
INTOSAI	International Organization of Supreme Audit Institution
ISWM	Integrated Solid Waste Management
IWW	Industrial Water Waste
MRF	Material Recovery Facility
MS	Mechanized Sweeper
MSW	Municipal Solid Waste
MSWM	Municipal Solid Waste Management
MT	Metric Ton
NEQS	National Environment Quality Standards
NGO	Non Government Organization
PEPA	Punjab Environment Protection Act
PLGO	Punjab Local Government Ordinance
SAAMA	Services and Asset Management Agreement
SWM	Solid Waste Management
SOP	Standard Operating Procedure

PREFACE

The Auditor General of Pakistan conducts audit under Articles 169 and 170 of the Constitution of the Islamic Republic of Pakistan 1973, read with Section 8 and 12 of the Auditor General's (Function, Powers and Terms and Conditions of Service) Ordinance 2001 and Section 115 of the Punjab Local Government Ordinance 2001. The environment audit of Solid Waste Management in City District Gujranwala was carried out accordingly.

The Directorate General Audit, District Governments, Punjab (North), conducted environment audit of the Solid Waste Management during 2016-17 with a view to evaluating the enforcement of environment policy, byelaws, regulations & laws and to check the performance of authorities at district level which are responsible for environment protection measures. The Audit Report includes the findings of the audit regarding the enforcement of Punjab Environment Protection Act (PEPA) 1997 also having a bearing on the handling, storage, disposal and transportation of waste by GWMC in an economical, efficient and effective manner.

The observations included in this report have been finalized after discussion of Audit paras with the management. However, no DAC meeting was convened despite repeated requests.

The Environment Audit Report is submitted to the Governor of the Punjab in pursuance of Article 171 of the Constitution of the Islamic Republic of Pakistan 1973, to cause it to be laid before the Provincial Assembly of Punjab.

Islamabad
Dated:

(Javaid Jehangir)
Auditor General of Pakistan

EXECUTIVE SUMMARY

Director General of Audit, District Governments Punjab (North), Lahore, conducted an Environment Audit to dwell upon imperatives of cross cuttings amongst relevant service delivery organs entrusted with the onus to act as enforcement arms such as DO (Environment), DO (SWM) and GWMC in City District Government Gujranwala (CDGG) during March- April 2017. The main objective of audit was to examine as to whether DO (Environment), DO(SWM) and GWMC in the CDGG are collecting, transporting and disposing off solid waste in an economical, efficient and effective manner with minimum risk to population and environment. The audit has focused as to whether the environment protection was being enforced to prevent pollutants causing hazards to the wellbeing of the people with serious risk to human population, ecological balance natural habitats, fauna and flora as well as livestock. Exposure of these risks is ranging from biodiversity losses, contamination of water sources /water bodies due to drainage of effluents, from chemical and pharmaceutical plants with non-existent/ non-commissioned treatment plants and discharge of industrial waste water effluent as well sewerage into the Canals/Nallahs without treatment. Furthermore, enforcement of laws and rules warranted cognizance and prosecution of environment offences to deter proliferation of such violations. The audit was conducted in accordance with the INTOSAI Auditing Standards besides ASOSAI Environment Auditing Guidelines.

DO Environment is responsible for enforcement of Punjab Environmental Protection Act (PEPA) 1997 and section 146 of PLGO 2001. In case of any violation of Environment Law, Environment Protection Order is issued for the treatment of violation. In case of non-compliance, penal action is taken under the provisions of PEPA 1997.

DO (SWM) is dealing with the service matters of human resource deployed and monitoring of their attendance besides payment of pension contribution of regular employees, commutation of pension, monthly pension of retired employees, family pension, gratuity etc.

GWMC was incorporated under Companies Ordinance, 1984 and entrusted with the function of waste management in CDGG w.e.f 01-02-2014. Services and Asset Management Agreement (SAAMA) was executed between GWMC and CDGG. According to clause 2(g) of SAAMA, GWMC is responsible for “Taking all such steps as are deemed necessary and expedient for effective management of solid waste in order to safeguard public health, ensure that waste is reduced, collected, stored,

transported, recycled, reused or disposed of, in an environment sound manner and promoting safety standards in relation to such waste and issuing specific directions to persons and entities to arrange solid waste management in the manner determined by the GWMC”.

Key Audit Findings

During the course of audit, Auditors found that the GWMC was functioning without standard operating procedures (SOPs) for collection, transportation, and disposal of waste. It did not have a reliable information system for recording the waste collected, transported and disposed off, unfolding, unchecked, internal control failures in relation to replacement of spare parts and hiring of third party labour. The report recommends issuing of SOPs, reliance on ICT and strengthening of internal controls regarding procurement, repair & maintenance of vehicles.

GWMC did not take any meaningful steps to involve the general public in reducing, reusing, recycling and recovering the waste. The report recommends that the Organization should take steps to involve general public in reducing the waste and its proper disposal through public awareness campaigns pegged to waste segregation and waste minimization at source.

DO (Environment) and DO (SWM) received Annual Budget from CDGG whereas GWMC received budget / grant from CDGG and Finance Department Government of Punjab. However, Finance Department provides funds in form of loan to the GWMC.

GWMC and CDGG offices were functioning with a disconnect also stood divorced from the much needed adherence to bringing value for money principle, evident from their failure to avoid redundancies and overlapping of functions. Municipal offence's cognizance for littering followed by evaporation of fumes and consequential imposition of penalties was conspicuous by absence. Open dumping of solid waste before commissioning any of scientifically developed disposal site with direct dumping of solid waste in heaps in proximity with canal/nallah banks and flood prone depression areas bespeaks of breach of performance obligation set forth under SAAMA to which both CDGG and GWMC were signatories. Multilayered monitoring was preferred without ensuring meaningful reporting mechanism encompassing the ambit of multitasking involved, results of which did not yield improvement in door to door collection, besides waste to energy projected inflow of financial returns. However additional expenses were still incurred adding to financial liabilities of engaging a third party labor firm with manpower on the

payroll of GWMC unable to reengineer their process flow to revamp requisite monitoring from own HR at their strength for effective results.

Recommendations

- i. Audit recommends to take solid waste as a resource forging linkages between retrieval of recyclables and production chain of value addition industries such as plastic, metal, glass and fertilizer sectors enterprises.
- ii. Audit stresses that dumping shall be in a manner that collection of hazardous waste from abandoned places in heaps be taken care of.
- iii. Audit recommends deployment of all available equipment leading to rationalization of output of the HR, enabling right sizing of the workforce.
- iv. Audit recommends the implementation of modern techniques of waste handling and introduction of 3R's policy (Reduce, Recycle and Reuse).
- v. The involvement of people and private sector through NGOs could improve the efficiency of MSWM. Public awareness should be created among masses to inculcate the health hazards of the wastes.
- vi. Littering of MSW should be prohibited in city, towns and urban areas notified by the state government. Moreover, house-to-house collection of MSW may be organized collection on regular pre-informed timing and scheduling.
- vii. Municipal authorities should maintain the waste storage facilities in such a manner that they do not create unhygienic conditions. The collection bins must be appropriately designed with features like metallic containers with lids.
- viii. There should be proper segregation of compostable waste from the other non-biodegradable and recyclable waste at source.

1. INTRODUCTION

Pakistan and other developing countries around the world are increasingly becoming conscious of the fact that, the pursuit of growth and development places a heavy burden on sustainability for now and for the near future.

Environment standards are important as they maintain balance among competing resources and help protect human health and the environment. An important purpose of environment regulations is to regulate the use of resources to ensure minimal impact on the environment and human health. As the economy grows and income rises, the increased demand for natural resources and manufactured consumer goods has put strains on the environment. Pakistan has responded to its environment problems by developing laws, establishing government agencies and accepting technical assistance from donors, including the World Bank. Despite this, the response remains fragmented and environment institutions, laws, and other initiatives do not solve the whole problem. Environment legislations are not well developed in Pakistan, especially in comparison to the developed world.

Environment degradation in a city like Gujranwala is to a considerable extent attributable to governance failure and ineptitude of the ineffectual Municipal Authorities also accentuating aggravation of harm caused by potentially explosive calamities and disasters, looming large due to Global Warming, Glacial Melt, Ozone Layer Depletion, deforestation, over population, water pollution, air pollution, natural resources depletion and Climate Change, defeating considerably the management interventions to mitigate the same. The neglect and inattention further aggravates due to breach of agreement on the part of corporate entities, having been outsourced the basic functions originally devolved upon field formations of the District Government (Khan, Amir N, R. Shaw, Pulhin, and J. Pereira, 2010).

Management of solid waste may be defined as the discipline associated with the control of generation, storage, collection, transfer and transport, processing, and disposal of solid wastes in a manner that is in accord with the best principles of public health, financial sustainability, sound engineering, environment conservation and rehabilitation, community participation, aesthetics, and other environment considerations relatable to health and hygiene. In its scope, solid waste management includes all administrative, financial, legal, planning, and engineering

functions involved in the whole spectrum of solutions to problems of solid wastes thrust upon the community by its inhabitants. Solid wastes have the potential to pollute all the vital components of living environment (i.e., air, land and water) at local and at global levels.

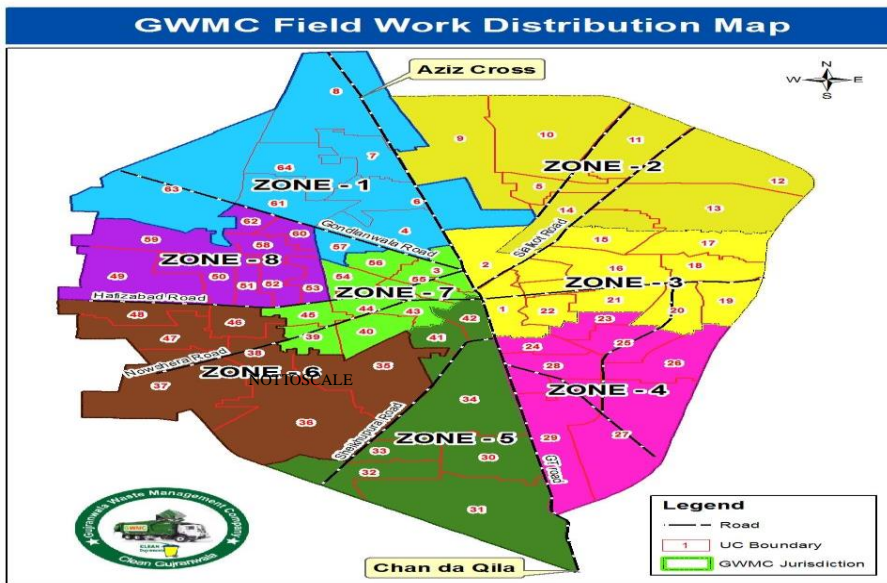
Gujranwala is the seventh (07) largest Metropolitan area of Pakistan and the industrial city of Punjab Province. Population of Gujranwala is 3.40 million with apportionment for urban population 1.72 million (50.55%) and rural population is 1.68 million (49.45%) according to 1998 census by Bureau of Statistics. Due to its heavy population intensity and large domestic and industrial activities, a huge quantity (i.e., approx. 903 tons/day in 90 urban UCs) of solid waste is being produced as per Waste Generation Report of GWMC. Presently, almost all of this waste is being dumped in open, without any proper waste disposal method barring landfill site at G.T. Road Kamoke which is closed now. Moreover, the population of the city is growing disproportionately. This rapid population expansion will further increase the generation of the amount of solid waste in the future years.

The City District Government Gujranwala (CDGG) entered into an agreement with Gujranwala Waste Management Company in 2014. GWMC is governed by a Board of Directors (BOD), headed by a Chairman. After the establishment of the company, a Services and Assets Management Agreement (SAAMA) was signed between CDGG and GWMC as consequence which all the functions and assets of SWM department (CDGG) were entrusted to GWMC. GWMC aims to develop an integrated system of solid waste management to ensure efficient collection, transportation, recovery, treatment and disposal of waste generated in Gujranwala.

The initial site officially allocated for the disposal of solid waste is located at G.T. Road Kamoke, which cannot be considered as a proper landfill. No solid waste is processed, whereas, after the closer of this site solid waste is being dumped at various sites on simple applications of the persons who are owners of the land without any test reports. Moreover, with surface runoff, the contamination arising out of open dumping of waste also adds pollution resulting in deteriorating impacts on water quality.

Gujranwala Waste Management Company (GWMC) is obligated to steer an Integrated Solid Waste Management (ISWM) system in Gujranwala District for proper treatment and disposal of Municipal Solid Waste (MSW) but no treatment plant has established till now.

After GWMC's commencement of operations, the UCs were divided into 8 zones for management purposes, as shown in **Figure**.



[Figure 2.3.1 Zoning Map of GWMC Service Area]

Hospital Waste Management at Gujranwala

Health Care Units are generating hospital waste in Gujranwala, out of these one (01) unit is Government Health Care Unit and there are various Pathological laboratories and private hospitals. No incinerators are available in Gujranwala. These units are generating Hospital Infectious Waste on daily basis which is not incinerated daily. It could be safely concluded that the waste is not being properly treated in the city. Improper treatment of the Medical waste is hazardous to the environment and health of the community.

Industrial Waste Water (IWW)

IWW stands for “Industrial Waste Water” i.e., industrial waste consisting of many types of organic and inorganic material, germs, viruses and unsafe ores discharged by the factories, in the streams or rivers. The factories, tanneries and refineries mostly in and around congested city of Gujranwala discharge their chemical waste in nearby water bodies, drains flowing into streams and rivers without WWT (Waste Water Treatment). This waste contains a large number of pollutants, which not only pollute water in rivers but also makes it poisonous for the creatures and plants livings nearby. Moreover, in rural areas of Gujranwala, people and

livestock use the water of same streams and rivers in which the waste is discharged without any treatment, not to mention, the crops are also watered by the same source, which unfolds a series of other problems.

Back and Forth Linkage between Solid Waste Management related Entities.

SWM Organization had made some progress since its inception in 2001. DO (SWM) admittedly has remained incapacitated in collection and disposal of solid waste in Gujranwala. Conceding this deficiency on record, CDGG shifted the function, duties and responsibilities of DO (SWM) to GWMC through an agreement on 01.01.2014 for a period of 20 years whereas in lieu thereof GWMC made its own plan for the collection of solid waste. However, unilaterally GWMC abdicated the role of the direct responsibility to manage waste collection and disposal with a paradigm shift having denomination of Integrated Solid Waste Management.

1.1 Audit Objectives

The major objectives of the audit were to check and assess the following;

- (a) Whether DO (Environment) was monitoring the implementation of PEPA and PLGO 2001 in letter and spirit.
- (b) Whether DO (Environment) take steps regarding the cleanliness of air, water and solid waste.
- (c) Whether GWMC was collecting, transporting and disposing off the waste efficiently and economically without harming the environment.
- (d) Whether GWMC had an effective monitoring mechanism for ensuring economy, efficiency and effectiveness in its operations and resource management.
- (e) Whether GWMC had the necessary resources for accomplishing the task of waste collection, transportation and disposal.
- (f) Whether the policy of 3 Rs (Reduce, Recycle and Reuse) was adopted by the GWMC in order to safeguard public health and ensure that waste is reduced, collected, stored, transported, recycled, reused or disposed of, in an environment sound manner.
- (g) Whether the policy to safeguard the biodiversity through conservation of plants, animals and birds through control of ruthless deforestation, proliferation of urbanization and industrialization was adopted by the concerned offices.
- (h) Whether DO (SWM) was carrying out the monitoring of key performance indicators of GWMC specified in clause 12 of Services and Assets Management Agreement signed between CDGG and GWMC.

1.2 Audit Scope and Methodology

Reason for Audit

GWMC claims since its establishment that many initiatives and implemented new technologies and methods has taken. With the rapid urbanization, the problem of the Municipal Solid Waste Management (MSWM) had compounded and GWMC had to cope with the magnitude of the problem unprecedented in nature and complexity. Due to increased public awareness about sensitivities of MSWM, a public litigation was filed and resulted in promulgation of the Municipal Solid Waste (Management and Handling) Rules. Government for the first time further consented to include private organizations in providing this public service.

New methods of storage, collection, transportation, processing and disposal are being implemented. It is necessary to evaluate the current process at this stage to understand if the methods being implemented are suitable for the Pakistan's peculiar scenario. It further would enable the audit as well as the entity to identify the lacunae in the methods being adopted. This would be achieved by carrying out an Environment Audit.

Scope of Audit

The audit scope coverage was inclusive of a review of process flows both at micro and macro level with emphasis on identification of common and mutually exclusive functions of DO (environment), DO (SWM) and Gujranwala Waste Management Company (GWMC), while conducting environment audit, Cross cuttings of multiple roles for agencies with overlapping jurisdiction for detection of redundancies causing resource crunch or additional financial burden remained focus of attention for field audit scrutiny. It entails assessment and evaluation of the Solid Waste Management System, initiatives to prevent damage to the environment in City District Government Gujranwala (CDGG) and monitoring of functions performed by the GWMC against outsourced activities for which contractors stood engaged. The audit also examined implementation of the rules and regulations of Environment Protection Department devolved on specific offices of the CDGG.

Audit Methodology

The audit relied both on primary and secondary data sources. However, greater reliance was placed on primary sources, which includes files review, site visits, and soliciting information from the key resource persons of Solid Waste Management and other relevant City District Government authorities.

Stakeholders' consultations and focus group meetings as well as qualitative research methodology such as key informant interviews have also been used as a credible source to solicit viewpoint and knowing concerns of the stakeholders. Photographs, taken during field visits and surveys, have been used for explaining adverse impacts and for highlighting areas of concern. The secondary sources include literature review, references, information available on websites and other indirect sources of information.

1.3 Preliminaries

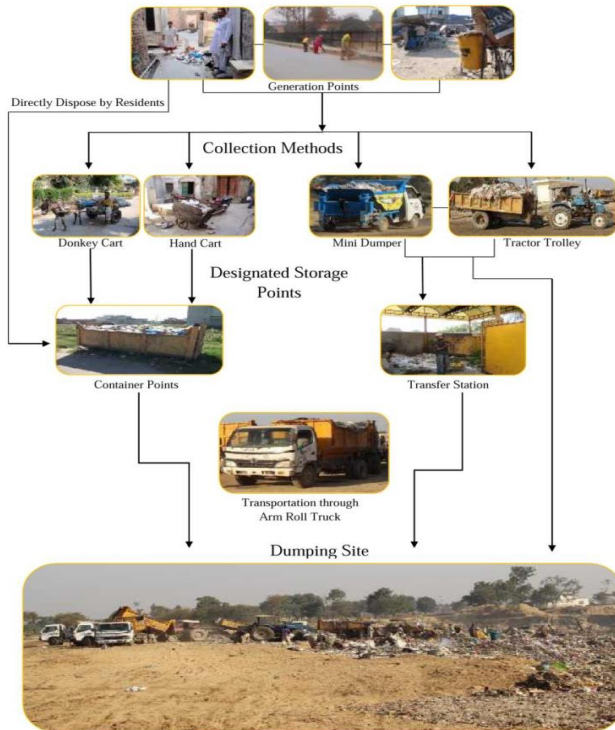
i. Environment Audit-Definition:-

Environment Audit can be defined as a management tool comprising a systematic, well documented, periodic and objective evaluation of how well the management systems are performing with the aim of helping to safeguard the environment by:

- a. Facilitating management control of environment practices, and
- b. Assessing compliance with national legislation, which would also include regulatory requirements.

ii. Solid Waste Management

Management of solid waste is associated with the control of generation, storage, collection, transfer and transport, processing, and disposal of solid waste in a manner that is in accordance with the best principles of public health, economics, engineering, conservation, aesthetics, and other environment considerations. In its scope, it includes all administrative, financial, legal, planning and engineering functions involved in the whole spectrum of solutions to problems of solid wastes hurts upon the community by its inhabitants.



Waste Collection and Transportation Scheme Conducted by GWMC

iii. Categories of Solid Waste

Solid waste can be categorized based on source as shown in the table below.

Sr. No.	Description
1	Municipal waste
2	Industrial and hazardous waste
3	Biomedical waste
4	Construction and demolition waste
5	Mining waste
6	E-waste
7	Radioactive waste
8	Other waste

iv. Municipal Solid Waste

The term Municipal Solid Waste (MSW) is normally assumed to include all of the waste generated in a community, with the exception of waste generated by municipal services, treatment plants, and industrial and agricultural processes. In the urban context the term municipal solid wastes is of special importance. The term refers to all wastes collected and

controlled by the municipality and comprises of most diverse categories of wastes. It comprises of wastes from several different sources such as, domestic wastes, commercial wastes, institutional wastes and building materials wastes. Major types of Municipal solid waste are as under;

Sources	Examples
Residential	Single family homes, duplexes, town houses, apartments
Commercial	Office buildings, shopping malls, warehouses, hotels, airports, restaurants
Institutional	Schools, medical facilities, prisons
Industrial	Packaging of components, office wastes, lunchroom and restroom wastes (but not industrial process wastes)

v. Municipal Solid Waste Management

Municipal Solid Waste Management involves the application of principle of Integrated Solid Waste Management (ISWM) to municipal waste. ISWM is the application of suitable techniques, technologies and management programs covering all types of solid wastes from all sources to achieve the twin objectives of (a) waste reduction and (b) effective management of waste still produced after waste reduction.

In the Municipal Solid Waste Management the major issues to be considered are:

- i. Increasing waste quantities
- ii. Wastes not reported in the national MSW totals
- iii. Lack of clear definition for solid waste management terms and functions
- iv. Lack of quality data
- v. Need for clear roles in state and local government
- vi. Need for even and predictable enforcement regulations and standards

vi. Industrial Waste

Industrial waste is the waste produced by industrial activity which includes any material that is rendered useless during a manufacturing process such as that of factories, industries, mills, and mining operations. Industrial wastes are chemical solvents, paints, sandpaper, paper products, industrial by-products, metals, and radioactive wastes. Industrial wastes containing toxic pollutants require specialized treatment systems. Industrial wastes is one of the major cause of water and Air pollution

vii. Construction Waste

Construction waste consists of unwanted material produced directly or incidentally by the construction or industries. This includes building materials such as insulation, nails, electrical wiring, and rebar, as well as waste originating from site preparation such as dredging materials, tree stumps, and rubble. Construction waste may contain lead, asbestos, or other hazardous substances.

viii. Hospital Waste Management

Hospital waste contains materials like syringes, glucose drips, urine bags and glass vials (injection bottles) and human wastes etc., Due to infection risk the disposal of medical wastes is one of the significant aspects requiring attention in integrated waste management. Medical waste management comprises of four basic steps; classification of wastes at the source, collection, treatment by various methods and disposal at special landfills.

ix. Medical Waste Disposal Methods

The commonly used methods for the disposal of medical waste are sterilization and incineration. Disposal of medical wastes can be carried out by a public organization or private companies.

➤ Sterilization

The disposal method which ensures complete removal of any microbial organisms by physical, chemical, mechanical methods.

➤ Incineration

This method allows making the medical waste harmless by incinerating at high temperatures in special furnace and reducing their volume significantly.

1.4 Environment Issues with Reference to Pakistan and Implications for CDGG

1.4.1 Climate Change/ Global Warming

Global warming is the new topic of this century as catastrophic climate events keep on ravaging the whole planet, annihilating entire villages and towns, and financially crippling the affected regimes.

The process of Global Warming has crippled Pakistan, which is already resource, stressed country, as the blatant floods and droughts continue to wreck the country's economy. The floods of 2010 and 2011 have emerged as the biggest catastrophes in the country's history with 20 million affectees.

Implication of this issue pertaining to CDGG

The time scales for climate change and waste management are similar. The rise in temperature and precipitation can:

- Reduce GWMC employee's productivity.
- Give rise to increased vermin i.e. flies at disposal site of GWMC
- Give rise to increased risk of odour nuisance at disposal site.
- Enhance disease transmission from the waste at disposal site.
- Increase the risk of skin problems and sun burn in Operational staff of GWMC
- Hindrance in transportation of waste due to flooding of water on roads.

1.4.2 Ozone Depletion

Ozone layer depletion is one of the most serious problems faced by our planet earth. The ozone layer depletion and its harmful impact on living beings have been a greater concern of all the scientists all over the world including Pakistan. The consequences of ozone on agriculture and health are important for Pakistan. In Gujranwala sometimes the ozone concentration reaches to 60 ppb, which declines the wheat and rice yield significantly as a consequence.

Implication of this issue pertaining to CDGG

Ozone depletion has following implications to CDGG:

- a) Alter waste decomposition rate at the disposal site of solid waste.

- b) Increase the skin problems and also affect the behavior of the people.
- c) Enhance disease transmission from the waste at disposal site.

1.4.3 Loss of Biodiversity

Nature has endowed Pakistan with diversified ecosystems embracing rich biodiversity. However, diminishing natural habitats and fresh water resources are depriving us from the ecological blessings of which these species are a significant part. Pakistan needs 500,000 tons of additional wheat every year to feed its ever-increasing population. The agricultural use of pesticides and fertilizers has increased rapidly in recent years. Pesticides destroy the natural biotic balance in agricultural soils and reduce the diversity.

Implication of this issue pertaining to CDGG

Biodiversity has following implications to CDGG:

- a) Decrease the overall agriculture crops production.
- b) Agriculture production depends on the use of pesticides.
- c) Enhance disease due to away from nature.

1.4.4 Natural Resource Depletion

Pakistan is arid and semi-arid with substantial variation in temperature. Agricultural growth of Pakistan is threatened by depleting soil fertility, degrading rangeland and encroaching deserts, while the coastal wetlands of Sindh deprived of water are losing their productive potential and estimated 70% of the population is rural and relies heavily on natural resources for their livelihood. Consequently, a degrading resource base directly affects poverty outcomes.

Implication of this issue in pertaining to CDGG

Natural resource depletion has direct effect to CDGG which become the cause of reduction of raw material for small industry. Further due to deforestation it may has indirect effect and it causes floods, hindrance in transportation and disposal of waste.

1.4.5 Air Pollution

Pakistan's air quality is deteriorating mainly due to inefficient burning of fuel, use of environment unfriendly fuels, and emissions from other industrial and no industrial sources. Vehicle emissions represent the greatest source of pollution in Pakistan reflecting the rapid growth in

vehicle use. Growth has been especially strong within the past decade. Motor vehicles emissions account for about 90% of total emission of hydrocarbon, aldehydes and carbon mono oxide. Other emissions include lead, sulphur dioxide and nitrogen oxides.

Implication of this issue pertaining to GWMC

- Air quality is deteriorated by the release of particulate matter and other harmful gases from open burning of MSW and from GWMC vehicles as most of the fleet is outdated.
- Causes health and psychological issues to the people.
- Waste is dumped in low lying areas/depressions or excavated trenches and buried by soil cover on the top without taking care of landfill gases that are produced by the decomposition of wastes which ultimately deteriorates the quality of air.
- Methane (CH₄) is released when biodegradable wastes decay under the anaerobic conditions in landfills and this is a greenhouse gas and it contributed to global warming.

1.4.6 Water Pollution

Water pollution is one of the major threats to public health in Pakistan. Drinking water quality is poorly managed and monitored. Pakistan ranks at number 80 among 122 nations regarding drinking water quality. Drinking water sources, both surface and groundwater are contaminated with coliforms, toxic metals and pesticides throughout the country.

Implication of this issue in pertaining to CDGG

- Pollution of water sources originates from haphazard disposal of solid wastes and leachate production from dumping of solid waste at disposal site.
- Contaminated water used for human consumption can lead to serious health problems e.g. cholera, typhoid, skin diseases, etc., which, in turn, leads to reduced working hours/manpower.

1.4.7 Solid Waste

Improper solid waste management is causing negative impacts in Pakistan. The situation is becoming very complex due to industrialization, urbanization and improved living standards of urban areas, as these things are the cause of drastic increase in the quantity and complexity of

generated waste. It is revealed that Pakistan has two major problems due to poor solid waste management, i.e. communicable diseases and unhygienic environment. Because of high growth rate, high waste generation rate, lack of efficient management and legislation, existing solid waste management systems in the Pakistan are not working properly. The main reasons for the failure of municipal solid waste management systems are unplanned annexation of the city, extreme weather conditions, lack of public awareness/community involvement, improper resources including improper equipment and lack of funds. Failure of the municipal solid waste management system has serious environment impacts like infectious diseases, land and air pollution, blockage of drains and water pollution in natural streams.

Some of the most important risks are mentioned in the following list:

- Uncollected wastes often end up in drains, causing blockages, which result in flooding and unsanitary conditions in the city.
- Flies and Mosquitoes spread disease, including diarrhea, malaria and dengue. Rats find shelter and food in waste dumps. Rats consume and spoil food, spread disease, damage electrical cables and other materials and inflict unpleasant bites. The open burning of waste causes air pollution; the products of combustion include dioxins, which are particularly hazardous.
- Uncollected waste degrades the urban environment, discouraging efforts to keep streets and open spaces in a clean and attractive condition. Solid waste management is a clear indicator of the effectiveness of a municipal administration. Plastic bags are a particular aesthetic nuisance and they cause the death of grazing animals, which eat them.
- Waste collection workers face particular occupational hazards, including strains from lifting, injuries from sharp objects and traffic accidents.
- Chemical wastes (especially persistent organics) may be fatal or have serious effects if ingested, inhaled or touched and can cause widespread pollution of water supplies.
- Waste that is treated or disposed of in unsatisfactory ways causes a severe aesthetic nuisance in terms of smell and appearance.
- Landfill gas can be explosive if it is allowed to accumulate in confined spaces. Methane (one of the main components of landfill

gas) is much more effective than carbon dioxide as a greenhouse gas, leading to climate change.

- Fires on disposal sites can cause major air pollution, causing illness and reducing visibility, making disposal sites dangerously unstable, causing explosions of cans, and possibly spreading to adjacent property.

Implication of this issue pertaining to CDGG

The general suites of activities in GWMC are collection, transfer, and disposal applies to MSW but in future separation of recyclables and treatment of waste may also be followed. Municipal solid waste is being thrown in the open drains, open spaces and around the street corners and partially open burnt which results in aesthetically bad look, outbreak of diseases and environment pollution. Poor community areas are mostly ignored and the collection efficiency is very low. Number of containers, collection bins and collection vehicles are too less in comparison with urban population and quantity of generated waste. There is no proper management of hazardous waste, hazardous hospital and industrial wastes are being simply treated as ordinary waste. As per present practice, solid waste is finally disposed by dumping in low lying areas/depressions or excavated trenches and buried by soil cover on the top without taking care of leachate collection and management of landfill gases which ultimately deteriorates the quality of underground water.

Air quality is deteriorated by the release of particulate matter and other harmful gases from open burning of MSW and from GWMC vehicles as most of the fleet is outdated. Open dumping of waste has many health problems in nearby community. Main health problems from open dumping of waste are gastrointestinal problems, hepatitis, breathing problems etc. Leachates produced from disposal site contaminated the surface and groundwater.

1.4.8 Public Awareness about water & solid waste

In 1992, heads of many countries signed Agenda 21 on the eve of Earth Summit in Rio de Janeiro. The Summit was a global commitment to protect environment, and promote sustainable development. That was a time when Pakistan prepared its National Conservation Strategy (NCS), which showed path of sustainable development and determined environment improvement agenda for the country. The knowledge and also the zest to protect the environment have increased considerably within span of 20 years in Pakistan. The government institutions, NGOs

and the media made significant efforts in creating awareness among all sectors of society. The Ministry of Environment, Local Government and Rural Development recently carried out a midterm review of the achievements, impacts and prospects of the NCS. The most significant achievements in the recent years are incorporation of environment concerns in government policies and initiation of process of Environmental Impact Assessment (EIA) in the development schemes. The Pakistan Environment Protection Act was enacted on 6th December 1997 to provide for the protection, conservation, rehabilitation and improvement of environment, for the prevention and control of pollution, and promotion of sustainable development.

World Environment Day, Earth Day, World Water Day etc. are also celebrated in Pakistan and awareness programs are organized on these days.

Implication of this issue in pertaining to CDGG

A survey was carried out in Gujranwala to check the level of education regarding solid waste. It showed that appropriate awareness in the field of solid waste management is high in high and middle income group while low income group has low level of awareness. The overall status of public education in solid waste management was also insufficient in low income group. Public participation is also very low in all groups e.g. transferring the waste to container, people dispose of their waste not inside container but near to a container or in any empty plot resulting in deterioration of environment.

1.5 Situation Analysis

Worst cases scenario has unfolded with alarming situation characterized by poisonous emissions, industrial waste water effluents, sewerage discharge untreated which represent a threat to the environment and human health. Surface water contamination takes place when waste reaches water bodies. Ground water contamination takes place when residues from waste leach into the ground water. Residues from waste can change the water chemistry which can affect all levels of an ecosystem. Both surface and ground water contamination can impact the health of lower food chain organisms and consequently, the availability of food through the food chain. It can damage the health of wetlands and impair their ability to support healthy ecosystems, control flooding and filter pollutants from storm water runoff. The health of animals and humans are affected when they drink or bathe in contaminated water. In addition, aquatic organisms like fish and shellfish can accumulate and concentrate contaminants in their bodies. Water from these contaminated sources, when used for irrigation, can affect soil productivity as well as introduce contaminants into the food chain. A specific environment hazard caused by waste is leachate, which is the liquid that forms as water trickles through contaminated areas, leaching out chemicals. Movement of leachate from landfills, effluent treating plants and waste disposal sites may result in hazardous substances entering surface water, ground water or soil.

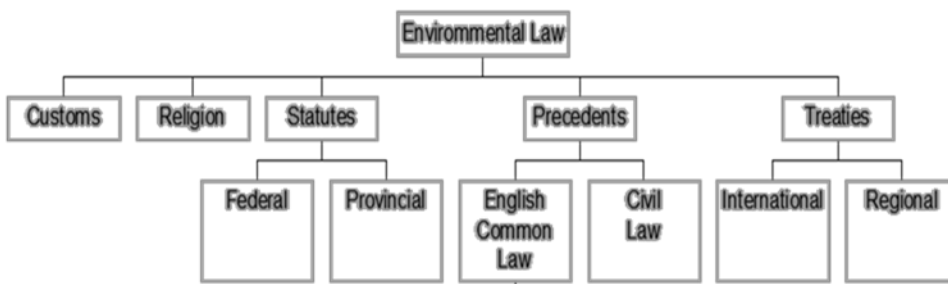
Soil contamination as a result of waste can harm plants when they take up contaminants from their roots. Ingesting, inhaling or touching soil contaminated by waste, as well as eating plants or animals that have accumulated soil contaminants can adversely impact the health of humans and animals. Emissions from incinerators or other waste burning devices and from landfills can also cause air contamination. Incinerators routinely emit dioxins, furans and polychlorinated by-phenyls (PCB), which are deadly toxins, causing cancer and endocrine system damage. Other conventional toxins such as mercury, heavy metals are also released. Landfills are a big source of release of greenhouse gases which are generated when organic waste decomposes in landfills. Thus, improper handling of waste has consequences both on the environment as well as on the health of the people. Risks to human health and environment are acute when electronic and electrical waste is not managed properly. E-waste contains a mix of toxic substances such as lead and cadmium in circuit boards, lead oxide and cadmium in monitor cathode ray tubes, mercury in switches and flat screen monitors, cadmium in computer batteries, PCBs

in older capacitors and transformers and brominated flame retardants on printed circuit boards, plastic casings, cables and polyvinyl chloride cable insulation that release highly toxic dioxins and furans when burned to retrieve copper from the wires. Due to the hazards involved, disposing and recycling e-waste has serious health and environment implications.

1.6 Regulatory Frameworks Relatable to Environment Law

Environment law aims at Protection, Conservation, Management, Rehabilitation and Improvement of environment.

Sources of Environment Law



History of Environment Legislations in Pakistan

1. In 1992 Pakistan attended the Earth Summit in Brazil (Rio-De Janeiro) and thereafter became party to various international conventions and protocols. This political commitment augmented the environment compliance in the country. The same year, Pakistan prepared National Conservation Strategy (NCS), which provides a broad framework for addressing environment concerns in the country.
2. In 1993 National Environmental Quality Standards (NEQS) were designed.

Pakistan Environmental Protection Act (PEPA) 1997

1. PEPA is an Act developed for the protection, conservation, rehabilitation and improvement of the environment, for the prevention and control of pollution and for the promotion of sustainable development.

2. Environmental Impact Assessment (EIA) is the process to examine the environment risks and benefits associated with the developmental project.
3. Section 12 of PEPA prescribed that, “No proponent of a project shall commence construction or operation unless he has filed with the Federal Agency an initial environment examination or, where the project is likely to cause an adverse environment effect, an environment impact assessment, and has obtained from the Federal Agency approval in respect thereof.”
4. Primarily PEPA, 1997 focuses on implementation of Council’s Policies, delegation of power to government agencies, enforcement of National Environment Quality Standards, introduction of EIA/IEE review procedures, regulatory regime for hazardous substances/ wastes, resource recovery through establishment of Provincial Sustainable Development Fund (PSDF) and levy of pollution charge pertaining to the cases of the environment offences adjudicated upon. The rules notified under the Act are listed in Table 1.

A brief recapitulation of extant environment legal framework meant to be enforced is summarized as follows;

Rules notified under PEPA, 1997 are enumerated as follows;

Sr. No.	Rule	Year of Regulation/ Rules
1	National Environment Quality Standards (Certification of Environment Laboratories) Regulations	2000
2	Pakistan Environment Protection Agency Review of IEE and EIA Regulations	2000
3	Revised National Environment Quality Standards	2000
4	Provincial Sustainable Development Fund (Procedure) Rules	2001
5	National Environment Quality Standards (self-monitoring & reporting by industry) Rules	2001
6	Environment Samples Rules	2001
7	Pollution Charge for Industry (calculation and collection) Rules	2001
8	Provincial Sustainable Development Fund (utilization) Rules	2003
9	Hospital Waste Management Rules	2005
10	Pakistan Bio-safety Rules	2005
11	National Bio-safety Guidelines	2005

2. AUDIT FINDINGS AND RECOMMENDATIONS

2.1 Environment Aspect

2.1.1 Solid waste dumped without test reports

According to the SAAMA, 2 Functions and Responsibilities of GWMC clause (g), taking all such steps as are deemed necessary and expedient by the GWMC for effective management of solid waste in order to safeguard public health, ensure that waste is reduced, collected, stored, transported, recycled, reused or disposed off, in an environment sound manner and promoting safety standards in relation to such waste and issuing specific directions to persons and entities to arrange solid waste management in the manner determined by the GWMC.

GWMC received an application from the owner of the land to dump the solid waste and fill the already excavated earth. As GWMC was only collecting and dumping the solid waste, the waste was dumped in the following sites without soil, water & air tests. Due to non-compliance of environment protections laws, this act of the management of GWMC exposed the local community to hazardous environment.

Sr. No.	Location	Area	Status	Waste Dumped (tons)	% of Space utilized
1	Gondhlanwala	7 Acre	At closing stage	446,813.93	99%
2	Kot Bakar	3 Acre	Closed due to strike	51,639.51	40%
3	Ghagarr Kay	4 Acre	Closed due to strike	-	10%
4	Khiali (back side of fruit market)	5 Acre	Closed temporarily	-	50%
5	Shera Kot at Misri Miayani Link road	4 Acre	Complete	-	100%
6	Basti Abdul Sattar near SheraKot	5 Acre	Operational	-	15%

The matter was brought into the notice of management during May, 2017. Management replied that to control smell, flies and mosquito soil cover was sprinkled on the dumped waste on daily basis.

Dewatering was done on regular basis through peter pump. As the leachate is rich in micro and macro nutrients so farmers around the disposal site were demanded for its supply. Further Gondalanwala site will be functional till 2018. But due to massive dumping the site was exhausted before the time assessed. But unfortunately before conducting tests for

water quality and air quality these sites were closed due to sever resistance by the local community.

Department did not show the test reports of soil, water and air of dumping points.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends thorough inquiry of the matter and fixing of responsibility against the person (s) at fault besides production of soil, water and air test reports.

[AIR No. 20]

2.1.2 No progress on re-cycling of waste

SWM department did not avail the opportunity of generating revenue through recycling of waste.

Through segregation and scientific disposal of solid waste, revenue can be generated. Development in science and technology and good management practices have made it possible to take advantage of solid waste through recycling. Recycling not only saves valuable landfill space but also saves energy required for processing of new material.

Auditors observed that GWMC did not pursue the opportunity of recycling the waste. The entire collected waste remained non-segregated and unmanaged. GWMC put all energies and expertise to collect waste and dumped it close to the urban areas.

There was no compost plant under the control of GWMC for the recycling of waste. This resulted into heaps of waste close to urban areas.

The matter was brought into the notice of management during May, 2017. Management replied that JICA experts proposed improvement of access road along the irrigation canal, earth work, pavement work for roads, impermeable layer work, installation of leachate collection and circulation system, installation of gas vent, building work for the landfill site.

Department did not take the steps for recycling of solid waste.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends inquiry of the matter regarding non compliance of SAAMA clause besides fixing of responsibility against the person (s) at fault.

[AIR No. 32]

2.1.3 Working of janitorial staff without safety apparel

The collection, transportation and dumping of waste exposes the sanitary staff to a number of health hazards. It is universally accepted that sanitary staff should wear gloves, masks, helmets, socks and long shoes to protect themselves from health hazards. The organization employing the staff has the responsibility to provide the safety apparel to the sanitary workers.

GWMC provided only caps, long shoes and rain coats to sanitary staff. Other safety essentials such as gloves, helmets, masks and full uniforms were not provided. The sanitary staff was found performing its duties without having access to the complete kit of safety apparel. GWMC also did not issue any safety guidelines that included clauses for worker safety.

A reasonable amount of funds was allocated for the safety apparel to ensure safety and security of sanitary staff. However, the auditors observed GWMC did not provide safety apparel since its establishment.

The matter was brought into the notice of management during May, 2017. Management replied that compliance will be made in future.

Compliance was not shown by the department.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends provision of safety apparels along with safety and security plan for the janitorial staff under intimation to Audit.

[AIR No. 33]

2.1.4 Non-compliance of EPA 1997

According to Punjab Environment Protection Act, 1997 [Amendment, 2012] Section 16- Environment Protection Order, (1) where the Provincial Agency is satisfied that the discharge or emission of any effluent, waste, air pollutant or noise, or the disposal of waste, or handling of hazardous substance, or any other act or omission is likely to occur, or is occurring, or has occurred, in violation of any provision of this Act,

rules or regulations or of the conditions of a license, or is likely to cause, or is causing, or has caused an adverse environment effect, the Provincial Agency may, after giving the person responsible for such discharge, emission, disposal, handling, act or omission an opportunity of being heard, by order, direct such person to take such measures as the Provincial Agency may consider necessary within such period as may be specified in the order.

DO (Environment) registered complaints for causing pollution after visit to sites. Complaints were forwarded to Tribunals for legal proceedings. But owing to negligence and lack of interest, fate of the cases/complaints was not decided till the completion of Audit.

Auditors observed that this negligence of the management resulted in inordinate delay in taking punitive actions against the delinquent/s.

The matter was brought into the notice of management during May, 2017. However reply of the management was not received.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends reframing of rules regarding registration of complaints and early clearance of pollution related complaints.

[AIR No. 39]

2.1.5 Inadequate awareness campaign

World Environment Day is an annual event on 5th June every year that is aimed at being the biggest and most widely celebrated global day for positive environment action. World Environment Day is also a day for the people from all the walks of life to come together to ensure a cleaner, greener and brighter outlook for themselves and future generations.

The theme of 2015 is “Seven Billion Dreams. One Planet. Consume with Care.” Environment Protection Agency (EPA) during the Environment Approval process condition of plantation of certain number of plants to ensure Environment sustainability and promote afforestation for which the scheme “Promoting Carbon Offset Afforestation through Environment Approval Mechanism and Developing Strategies for its Sustainability” was launched in 2017.

Scrutiny of the record of District Officer (Environment) Gujranwala revealed that awareness session was arranged only once

during the year on World Environment Day. Sufficient funds were not allocated for disseminating information among common folks regarding environmental issues. Detail is as under;

Year	Description	Amount (Rs)
2014-15	Seminars for the awareness of public	63,570
2015-16		63,665

The matter was brought into the notice of management during May, 2017. However reply of the management was not received.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends protection of the environment should be ensured by launching public awareness massive campaign/s.

[AIR No. 45]

2.1.6 Dumping of old tyres and scrap at workshop

Surprise visit of GWMC workshop was carried out by the audit team on 30.03.2017 at 11.00 AM and during visit it was noticed that the huge amount of redundant tyres and other scrap material were dumped at workshop causing infestation of insects and reptiles.



The matter was brought into the notice of management during May, 2017. Management replied that concrete efforts are made in this regard to ensure compliance of the subject observation and all old tyres have also been properly stacked at the Workshop premises to preserve the environment.

However department did not produce the documentary evidence in support of the reply.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter and fixing of responsibility against the person (s) at fault.

[AIR No. 02]

2.1.7 Settlement of Environment Violation at Notice stage

According to Punjab Environment Protection Act, 1997 [Amendment, 2012] Section 6- Functions of the [Provincial Agency], (1) The [Provincial Agency] shall- (i) establish systems and procedures for surveys, surveillance, monitoring, measurement, examination, investigation, research, inspection, and audit to prevent and control pollution, and to estimate the costs of cleaning up pollution and rehabilitation the environment in various sectors;

DO (Environment) issued notices to the units for emitting pollutants in the open air. About 70% cases were settled after the issuance of notice. Remaining cases were sent to EPA for legal proceedings. This eye-catching percentage was settled due to the steps taken regarding environment protection by the emitting units. Once the notice issued and steps taken by the emitting unit, the matter was not further pursued in future by the Environment department. Auditors observed that non pursuance of environment protection were occurred due to non-inspection of units.

Years	No. of Notices issued for environment violation	No. of units sealed	No. of FIR registered against Environment violation	Total No. Legal proceedings
2013-14	690	170	32	202
2014-15	472	52	36	88
2015-16	982	174	16	190

The matter was brought into the notice of management during May, 2017. However reply of the management was not received.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter of settlement of notices as a result of steps taken by the emitting units for the environment protection.

[AIR No. 40]

2.1.8 Environment at the stake of application

According to Punjab Environmental Protection Act, 1997 [Amendment, 2012] Section 11- Prohibition of certain Discharges or Emissions, (1) Subject to the provisions of this Act and the rules and regulations made there under no person shall discharge or emit or allow the discharge or emission of any effluent or waste or air pollution or noise in an amount, concentration or level which is in excess of the Environment Quality Standards or, where applicable, the standards established under sub-clause (i) of clause (g) of sub-section(1) of section 6.

DO (Environment) received applications regarding the violation of EPA from the effectees and take action by preparing report against the defaulters. The reports were sent to the Director General Environment Protection Agency for legal proceedings. When there was no complaint/application from the suffering individual, nothing to do for the protection of environment by the DO (Environment).

Years	No. of complaint received	No. of reports prepared and sent to EPA	No. of violations (air, liquid and solid)
2013-14	184	103	103
2014-15	226	34	34
2015-16	222	66	66

The matter was brought into the notice of management during May, 2017. However reply of the management was not received.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault due to non compliance of PEPA.

[AIR No. 41]

2.1.9 Triviality regarding issuance of NOC

According to Punjab Environmental Protection Act, 1997 [Amendment, 2012] Section 12- Initial Environment Examination and

Environment Impact Assessment, (1) No proponent of a project shall commence construction or operation unless he has filed with the [Provincial Agency] an initial environment examination or where the project is likely to cause an adverse environment effect, an environment impact assessment, and has obtained from the [Provincial Agency] approval in respect thereof. (2) The [Provincial Agency] shall-

- (a) Review the initial environment examination and accord its approval, or require submission of an environment impact assessment by the proponent;

Auditors observed that only few units were registered by the DO (Environment) and issue NOC for environment protection during the last three years. Units were registered on the receipt of application from the management/owner. EPA did not frame any mechanism at district level to register the units under PEPA. This undeveloped system causes hazardous to environment.

Years	No. of Registration of Units / NOC	Remarks
2013-14	38	Site Inspection Reports forwarded to Authority (Director General EPA Punjab Lahore) for further process of issuance of NOC
2014-15	13	
2015-16	11	

The matter was brought into the notice of management during May, 2017. However reply of the management was not received.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends formulation of mechanism for the inspection as well as registration of units under intimation to Audit.

[AIR No. 42]

2.1.10 Unreliable data of solid waste

According to SAAMA, clause 11- Bench Marking of Existing SWM Services, The GWMC shall within 3 months after the signing of this agreement, complete the bench marking of existing solid waste management services and also fix targets for the improvements in SWM services for the next year. The GWMC shall submit a report to the CDGG containing details of Bench Marking of existing SWM services and Targets of GWMC for the future.

GWMC was only performing the function of collection and dumping of solid waste since its establishment in April 2014. The whole resources were utilized to increase the percentage of collection and dumping of solid waste. Weigh machine was installed at only one site i.e. Gondhlanwala out of 6 dumping sites. In the absence of weigh machines at dumping points, waste dumping data could not be relied.

Years	RTC (Tons)	OTC (Tons)	Total (Ton)
2013-14	14997.82	-	14,997.82
2014-15	158602.65	63105.35	221,708.01
2015-16	212746.43	49001.18	261,747.61
Total			498,453.44

The matter was brought into the notice of management during May, 2017. Management replied that weighbridge was installed at single dumping point.

Department admitted the lapse but maintained and produced unreliable solid waste collection data.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 21]

2.1.11 Non auction of moveable assets resulted ill environment

According to SAAMA Agreement 2 Functions and Responsibilities of GWMC clause (d) Gujranwala Waste Management Company may act as an agent of the City District Government Gujranwala (CDGG) to dispose-off the condemned moveable assets of the CDGG and the amounts received therein shall be adjusted in the next financial year claim of the GWMC.

GWMC did not act as agent to dispose-off the non-operational assets on behalf of the CDGG. GWMC did not take any step to remove the condemn machinery and this act of the management of workshop causes pollution in workshop. Due to collection of water and mounting of species, this site becomes the source of mosquito and reptiles. The health of the labour working in workshop was at stake. In addition to this, audit holds that due to negligence of the management, moveable assets were not disposed-off and its receipt was not adjusted in budget allocation.

Sr. No.	Type of Vehicle	Registration No. of vehicle	Status
1	Arm roll (for 5 m3 Container)	Hino 5	Non operational
2	-do-	Hino 1007	-do-
3	Tractor	2048	-do-

Sr. No.	Description	Reported at W.S	Repairable	Non repairable
1	Skips	39	35	4
2	Container 10 m3	12	9	3
3	Container 5 m3	22	17	5
4	Hand carts	100	20	80
5	Tractor trolleys	1	1	0

The matter was brought into the notice of management during May, 2017. However reply of the management was not received.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends auction of unserviceable moveable assets for maintenance of safe and healthy environment.

[AIR No. 22]

2.1.12 Inefficient maintenance of Solid Waste Collection Vehicles

According to clause 2-Functions and Responsibilities of GWMC (d) of SAAMA, Managing, controlling, using and maintaining machinery, equipment, tools and plants, vehicles, lands, buildings, structures and other moveable and immovable assets owned, managed or controlled by the CDGG for solid waste management, except those assets which the GWMC and CDGG mutually agree to be retained by the CDGG; in furtherance to these powers the GWMC may act as an agent of the CDGG to dispose of the condemned movable assets of the CDGG and the amounts received therein shall be adjusted in the next financial claim of the GWMC.

CDGG handed over fleet of 86 Solid Waste Collection & dumping Vehicles including Plant & Machinery to GWMC for the collection, transportation and dumping of Solid Waste. GWMC did not frame guidelines/SOPs for the use of vehicles till the time of Audit. Due to this reason most of the vehicles had lost its values and remained off road thus bringing the whole process of collecting and managing solid waste to halt.



The matter was brought into the notice of management during May, 2017. Management replied that GWMC workshop team regularly checks the vehicles for routine maintenance like engine oil change, filter change etc.

However department did not prepare SOPs for the use of vehicles.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter along with formulation of SOPs for the use of vehicles besides fixing of responsibility.

[AIR No. 17]

2.2 Performance Aspects

2.2.1 Third Party Labour contributes less in waste collection

According to the SAAMA, clause 8- Transfer of CDGG Staff (i), services of regular employees of CDGG and employees engaged on work charged basis working in solid waste management department along with their sanctioned strength, are hereby, placed at the disposal of GWMC except employees mutually agreed to be retained by CDGG for the performance of residual functions of CDGG as specified in Clause 3.

On comparison of 2 financial years auditors observed that GWMC engaged third party for sanitation but the waste collected and dumped during the subject remained less in proportion to amount spent. Gap of 72% between amount spent and waste collection was witnessed as detailed below;

Description	2014-15	2015-16	% increase
Expenditure (Rs in million)	116.066	220.885	90%
Waste collected and dumped (Tons)	221,708.01	261,747.61	18%
Gap between amount spent and waste collected			72%

The matter was brought into the notice of management during May, 2017. The management replied that drain cleaning, manual sweeping, water sprinkling activities do not contribute toward collection efficiency but make improvement in process.

However department did not produce the documentary evidence to support the reply.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 11]

2.2.2 Unjustified award of contract for rental machinery for sanitation

According to the GWMC procurement manual, 11.8 Technical Evaluation Criteria- The criteria specified in the RFP should include:

- i. The firm's relevant experience for the assignment.
- ii. The quality of the methodology proposed.
- iii. The qualifications and experience of the key staff proposed.

- iv. Provisions for training/capacity building of local staff.
- v. The extent of participation by nationals among key staff in the performance of the assignment.

The marks for each criterion are aggregated to give the total technical score. The following table shows the normal range of points to be specified for each criterion, which may be adjusted for specific circumstances. The proposed points must be declared in the RFP.

Specific relevant experience	10 points
Response to the TOR and Methodology Proposed	50 points
Key personnel	30 points
Training	10 points
Total	100 points

GWMC awarded the Contract of rental machinery for cleaning/sanitation to M/s Yashfa International amounting to Rs44.4 million against the purchase requisition of only Rs2.00 million. Management of GWMC advertised the tender before the receipt of purchase requisition from operation department. M/s Yashfa International was not registered as Company or Firm at the time of submitting its bid. Insufficient and inappropriate relevant experience was provided by the supplier. Further details of qualified and experienced staff were also missing in bidding documents. Financial position of M/s Yashfa International was doubtful due to mismatching of bank signatory and bid authorization letter. Financial Statements along with work plan were not available on record. The management of GWMC did not observe the procurement manual and violation was also made in competency as well.

Under these circumstances, it can be easily concluded that Contract was awarded to the contractor without financial and technical evaluation criteria.

The matter was brought into the notice of management during May, 2017. Management replied that the matter is under detailed investigation.

Department did not produce the enquiry report.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 30]

2.2.3 Irrational expenditure on account of maintenance and repair

Repair and maintenance of vehicles and trucks was 3rd material expense of the GWMC. The repair and maintenance expense of vehicles for the FY 2014-15 was Rs 63.419 million and this was 8% of total grants received during the year. This total expense included the Rs 10.935 million against the purchase of tyres. The remaining expense of Rs 52.484 million was against the repair and maintenance of vehicles. No detail working or relevant record was available regarding the expense incurred against each vehicle. The company has total 124 vehicles including 35 new vehicles. Auditors assumed expenditure of Rs 2,500 per month on account of repair & maintenance for new vehicles (35 vehicles x Rs2500 per month x 12 months = Rs 1.050 million). Average repair and maintenance expense per vehicle per month remained Rs 48,159 with the total expenditure of Rs 51.434 million/

It was also worth mentioning that before the establishment of GWMC, same function was performing by the DO SWM, CDGG with the amount Rs 15.00 million during the financial year 2013-14.

The management needs to design strict control mechanism to control the repair and maintenance expense of vehicles.

The matter was brought into the notice of management during May, 2017. Management replied that before GWMC all vehicles were not operational and the collection efficiency was around 207 tons per day in the month of May 2014. Non-operational vehicles were repaired and made functional during FY 14-15 resulting into average collection efficiency of 603 ton per day in May 2015.

The reply of the department was not acceptable because irrational increase in expenditure of repair and maintenance.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 36]

2.2.4 Non-functioning of Internal Audit

Gujranwala Waste Management Company is a public sector organization which registered under section 42 of the Companies Ordinance 1984. As public sector organization, the internal control system of the organization should be very strong and efficient in order to meet the requirement of code of corporate Governance as well as to safeguard the assets and resources of the company.

The internal audit function has clear job description specifying its role but auditors observed that internal audit function had not been able to improve the quality of existing procedures. GWMC was established in 2013, however internal audit department did not produce any audit report to the management. The internal audit department was required to prepare monthly audit report with recommendations for improvement of accounting system and that report was need to be discussed with the management for remedies.

Further internal auditor and audit committee did not held any meeting with the management during the financial years 2014-15 & 2015-16.

With non-functioning of internal audit department, company exposed itself to serious financial and operational risks and all payments were made to the contractors/suppliers without internal audit function.

The matter was brought into the notice of management during May, 2017. Management replied that GWMC had established Internal Audit department in February 2015 and since then it has been functioning. Moreover, all payments were pre-audited in compliance of the rules stated in Accounting and Financial Reporting Manual of GWMC.

Department did not establish the internal audit division.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends functioning of Internal Audit department along with steps taken for the improvement of Internal Audit section.

[AIR No. 34]

2.2.5 Non-functioning of Tracking System

GWMC spent Rs 2.989 million on the tracking system, and paid Rs 1.2 million as consultancy fee to TPL for tracking system during the

financial year 2015-16. But tracking system remained non-functional till the time of audit and not a single penny was saved by monitoring through vehicle tracking system.

The matter was brought into the notice of management during May, 2017. Management replied that GWMC is utilizing the tracking system for monitoring of operational vehicles so that they cannot move out of the deployed area and through this system. GWMC is ensuring that drivers do not waste time during field operations which results in saving of time.

Department did produce the documentary evidence regarding functioning of tracking system.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter and fixing of responsibility against the person (s) at fault besides functioning of tracking system.

[AIR No. 37]

2.2.6 Unjustified appointments of Assistant Managers

GWMC appointed 31 Assistant Managers for HR, Procurement, Operations, Finance and Administration Departments by adopting LWMC model.

Auditor held that scope of GWMC is far less than the LWMC. Appointment of number of Assistant Managers in line with LWMC had caused extra burden on establishment charges.

The matter was brought into the notice of management during May, 2017. Management replied that LWMC has more than 70 officials engaged to perform the function assigned to 31 Assistant Managers of GWMC (published list of LWMC employees attached as F/D). Moreover, against 48 approved AM level positions, only 31 AMs were hired strictly on need basis.

The reply of the department was not acceptable as Assistant Managers were not appointed according to the demand of the GWMC.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends rationalization of the staff besides fixing of responsibility against the person (s) at fault.

[AIR No. 08]

2.2.7 Expenditure on account of repair and maintenance without budget

According to the SAAMA, 9-Financial and Budgetary Provisions clause (i), Amounts budgeted in the approved annual budget of the CDGG for the financial year 2013-14 for solid waste management shall be transferred to the GWMC for credit into commercial bank account of the GWMC with effect from 1st July, 2013 on monthly basis after subtraction there from the amounts agreed to be retained from residual solid waste management functions to be performed by employees mutually agreed to work under the District Officer (Solid Waste Management), CDGG as provided in Annexure-E of the Agreement.

The examination of record revealed that the funds amounting to Rs 15.258 million were released by the CDGG to the GWMC in each financial year. However GWMC incurred expenditure on account of repair of operational vehicles in excess of budget available. It is also worth mentioning that expenditure for the FY 2013-14 included 20% contractor profit which implied that the actual expenditure on purchase of spare parts was Rs 12.715 million. Therefore, this significant increase in the expenditure of repair of vehicles was unjustified.

(Rs in million)

Description	Year	Amount	Expenditure increased in %
Repair and Maintenance-Operational Vehicles	2013-14	15.258	-
-do-	2014-15	69.972	359%
-do-	2015-16	60.056	294%

The matter was brought into the notice of management during May, 2017. The management replied that expenditure was increased due to lifting of excess tonnage and purchase of new vehicles.

The reply of the department was not acceptable because massive funds were utilized for the repair and maintenance of operational vehicles.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 14]

2.2.8 Irrational increase in repair of vehicles

According to the SAAMA, 2 Functions and Responsibilities of GWMC clause (f), receiving moneys from the CDGG for performance of functions assigned to the GWMC under this Agreement and appropriating and spending these moneys in accordance with standing operating procedures of the GWMC.

The examination of record revealed that an expenditure of Rs 145.286 million was incurred on account of Repair and Maintenance for only operational vehicles by GWMC during the FYs 2013-16. Expenditure on Repair & Maintenance was enhanced upto 359% and 294% in 2014-15 and 2015-16 respectively. Detail is as under;

Description	Year	Rs in million	Expenditure increased in %
Repair and Maintenance-Operational Vehicles	2013-14	15.258	-
-do-	2014-15	69.972	359%
-do-	2015-16	60.056	294%

The matter was brought into the notice of management during May, 2017. However reply of the management was not received.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends inquiry of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 16]

2.2.9 Non actualization of receipts

According to clause 2-Functions and Responsibilities of GWMC (i) of SAAMA, Proposing cost recovery measures for services provided by or on behalf of the GWMC and suggesting actions regarding taxes, fees, user charges, surcharges, cesses, rents, rates in respect of solid waste management, receiving and appropriating all receipts recovered in respect thereof.

Auditor observed that GWMC entered into 8 agreements with the following private housing societies for the collection and transportation of solid waste but the potential receipts were not actualized. Further solid waste was dumped by these societies in surroundings which remained the source of pollution. In this way GWMC was deprived revenue for providing services. Detail is as follows;

Sr. No.	Contract	Date of Contract	Expiry of Contract	Service Charges	Remarks
1	Sasta Model Bazar	18-01-2016	30-06-2017	Rs180,400 / month	No recovery till date
2	Fruit & Vegetable market	01-01-2016	31-12-2016	Rs220,000 / month	Contract terminated on 20-02-2016
3	Al Mansoorah Housing Society	14-11-2015	13-11-2016	Rs50/ton/km	Contract expired, party not willing for extension
4	Professors Housing	2-11-2015	01-11-2016	Rs50/ton/km	Service discontinued due to non-payment
5	Shalimar Town	04-11-2015	03-11-2016	Rs50/ton/km	No service provided due to non-availability of resources
6	WAPDA Employees Housing	04-11-2015	03-11-2016	Rs50/ton/km	
7	Aujla Associates	07-12-2015	06-12-2016	Rs50/ton/km	
8	Punjab Small Industries Housing Scheme	02-11-2015	01-11-2016	Rs50/ton/km	

The matter was brought into the notice of management during May, 2017. Management replied that GWMC terminated contract with Fruit and vegetable market due to non-payment. All other Town/societies were not willing to receive services.

Department did not take steps to actualize the receipts.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault and collection of potential receipts.

[AIR No. 19]

2.1.10 Functions and Responsibilities of GWMC

According to clause 2-Functions and Responsibilities of GWMC (a) of SAAMA, Managing, controlling and monitoring exiting procedures, processes, actions, activities, facilities, operations, schemes, plans, programs, and assets of the CDGG directly or indirectly related to generation, collection, separation, storage, reuse, recycling, transportation, transfer, reduction, treatment and disposal of Solid Waste.

Auditor observed that DO (SWM) CDGG was collected, transported and dumped solid waste upto 2013. GWMC was established to move one step forward, however GWMC was also performing the same function and limited itself to the collection and transportation of solid waste. Further GWMC did not have any plan regarding separation, storage, reuse, recycling, reduction and treatment of solid waste. Under these circumstances it can easily be concluded that GWMC fails to perform its functions and responsibilities and resulting loss of enormous funds.

The matter was brought into the notice of management during May, 2017. Management replied that PC-II for construction of landfill site has been prepared with consultation of UU, in this project all the activities like separation, storage, reuse, recycling, reduction and treatment of solid waste will be performed.

However compliance was not shown to audit.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends compliance of SAAMA clauses and investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 18]

2.3 Financial Aspects

2.3.1 Hiring of third party labor - Rs 341.08 million

According to the SAAMA, clause 8- Transfer of CDGG Staff (i), services of regular employees of CDGG and employees engaged on work charged basis working in solid waste management department along with their sanctioned strength, are hereby, placed at the disposal of GWMC except employees mutually agreed to be retained by CDGG for the performance of residual functions of CDGG as specified in Clause 3.

GWMC incurred expenditure on hiring of human resource through third party for sanitation during the financial years 2013-14, 2014-15 & 2015-16. This model of third party labour was adopted as replica of LWMC without assessing the need of CDGG. Further third party labour was required on need basis instead of engaging labour throughout the year. The Contracts were awarded to the following Contractors for the provision of sanitation labour on daily wages.

(Rs in million)

Name of Contractor	Expenditure			
	FY 2013-14	FY 2014-15	FY 2015-16	Total
3Rs Waste Management	4.129	81.268	93.321	178.717
Zohaib and Company	-	34.798	127.564	162.362
Total	4.129	116.066	220.885	341.079

The matter was brought into the notice of management during May, 2017. The management replied that population of Gujranwala is more than two million and as per International SWM Standards, Worker – Population ratio should be 1:800. Therefore, minimum required sanitary workers to serve the population of Gujranwala are 2500. Since as a policy matter, no additional positions were sanctioned, the workforce deficiency was directed to be provided for through third party service providers in order to avoid the burden of pension cost on the Government.

The reply of the department was not acceptable as enormous funds were utilized for hiring of third party labor.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 09]

2.3.2 Improvement required in fixed assets register - Rs 309.96 million

As per rule 15.4 (a) & 15.7 of PFR Vol-1, all material must be examined, counted, weighed or measured as the case may be and recorded in an appropriate Stock Register.

Audit scrutiny revealed that GWMC did not prepare its Fixed Assets Register properly. The Register did not depict clear picture of the total assets purchased by GWMC, and transferred to GWMC from CDGG. The Register was also found without any signature. The register indicated that some of the items were purchased whereas its delivery and acknowledgement by the user was not available on record.

The matter was brought into the notice of management during May, 2017. Management replied that GWMC maintains electronically controlled Fixed Assets Register in accordance with the requirements of Accounting and Financial Reporting Manual.

However department did not produce the documentary evidence regarding the assigning of duty of maintenance of record.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends compliance of Accounting and Financial Reporting Manual along with detailed verification of assets.

[AIR No. 15]

2.3.3 Unjustified creation of liabilities due to non-suspension of contracts - Rs 229.534 million

According to Clause 9 (vi) of SAAMA, the increase in non-salary portion of the budget of the CDGG for solid waste management shall be made after two years with the mutual consent of parties and till that time the allocation shall remain fixed as during financial year 2013-14.

Scrutiny of expenditure statements of GWMC for the period 2014-15 to 2015-16 revealed that liabilities worth Rs 229.534 million were created during the years without availability of funds in violation of the rules as detailed below:

Name of Company	2016 (Rs)	2015 (Rs)
Majid engineering	436,860	1,689,520
Rachna filling station	3,196,298	257,088
Lahore waste management company	3,000,000	3,730,000

Name of Company	2016 (Rs)	2015 (Rs)
Subhan construction	0	1,362,900
Royal colonial	4,076,179	1,052,798
Japan traders	51,000	286,850
Abdullah traders	13,435,103	97,800
Madni& co	55,000	98,400
Techno pack	79,680	164,108
Rana Rashid	18,749,233	943,500
Hafeez Traders	442,500	225,000
Zohaib& co	28,236,251	8,833,448
3R's waste management company	14,161,080	6,800,420
The Urban Unit	1,670,400	2,436,000
Rafiq& Co	11,406,865	9,017,503
Yashfa International	11,602,030	8,149,637
TPL tracking	600,000	2,989,900
Transfer station security payable	0	144,000
Asia Traders	0	80,172
Hafeez associates	191,268	1,206,218
Advertising Bills	179,642	0
Kissan Eniginnering	15,358,000	0
Fuso Master	34,150,000	0
Motor Companies	9,055,073	0
Al manzir Brothers	413,600	0
Master Filters	35,000	0
Mudassir Traders	471,830	0
Sufi Inayat Impex	210,622	0
Dewintec	21,000	0
TUV Austria	63,800	0
Afzal Industry	69,000	0
Track Security System	180,955	0
Goraya& Co	881,500	0
Allied Engineering	30,512	0
Abdul Hameed	633,600	0
Winpro Enterprises	406,500	0
M/s A.M.C.C	1,350,825	0
Tayyaba Associates	668,800	0
GCCI	19,740	0
Data Enterprise	97,900	0
Rafiq Technologies Concern	182,988	0
Pak Tire Corporation	134,000	0
Golden Pump	34,538	0
Ali Traders (Digital Management System)	848,190	0
Group Life Inu. Premium Payable of CDGG staff	703,477	0
Punjab Information Board for Mobile Sets	2,377,500	0
Total	179,970,355	49,567,277

The matter was brought into the notice of management during May, 2017. Management replied that cash balance of Rs 129,460,851 and Rs 79,288,444 was available against the outstanding closing liabilities of

FY 2015 and FY 2016 respectively. Also, GWMC received Rs 633.00 million from Government of Punjab in FY 2017 which includes Rs 150.00 million on account of outstanding liabilities that were incurred in anticipation of funds during FY 2016.

However department did not produce the evidence regarding the need of generation of liabilities.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 06]

2.3.4 Third party labor carried out repair and maintenance of vehicles - Rs 136.941 million

According to the SAAMA, 6-Transfer of CDGG Assets clause (iii), All offices and facilities owned by CDGG and TMAs which are presently under the use and control of SWM staff will continue to be used by the employees of GWMC without any encumbrance of rent or charge for a period of three years or till such time the GWMC manages its own alternate offices. The GWMC shall exercise reasonable care for proper use and necessary maintenance of assets transferred to it by the CDGG.

The examination of record revealed that the expenditure amounting to Rs 130.028 million was incurred for purchase of spare parts of the operational vehicles. These high valued and sophisticated spare parts were handed over to labor (hired by the third party) for replacement without any record. However, GWMC made payment to the suppliers/contractors for the purchase of spare parts without proper planning.

(Rs in million)

Description	Years	Expenditure incurred for R&M of vehicles	Expenditure incurred for third party labor
Repair and Maintenance-Operational Vehicles	2014-15	69.972	1.283
-do-	2015-16	60.056	5.630
Total		130.028	6.913
Grand Total		136.941	

The matter was brought into the notice of management during May, 2017. Management replied that third party technicians are hired to perform

repair works only. Spare parts of vehicles are not handed over to them but are under the control and custody of Vehicle Supervisor/ In-charge who is the regular employee of CDGG/MCG.

Department did not produce the saving of funds or improvement of service due to hiring of third party workshop technical staff.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault along with recovery of govt. loss.

[AIR No. 13]

2.3.5 Spare parts replaced without maintenance of record - Rs 130.028 million

No authority should sanction any expenditure which is likely to involve at a later date expenditure beyond its own power of sanction as laid down under Rule 2.10(a)(5) of PFR Vol-I. Further no authority shall sanction any expenditure, which is directly or indirectly to its own advantage as laid down under Rule 32(c) of PLG (Accounts) Rules 2001.

Auditor observed that an expenditure of Rs 130.028 million was incurred for the purchase of spare parts during the FY 2014-15 & 2015-16. Spare parts were issued to the labor without indents. Issuance of parts was also not vetted by the Workshop Manager. Due to non-maintenance of history sheet register, spare parts might be issued to the labor for selling into market for personal benefit. Further old parts were not taken in dead stock register.

Year	Expenditure incurred for R&M of vehicles (Rs in million)
2014-15	69.972
2015-16	60.056
Total	130.028

The matter was brought into the notice of management during May, 2017. Management replied that for the verification/ reconciliation of old parts, an official has been nominated by the Competent Authority and directed to present the compilation report.

However department did not maintain requisite record.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 10]

2.3.6 Unjustified expenditure - Rs 29.06 million

According to the procurement manual of GWMC, 7.1.1 Initiation of PRs.

iii. The person raising the requisition shall provide:

- Description - Clearly describe and specify the requirement unambiguously.

Specifications provided with purchase requisitions must be in a form suitable for issue to potential suppliers or contractors.

- Quantity-Detail the quantity required, and state whether partial deliveries are acceptable.
- Quality-Clearly describe the required quality standards and performance characteristics noting that these shall be sufficient for the purpose. No benefit is achieved for LWMC by specifying goods or services of a higher than necessary quality.
- Program - Identify when the items or service are required and ensure that you have allowed sufficient time for the procurement process to be undertaken. If program requirements are critical and would involve cost to LWMC if not completed to time, clearly identify this so that the terms and conditions of contract can be tailored to suit. As Procurement Department has no direct control over when requisitions are raised, it is therefore the requisitioner's responsibility in the first instance to ensure that Requisitions are produced on time.
- Provide a list of the vendors who are qualified to meet the requirement; Procurement Department reserves the right to amend this list.

Auditor observed that enormous funds were utilized to establish the infrastructure of GWMC office during the financial years 2015-16, 2014-15 & 2013-14. Machinery, Equipment and Furniture were purchased during the period when Austerity Committee, Govt. of the Punjab banned

all types of procurement above Rs 50,000. The expenditure did not have any impact on the core operations of GWMC i.e. solid waste collection.

Sr. No.	Year	Description	Amount of Contract (Rs)
1	2014-15	Laptop & Computer	1,423,966
2	-do-	Office equipment	785,358
3	-do-	LED & UPS	475,520
4	-do-	CCTV	1,531,890
5	-do-	Desktop Computers & UPS	1,776,000
6	-do-	Renovation of head office and zonal office	1,925,000
7	-do-	Multimedia projector	159,700
8	-do-	Electrical wiring and lights installation at workshop	1,239,250
9	-do-	Office furnishing (including 15%)	5,191,611
10	2013-14	Office furniture	8,306,132
Total			29,061,420

The matter was brought into the notice of management during May, 2017. Management replied that items were procured before clarification.

Reply of the department was not acceptable because approval of expenditure was not granted by the Austerity Committee.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 31]

2.3.7 Improper evaluation regarding life cycle - Rs 27.710 million

According to the GWMC procurement manual, 7.2.1 Evaluation Policy & Procedure (a) Life Cycle Costing, The GM (P&C) in consultation with the Chief Financial officer shall consider following six steps for conducting a life-cycle cost analysis:

- i. Determine the operating life cycle of the goods or service - types of operation, maintenance required, etc.
- ii. Identify and quantify the factors that affect costs - power consumption, labor and maintenance requirements, average time

between failures, average downtime cost, time between overhauls, etc.

- iii. Calculate all costs at current rates and prices.
- iv. Project costs to the future dates at which they will be incurred, adjust for expected inflation or deflation, consider estimated salvage or scrap value, and complete the life cycle cost matrix.
- v. Discount all future costs and benefits to their present values.
- vi. Sum all costs and benefits to obtain the total net present life-cycle cost.

GWMC purchased machinery for sanitation during the financial year 2015-16 without determining the operating life cycle of the assets. Management did not quantify the cost, repair & maintenance, consumption of POL and ultimately benefits for the organization. Auditor observed that GWMC already operating the brand of Suzuki in Mini Tippers, so purchase of FAW Mini Dumpers increased maintenance cost. It also increased the cost of labor due to its different functions. The management took the decision from manual to automation without observing the requirements of the sanitation by adopting the mechanism of LWMC.

Sr. No.	Years	Description	Contract Amount (Rs)
1	2015-16	Mini Dumpers (FAW)	2,985,000
2	-do-	Mechanical Sweeper	21,150,000
3	-do-	Sludge Suction Machine	3,575,000
Total			27,710,000

The matter was brought into the notice of management during May, 2017. Management replied that FAW mini dumpers have a laden capacity of 1.5 m³ whereas Suzuki mini dumpers (laden capacity 1m³) are smaller. The purpose of purchasing FAW dumpers was not only to perform primary collection but also transport the waste for the final disposal. Sludge Suction Machine is required to clean the small drains of upto 2 feet where the waste gets stuck during primary collection.

The reply of the department was not acceptable FAW dumper were not affordable for dumping of solid waste. Similarly Suction Machine could not be used for 2 feet drains.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 26]

2.3.8 Re-appropriation of saving of pay and allowances funds - Rs 10.93 million

According to Clause 2 (f) of SAAMA, receiving moneys from CDGG for performance of functions assigned to the GWMC under this agreement and appropriating and spending these moneys in accordance with standing operation procedures of the GWMC.

Scrutiny of expenditure statements of GWMC for the period 2014-16 revealed that a sum of Rs 732,272,805 was received from CDGG during the period out of which a sum of Rs.721, 346,302 was incurred on establishment charges and savings of Rs.10,926,503 were re-appropriated from salary to contingencies in violation of rules as detailed below:

Years	Establishment Budget (Rs)	Establishment Expenditure (Rs)	Balance (Rs)
2014-15	352,281,667	347,441,105	4,840,562
2015-16	379,991,138	373,905,197	6,085,941
Total	732,272,805	721,346,302	10,926,503

The matter was brought into the notice of management during May, 2017. Management replied that amount received by GWMC from CDGG during a financial year, which remain unspent on the close of that financial year, shall be retained by GWMC and shall be utilized, in addition to the amounts budgeted for the ensuing financial year, for performance of the functions assigned to the GWMC under Clause 2 of this Agreement.

However GWMC did not transfer remaining / balance amount to CDGG.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends transferring of balance funds to CDGG and investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 05]

2.3.9 Contracts awarded without technical evaluation - Rs 10.485 millions

According to PPRA Rules 2014, General Provisions 4- Principals of Procurement, A procuring agency, while making any procurement, shall ensure that the procurement is made in a fair and transparent manner, the object of procurement brings value for money to the procuring agency and the procurement process is efficient and economical.

GWMC awarded the following Contracts to the contractors during the financial year 2015-16. The Contracts were related to Construction/ Works and procurement committee did not include personnel having expertise in civil works. In the absence of Technical Expert, bid could not be technically evaluated. Further specifications were also not framed and which could not be followed in execution.

Under these circumstances, it can be easily concluded that contracts were awarded to the contractors without technical evaluation. The payments were made without observing the specifications of civil works.

Description	Qty.	Rate/ Unit	Amount (Rs)
Transfer Station at Alam Chwok			
Procurement of construction & demolition waste for developing the temporary approach roads with the landfill premises			3,360,000
Waste Enclosures	15 Nos.	Rs475,000 each	7,125,000
Total			10,485,000

The matter was brought into the notice of management during May, 2017. Management replied that GWMC Technical Evaluation Committee comprised of Sr. Manager Operations and Manager Workshop as members/personnel having expertise in the relevant field. The Technical Evaluation Committee evaluated the tender against the evaluation Criteria mentioned in the bidding documents and the evaluation was duly announced.

The reply of the department was not acceptable because academic qualification and experience of both officers was irrelevant.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 24]

2.3.10 Wasteful expenditure - Rs 9.25 million

As per para 3.3 of procurement manual of Gujranwala Waste Management Company, “a person involved in the procurement process shall be personally liable, to make good the loss / damage incurred by GWMC, if he misrepresents, misconstrues and / or misunderstands his authority, and / or does not exercise sufficient and due care and discretion in exercise of authority given to him.

GWMC incurred an expenditure of Rs 9.25 million on Daily Allowance, Hotel Charges and Consultancy fee during the financial year 2013-14 and 2014-15. Purpose of journey was only for the research of waste but GWMC had no plan for compost and recycling of solid waste. Due to these reasons, the expenditure was held wastage of public money as detailed below;

Entity	Purpose	No. of officer	Cheque No.	Date of Cheque	Amount (Rs)
Funds transfer to Urban Unit Lahore	Foreign Training	8 officers	131989334	13-05-2014	8,887,000
GWMC	Foreign Training Japan	7 officers	803674331	07-09-2015	358,598
Total					9,245,598

The matter was brought into the notice of management during May, 2017. The management replied that funds to the tune of Rs 8,887,000 were transferred to UU Lahore as per direction received from Administrative Department (LGCDD) vide letter No SO.FP (LG) 5-40/2012 dated 10th April, 2014. Total funds were released from JICA funded project and used as per requirements of JICA.

However department did not produce the documentary evidence regarding the need and implementation of trainings.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends recovery of the subject amount from the concerned staff.

[AIR No. 12]

2.3.11 Irregular award of contracts - Rs 8.51 million

According to the GWMC procurement manual, 7.4.2 (h) Contracts, All procedures for procurement under contracts will be same with the following additional procedures:

- Contracts having significant technical or financial commitments must be negotiated by a committee comprising of members fully familiar with technical, legal and financial requirements for which the contract is being proposed.
- For work carried out on site, it is essential that project manager/site engineer or other technical persons conduct themselves in their dealings with suppliers and contractors in such a way so as to protect themselves and GWMC. Any form of corrupt practice will expose those involved to severe disciplinary action.
- Maintain a site diary and record all meetings with contractors and the basis of any discussions. Trivial events may later be of some significance.
- Formal meetings should ideally be maintained or recorded, and copies signed by both GWMC and the contractors so that the content is formally agreed.
- All formal meetings between contractors and project manager/site engineer or technical officer shall also be attended by the GM (P&C) or by Chief Financial Officer in his absence.
- Copies of all meetings shall also be sent to the Procurement Department and the accounts department.

Auditors observed that the following contracts were awarded by the GWMC to the various contractors during the financial year 2015-16 without constituting negotiation committee. No technical member was deputed to monitor the execution of the works. Management of the GWMC did not inspect the site of the operations due to which the contractors was unduly obliged. Time to time formal meetings was not called with the contractors.

Sr. No.	Year	Description	Amount (Rs)
1	2015-16	Renovation of GWMC Trolleys	1,959,459
2	-do-	Hiring of machining services for Operational Vehicles and Fabrication material	3,400,000

Sr. No.	Year	Description	Amount (Rs)
3	-do-	Repair and maintenance of trolleys	500,000
4	-do-	10 cubic meter Containers	1,949,870
5	-do-	Porta Cabin	700,000
Total			8,509,329

The matter was brought into the notice of management during May, 2017. Management replied that Operations and Workshop teams were designated by the management of GWMC for the monitoring and inspection of relevant services. The teams monitored the tasks and ensured accomplishment of tasks as per work schedule/contractual requirements.

Department did not produce the documentary evidence in support of the reply.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 27]

2.3.12 Award of tender without completion date - Rs 7.12 million

According to PPRA Rules 2014, General Provisions 2 Definitions (k) "completion date" means the date of completion of the procurement certified by the procuring agency and clause 64-Closing of Contract, (1) Except for defect liability by the contractor, as specified in the conditions of contract, performance of the contract shall be deemed close on the issue of overall delivery certificate or taking over certificate which shall be issued within thirty days of final taking over of goods or receiving the deliverables or completion of works enabling the contractor to submit final bill.

GWMC awarded the Contract for the Development and Construction of Waste Enclosures to M/s Toqeer Traders vide letter No. GWMC/2015/3977-85 dated 16-09-2015. The construction schedule was need to be discussed with the operations team and to decide the provision of subject services as and when required under the terms and conditions mentioned in the work order as well as agreement. However the terms and conditions were not framed and communicated to the contractor. The contractor did not complete the work till the completion of Audit. Further

work order was also found silent about the time limit of the contract. The management of GWMC did not formulate the terms and conditions of the Agreement prudently which caused the non-construction of waste enclosures that resulted in dumping of the solid waste in open places and resulting pollution.

Description	Qty.	Rate/ Unit	Amount (Rs)
Waste Enclosures	15 Nos.	Rs475,000 each	7,125,000

The matter was brought into the notice of management during May, 2017. Management replied that no payments have been made in respect of unfinished works. The contractor bills were deducted and only the certified works which were completed within the given completion period.

However department did not impose penalty due to delay in completion of work.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault alongwith imposition of penalty to the contractor.

[AIR No. 23]

2.3.13 Irregular expenditure on account of mobile phone - Rs 6.565 million

According to HR manual of GWMC clause, 5.4. ALLOCATION AND USE OF COMPANY PROVIDED MOBILE PHONES ,5.4.1 Responsibility

The GM (HR and Admin) and concerned department head shall be responsible for authorizing the mobile phone allocation.

a. Entitlement

Employees shall be provided with the Mobile Phones for business purposes, in accordance with the LWMC"s decision and the nature of employee"s job. Generally the mobile phones shall be provided to General Managers, Senior Managers and other employees with the approval of their Department Heads Monthly Usage Limits

Following limits on the phone usage and phone specifications shall apply:

Designation	International Roaming Facility	Monthly Limit,	Usage	Telephone Set
Managing Director	Yes	Unlimited	Personal & Business	Executive
General Manager		5,000		Executive
Senior Managers		3,500		Standard
Managers		2,000		Standard
Lower Staff	No	1,000	Business	Standard
Pool use		Unlimited		Economy

The management should ensure that there should be a proper control over the expenditure. The GWMC issued mobiles phone along with the postpaid sims for officials usage and total mobile phone usage bill. Further despite all office and field staff members have their own mobile phone, there was expense of PTCL and NTC bills.

This indicates that company that company has not proper cost control over the expenditure.

Description	FY 2015-16 (Rs)	FY 2014-15 (Rs)
PTCL Evo charges	229,1188	118,449
Mobile bills	754,762	423,006
Telephone charges	271,289	175,420
Mobile sets for field staff	2,377,500	0
Email Services	131,994	21,000
Total	5,826,733	737,875

The matter was brought into the notice of management during May, 2017. The reply was not submitted by the management.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter regarding the use of mobiles phones and contribution towards accomplishment of targets.

[AIR No. 38]

2.3.14 Unauthorized award of janitorial contract - Rs 4.84 million

According to PPRA Rules amended 2014, chapter-VIII Acceptance of Bids and Award of Contracts clause 55A Single Complying Proposal – subject to rule 35, if one complying bid is received, the

procuring agency may award the contract to the bidder. * after rule 55 rule 55A inserted vide Notification No. S.O (Cabinet-I) 2-9/2015 dated 06.01.2016.

Scrutiny of accounts record of GWMC revealed that Janitorial Services were hired from M/s 3R's Waste Management Pvt. Ltd Lahore on the event of Eid-UI-Azha 2015. Single bid was received and work order was issued to the firm without getting the reasonability certificate. Rates charged per day per individual were exorbitant.

Invoice No.	Date	Description	No. of days working in Work Order	No. of days worked	Wage per day	Gross Amount (Rs)
ST-15-022	01-10-2015	Supply of additional Janitorial workers days during EidUIAzha 24-09-2015 to 27-09-2-15 (6:00 AM to 6:00 PM) 12 Hours	1925	2235	1650	3687750
		Supply of additional Janitorial workers days during EidUIAzha 24-09-2015 to 27-09-2-15 (6:00 AM to 2:00 PM) 8 Hours	1440	965	1195	1153175
Total						4840925

The matter was brought into the notice of management during May, 2017. Management replied that the rates offered by M/s 3R's Waste Management for provision of Janitorial Services, per day per individual, included rates for 12 hours shift. Moreover, the offered rate for 8-hours-working is only 1.7 times of the normal day rate of 3rd party services availed in the annual tender which is justified owing to the fact that workforce is incentivized by higher than standard rates for reasons like overtime work, shortage of workforce, national holidays, and religious event.

Reply of the department did not acceptable due to charging of exorbitant rates.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends investigation of the matter besides fixing of responsibility against the person (s) at fault.

[AIR No. 07]

2.3.15 Irregular grant of imprest money - Rs 1.020 million

According to Note for Managing Director Dated.19.03.2015 imprest limit of Rs 200,000 is approved for GWMC Workshop.

Scrutiny of various vouchers of GWMC revealed that petty cash adjustments was paid to Muhammad Rizwan Khan Purchase Officer Workshop during the period in excess of admissible amount of Rs 200,000. Moreover, huge amounts have been issued for petty cash expenses which are not petty expenses by nature. Detail is as below

S. No	Cheque No	Date of Cheque	Date of Cash Withdrawal	Name of Beneficiary	Amount Paid	Petty Vouchers in Hand	Cash in hand	Total Imprest paid	Sanctioned	Excess Amount Paid
1	1304626985	01.04.2015	01.04.2015	Rizwan	210,325	210,325	89,675	300,000	200,000	100,000
2	1305126966	04.05.2015	04.05.2015	Rizwan	686,216	686,216	0	686,216	200,000	486,216
3	1305126927	14.04.2015	14.04.2015	Rizwan	333,232	433,232	133,232	333,232	200,000	133,232
4	1305126918	11.04.2015	11.04.2015	Rizwan	106,558	107,558	192,142	300,000	200,000	100,000
5	1305126903	07.04.2015	07.04.2015	Rizwan	272,367	272,367	27,633	300,000	200,000	100,000
6	1304626977	30.03.2015	30.03.2015	Rizwan	100,000	0	200,000	300,000	200,000	100,000
Total										1,019,448

The matter was reported to the management during May, 2017 for exit conference. The management replied the limit of petty cash imprest was approved as Rs 200,000 and transactions are the reimbursements of repair bills submitted by Petty Cash Custodian – after performance of maintenance jobs.

Audit is of the view that approved limit of imprest money by BOD was Rs 200,000 whereas Rs 300,000 was disbursed to purchase officer.

The matter was brought into the notice of management during May, 2017. The reply was not submitted by the management.

The matter was also reported to PAO during June, 2017 for convening DAC meeting. However, no DAC meeting was convened till finalization of this report despite repeated reminders.

Audit recommends recovery of the amount.

[AIR No. 01]

3. CONCLUSION

The audit has brought out the key issues that need immediate attention and minor lacunae that pose major hindrance in the further process of the system. The waste disposal needs immediate attention and strict monitoring. The setting up of sanitary landfill sites has to speed up and this needs to be given top priority. The number of treatment process plants has to be increased to manage total quantity of waste generated. Many new techniques have been implemented for storage, collection, transfer and transportation. These techniques have brought about many positive changes and have increased the efficiency of the MSWM system. However, segregation of waste at each step is not being carried out. The segregation of waste during storage, collection and transportation has to be put in place. Proper training and education needs to be provided to the workers and public awareness programs should be conducted regularly. The occupational and health and safety measures taken by the authorities are not sufficient. Health and safety programs has to be conducted regularly to check the health condition of the workers in the various areas of MSWM and they should be educated on the health hazards related to their work and the importance of wearing the safety gear.

GWMC has achieved the partial enhancement in capacity of waste removal. The city is more clean, GWMC is not only collecting waste generated from the city but also trying to remove the heaps of waste in the city. It is mandatory to mention here that in the achievement of these targets, few serious environment, financial and management lapses were committed which have been discussed in detail. GWMC was constituted under Companies Ordinance, 1984 and entered into an agreement with CDGG for waste removal but later on company outsourced its function through international agreements which increased the administrative and direct costs. Due to intermediary role of GWMC, government is bearing a huge cost. The recommendation of this report may be made privy to be competent authorities for taking necessary steps to protect the environment and utilize of funds out of public exchequer in an economic and efficient manner.

4. ACKNOWLEDGEMENT

We wish to express our appreciation to the Management and staff of Solid Waste Management Gujranwala for the assistance and cooperation extended to the auditors during this assignment.