



THE UNITED REPUBLIC OF TANZANIA

NATIONAL AUDIT OFFICE



**A PERFORMANCE AUDIT ON THE ENFORCEMENT OF ENVIRONMENTAL
CONTROL SYSTEMS IN THE MINING SECTOR IN TANZANIA**

**VICE PRESIDENT'S OFFICE - DIVISION OF ENVIRONMENT
AND
NATIONAL ENVIRONMENTAL MANAGEMENT COUNCIL**

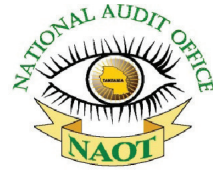


A REPORT OF THE CONTROLLER AND AUDITOR GENERAL OF THE UNITED REPUBLIC OF TANZANIA

March, 2015



THE UNITED REPUBLIC OF TANZANIA
NATIONAL AUDIT OFFICE



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PREFACE

The Public Audit Act No. 11 of 2008, Section 28 authorizes the Controller and Auditor General to carry out Performance Audit (Value-for-Money Audit) for the purposes of establishing the economy, efficiency and effectiveness of any expenditure or use of resources in the Ministries, Independent Departments and Executive Agencies (MDAs), Local Government Authorities (LGAs) and Public Authorities and other Bodies which involves enquiring, examining, investigating and reporting, as deemed necessary under the circumstances.

I have the honour to submit the Performance Audit Report on the Enforcement of Environmental Control Systems in the mining sector in Tanzania to His Excellency the President of the United Republic of Tanzania, Dr. Jakaya Mrisho Kikwete and through him to the Parliament of the United Republic of Tanzania.

The report contains conclusions and recommendations that have focused mainly on the Enforcement of Environmental Control Systems in the mining sector. The audit specifically covered the planning, implementation of the enforcement mechanisms, coordination of the environmental enforcement outcome with other MDAs and LGAs as well as monitoring and evaluation of the enforcement activities with the aim of assessing whether the Enforcement of Environmental Control Systems in the mining sector was done accordingly.

The management of the Vice President's Office (VPO) and National Environmental Management Council (NEMC) were given the opportunity to scrutinize the factual contents of the report and come up with comments on it.

I wish to acknowledge that the discussions with the audited entities have been very useful and constructive in achieving the objectives of the study.

My office intends to carry out a follow-up at an appropriate time regarding actions taken by the audited entities in relation to the recommendations in this report.

The office has also subjected the report for critical review by the following experts in Enforcement of Environmental Compliance and Mining namely: Prof. Agnes G. Mwakaje from the Institute of Resource

Assessment of University of Dar es Salaam and Dr. Crispin Kinabo from University of Dar es salaam who came up with useful inputs in improving and enhancing the quality of this report

The report was prepared by Mr. Frank B. Mwalupale and Mr. Deusdedit S. Muhono under the supervision of the Assistant Auditor General - Performance Audit, Mr. George C. Haule and the Deputy Auditor General - Performance and Specialized Audit, Ms. Wendy W. Massoy.

I would like to thank my staff for their valuable inputs in the preparation of this report. My thanks should also be extended to the audited entities for their cooperation during the audit and their fruitful comments on the draft report.

A handwritten signature in black ink, appearing to read 'Mussa Juma Assad', with a stylized flourish extending to the right.

Prof. Mussa Juma Assad
Controller and Auditor General
Dar es Salaam,
March 2015

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ABBREVIATIONS AND ACRONYMS

CAG	Controller and Auditor General
CPU	Central Planning Unit
DECE	Directorate of Environmental Compliance and Enforcement
DEIA	Directorate of Environmental Impact Assessment
DEMOs	District Environmental Management Officers
DEPR	Directorate of Environmental Planning and Research
DOE	Director of Environment
ECS	Environmental Compliance Section
EES	Environmental Enforcement Section
EIA	Environmental Impact Assessment
EMA	Environmental Management Act
EMC	Environmental Monitoring Section
ISO	International Standards Organisation
ISSAI	International Standards for Supreme Audit Institutions
LGAs	Local Government Authorities
M&E	Monitoring and Evaluation
MDAS	Ministries, Departments and Agencies
MEM	Ministry of Energy and Minerals
MoU	Memorandum of Understanding
MoW	Ministry of Water
NAOT	National Audit Office
NEAC	National Environmental Action Plan
NEMC	National Environmental Management Council
PMO-RALG	Prime Minister's Office - Regional and Local Government
TMAA	Tanzania Minerals Audit Agency
UNDESA	United Nations Department for Economic and Social Affairs
UNEP	United Nations Environmental Programme
VPO	Vice President's Office
WHO	World Health Organisation

DEFINITION OF TERMS

As used in this audit report

- i. **Environmental Enforcement*** means the range of procedures and actions employed by a Government, through its Council (NEMC) to ensure that mining entities potentially failing to comply with environmental requirement given to them either through Environmental Impacts statements or set environmental conditions can be brought or returned into compliance and/or punishment through the administrative or criminal sanction (*UNEP guideline for enforcement dated 9,February 2001*)
- ii. **Environmental inspection*** is one of the key enforcement tool used to identify who is complying with applicable regulatory requirement and permit conditions and who is not. The information from this stage is used for imposing penalties intended to deter future violations.
- iii. **System*** means the structures, approaches and Procedures required to be set by mining facilities to ensure that the mining activities do operate in line with the environmental standards without posing risk to public health and the environment.

EXECUTIVE SUMMARY

The overall tasks for overseeing and enforcing the implementation of environmental control systems in mines to maintain environmental quality standards are falling under the purviews of the Vice President's Office - Directorate of Environment (VPO - DoE) and the National Environmental Management Council (NEMC) respectively. Their mandates are vested to them by the Environmental Management Act No. 20 of 2004 and its Regulations of 2005. If the environment is left unmanaged and unregulated then it may result into endangering human health, life, ecological balance as well deterioration of other living things¹.

There have been a number of public outcries and concerns from stakeholders in relation to environmental problems which results from the mining activities in the country. These include wide use of dangerous chemicals such as mercury and cyanide by miners, spillage of dangerous chemicals and disposal of dangerous and hazardous mining wastes which have even led to outbreak of diseases and deaths to humans, animals and other living things. In this case therefore, it is necessary that both the VPO and NEMC be quite reliable while discharging their environmental management and enforcement functions.

The overall objective of the audit was to assess the extent to which the Vice President's Office - Environment (VPO) through the National Environmental Management Council (NEMC) enforces the implementation of environmental control systems with the view of mitigating environmental impacts caused by mining operations in the country.

The scope of the audit covered a period of three financial years i.e. 2011/12 to 2013/14 and the main audited entities were VPO and NEMC. Special focus was on the enforcement of the implementation of environmental control systems in the mining facilities operating in Tanzania as applied by NEMC and overseen by VPO.

The audit reviewed the performance of these entities from the planning phase, implementation of the enforcement mechanisms, coordination of the environmental enforcement outcome with other MDAs and LGAs as well as monitoring and evaluation of the enforcement activities.

NAOT used three main methods of data collection in conducting this

1 UNEP: Industry, Environment, Mining and Sustainable Development. Vol. 20 No. 4 of 1997.

audit. Interviews were carried out and document reviews done to VPO and NEMC offices as well as in three NEMC's Zonal Offices. In addition, site visits were made to selected mining facilities within the three zones in order to establish the environmental condition and verify information obtained through interviews and document reviews.

Main Audit Findings

The following were the main findings observed during the audit. The details of these findings are described in Chapter Three to this report.

Inadequate planning for environmental enforcement

There was evidence that the available plans in NEMC did not address key risk factors while planning for environmental enforcement. There were no clear guidelines, well defined criteria or indicators for enforcement. Thus planning tools did not address crucial risk factor during the environmental enforcement.

Due to absence of risk assessment, enforcement activities were carried out based on reported incidents or complaints brought about to NEMC or VPO. The complaints indicated that environmental enforcement made by NEMC was not adequately done in mining facilities or operations.

Monitoring and enforcement of environmental compliance on mining facilities need significant improvement.

- In conducting inspections in the mining facilities/ operations, risk-based approach was not applied in identifying mining facilities with higher environmental risk. Accordingly the variance between inspected mines and non-inspected mines was very high. On the other hand discrepancies in planning of inspections, resource allocations compared to a number of mining facilities were noted. Inspections were done based on incidents and complaints rather than relying on well planned inspections;
- NEMC did not establish compliance information of the mining facilities (e.g. major, moderate, minor and non-compliance). As a result it was difficult to establish whether all high risk mines were among the facilities covered in their inspections;

- Significant weakness in information management made it difficult for NEMC to analyse and demonstrate the effectiveness of its inspections, or report accurately on how well operators complied with conditions;
- The audit found that NEMC Zone Offices did not conduct inspections to mining facilities in their zones especially large scale mines. This responsibility was left to NEMC-HQ even-though the zone offices were established to perform the duties of NEMC in their area of jurisdiction; and
- There were no clearly established criteria for determining the severity of non-compliance. This was left to the judgment of individual inspectors which possessed a risk of inconsistency in how non-compliances were addressed as confirmed during interview with miners.

Insufficient application of available sanctions:

It was noted that NEMC did not apply a full range of available sanctions as per the law. NEMC in most cases issued emergency protection orders and fines resulting from compounding of environmental offences. Due to existence of irregularities in making such orders, NEMC uplifted the orders following appeals and objections from the mining facilities. This means that these sanctions were not effective and that likelihood of prolonged pollution and non-compliance was prevalent on part of such facilities.

Inadequate follow-up of enforcement actions

NEMC did not make regular follow-up of its sanctions and therefore failed to analyze the level of compliance. NEMC's monitoring system on whether mining operators had taken action to address identified non-compliance was weak.

Inadequate reporting

LGAs did not report to NEMC on environmental issues associated with mining on a regular basis. As a result NEMC did not get updates of the status of environment on mining sites from the local government environmental officers. It was noted that LGAs were not involved in

monitoring and reporting of environmental issues in mining sites. Non-submission of these reports made it difficult for NEMC to scrutinize such reports and provide profound judgment on the state of environment in the mining sector.

Lack of effective coordination in environmental enforcement

The audit noted that coordination within and between NEMC and other government institutions was inadequate. This was due to lack of sharing statistical data and environmental findings; un-defined reporting mechanism between them, limited sharing of environmental enforcement results, un-balanced and arbitrary enforcement activities among them.

Inadequate monitoring and evaluation of enforcement activities

Our interviews with NEMC officials from Headquarters in Dar es Salaam indicated that monitoring and evaluations were not being conducted in order to assess the performance of enforcement activities in the mining facilities. There was neither internal monitoring and evaluation nor external evaluation of NEMC's performance for the whole period under audit. It was noted that failure to conduct monitoring and evaluation of NEMC's performance on enforcement of environmental control systems denied NEMC the opportunity to measure the level of performance over a particular period of time as per the NEMC's set objectives.

Main Conclusions

The National Environmental Management Council did not adequately fulfil its objectives in enforcement of the implementation of the environmental control systems as mandated by the Environmental Management Act, 2004. Generally, NEMC failed to undertake enforcement systems in mining facilities despite the fact that its strategic plan required it to conduct inspections in all mining activities.

Strategies for enforcement of the implementation of environmental control systems were not clearly set out. Planning tools did not indicate clear strategies for environmental enforcement in mines operations. The availed strategic plans and Annual Work Plans did not address key risk factors which were associated with mining sector as well as those factors that would require immediate intervention by NEMC.

Non-availability of these enforcement parameters for guiding the enforcement of the implementation of environmental control systems on the medium and small scale mines made it difficult for NEMC to assess its level of performance.

Main Recommendations

The National Environmental Management Council should:

- 1) To undertake proper monitoring/inspections in order to establish performance profile of those facilities whose enforcement is vital with the view of establishing the compliance level of each of the mining facilities and use such information as the basis for planning the enforcement;
- 2) Ensure the application of sanctions is that of a deterrence nature. This is possible if sanctions are issued according to laws and regulations and by periodically following up their respective implementation or impact; and
- 3) Ensure that monitoring and evaluation indicators for enforcement of environmental control systems in the mining sector are established and approved by NEMC. Equally, a periodic monitoring and evaluation of enforcement activities is done accordingly and results are used as the basis for further improvements.

The Vice President's Office - Division/department Directorate of Environment should ensure:

- 1) that environmental enforcement activities done by NEMC, Sector Ministries and LGAs are properly coordinated, harmonized and all stakeholders establish a firm reporting line of environmental matters;
- 2) that a general environmental status report on mining sector in the country is prepared annually. An annual compilation of reports on environmental enforcement roles in the mining sector as carried out by other government departments are made available and used for assessing enforcement of performance annually and be the basis for further improvements; and
- 3) that it monitors NEMC's performance on enforcement of

the implementation environmental control systems in the mining sector by regularly reviewing its performance as well as improving the NEMC's capacity on human resource , financial and technology in meeting its overall enforcement objectives.

CHAPTER ONE

INTRODUCTION

1.1 Background

Minerals are valuable natural resources which are finite and non-renewable. Minerals exploration and development is closely linked to development of a country's economy and the people. Accordingly, mining is a major economic activity in many developing countries² including Tanzania. Mining operations, whether smaller, medium and large-scale, are inherently disruptive to the environment³, producing enormous quantities of waste that can have significant impacts to the environment for decades⁴. The environmental deterioration caused by mining activities occurs mainly as a result of inappropriate and wasteful working practices and rehabilitation systems.

However, as mining activities intervenes with the environment and social structure, a harmony and balance is to be maintained between environmental conservation and extraction of minerals in the interest of sustainable development⁵. Mining has a number of common stages or activities, each of which has potentially-adverse impacts on the natural environment, society and cultural heritage, the health and safety of mine workers, as well as communities at large.

Despite having laws and regulations for sustainable management of environment in the country, the environmental enforcement in the mining operations has remained ineffective. As a result there have been reported environmental incidents which endanger the environment and public health.

2 UNEP. Industry and environment, mining and sustainable development. <http://www.uneptie.org/vol20no4.htm>; 1997

3 Makweba MM, Ndonde PB. The mineral sector and the National environmental policy. In: Mwandosya MJ, et al, ed. Proceedings of the workshop on the national environmental policy for Tanzania (Dar es Salaam, Tanzania), 1994;1996. p. 164-173

4 Moody R, Panos SP. Environmental Assessment of Mining Projects. <http://www.worldbank.org/mining.xls>; 1997

5 INTOSAI - WGEA; guideline for auditing mining for SAIs

1.2 Motivation for the audit

The audit was motivated by the following factors:

- a) Public complaints and outcry on the existing water pollution in rivers nearby mining operations⁶.
- b) During Parliamentary sessions held in May 2009, Members of the Parliament wanted the Government to stop mining activities in one of the mining sites in Mara, because it was alleged that it was endangering the lives of the people due to spillage of toxic wastes from the said mines⁷.
- c) Research on Poverty Alleviation (REPOA) assessment report⁸ provided responses regarding the pollution caused by mining operation by most of respondents living near the mining operation by showing the level⁹ of impacts relating to mining activities to the environment pointed out that, it is high in the villages close to mining operation. The statistics of responses indicated, a very high influence of mining activities on Water pollution (48.4%); Air pollution (32.8%); Noise (26.6%); Forage destruction (20.3%); Forest resource destruction (17.2%) and Land pollution (14.1%). This was reported by most of respondents in villages adjacent to mining activities. From these results it can generally be observed that, mining activities are highly detrimental to the environment especially to communities living closer to the mines.
- d) Studies from the University of Dar Es Salaam revealed that, in total the number of affected people due to chemicals resulting from mining activities is believed to be over 40 and over 1350 livestock dead, the study also concluded that levels of heavy metals in River Mara was higher compared to WHO or Tanzania standards¹⁰.

6 The Citizen Newspaper, January 28th , 2014

7 The levels of Heavy Metals and Cyanide in Soil Sediment and Water from the Vicinity of Mines in Tarime District. Report presented to Christian Council of Tanzania, June 2009. pg. 11, 12

8 Large Scale Mining Activities and the Livelihood of Adjacent Communities in Tanzania: March, 2013 REPOA assessment report, pg. 36

9 "Each problem to the environment and responses were compared between the close and away villages using ranking scores for its seriousness. The ranking in percentages are a result of the number of responses from villagers.

10 "The levels of heavy Metals and Cyanide in Soil Sediment and Water from the Vicinity of Mines in Tarime District" Report presented to CCT, June 2009. pg. 11, 12

Due to the above mentioned factor the Controller and Auditor General decided to carry out a performance audit on the enforcement of implementation of environmental control systems in mining sector to mitigate the environmental impacts caused by mining activities.

1.3 Design of the audit

1.3.1 Objectives of the Audit

The overall objective of the audit was to assess the extent of which the National Environmental Management Council (NEMC) enforces the implementation of environmental control systems with the view of mitigating environmental impacts caused by mining operations in the country.

Based on the above audit objective, the audit has come up with four specific audit objectives as mentioned below:

- to determine whether VPO and NEMC have adequate risk based environmental enforcement plans in mitigating environmental impacts caused by mining activities;
- to determine the extent to which NEMC inspects, reports, sanctions or conduct follow up on the implementation of environment control systems in the areas with mining activities;
- to determine whether VPO and NEMC adequately coordinate with other sector ministries, agencies, departments and other government institutions in environmental conservation issues; and
- to assess the extent to which VPO monitor the performance of NEMC and also how NEMC monitor its performance of enforcement to ensure compliance with environmental conditions on mining.

1.3.2 Scope of the Audit

The audit examined the enforcement of environmental control systems in the mining sector including large, medium and small-scale mines that is applied by VPO through NEMC in executing their statutory mandate as over-all overseers of environmental conservation matters.

The audit reviewed the performance of these entities from the planning phase, implementation of the enforcement tools, coordination of the environmental related matters with other MDAs and LGAs as well as monitoring and evaluation of the enforcement results.

The main audited entity was the National Environmental Management Council (NEMC) which is the main enforcer of environmental controls systems in the country.

The audit covered a period of four financial years i.e. from 2010/11 to 2013/14 in order to trace trend of performance over a period of time. The selected audit period is also influenced by the coming into force of the Mining Act in 2010 and its regulations of 2010, for which the audit also intended to test its implementation in the area of environment.

1.3.3 Assessment criteria

In order to assess the performance of both the VPO and NEMC on their environmental protection roles, assessment criteria were drawn from various sources. These were extracted from legislations, regulations, policies, guidelines, manuals, plans and best practices for planning, enforcement, coordinating and monitoring and evaluation of environmental impacts in the mining sector. Some of key criteria are highlighted in **table 1.1 below**.

Table 1.1: Audit assessment criteria

Topic	Issues assessed	Requirements
Planning for environmental enforcement activities	<div><div>i.</div><div>ii.</div><div>iii.</div></div> <div><div>Risk based Planning</div><div>Performance indicator</div><div>Availability of environmental data base</div></div>	<div>NEMC have to</div> <div><div><div>•</div><div>Set priority for mining inspections in the annual planning</div></div><div><div>•</div><div>Develop performance indicators to assess progress in implementation of enforcement</div></div><div><div>•</div><div>Avail the system (database) that stores the information which can be used and assist planning</div></div></div>

Topic	Issue assessed	Requirements
Implementation of enforcement activities	i. Environmental inspections in mines ii. Reporting of inspections iii. Applications of sanction iv. Follow-up	<ul style="list-style-type: none"> • Monitor and inspect any mining facilities to check compliance with the environmental requirement • Report the contravention • Impose sanction accordingly • To verify that the corrective actions have commenced
Coordination with other enforcement agencies on environmental issues in mines e.g. MEM and LGAs	i. Information reporting on enforcement of environmental compliance in mines. ii. Having Memoranda of Understanding on enforcing the compliance	<ul style="list-style-type: none"> • Submission of report by Ministry of Energy and Minerals to VPO about the state of the environment • Submission of report by LGA to VPO-Environment and NEMC
Monitoring and evaluation	i. Monitoring by oversight body ii. Entirely performance monitoring by council itself	<ul style="list-style-type: none"> • VPO is required to monitor and assess the NEMC's activities to ensure that the environment is not degraded by such activities (EMA 2014 section 15(d)). • NEMC required to monitor its performance and prepare report detailing its performance and submit to ministry responsible for environment

Source: Analysis of Criteria from Legislations and Regulation Policies, Guide Lines, Mannuals, Planns and Best Practices sources.

*The details of assessment criteria are in chapter three and the Audit questions and sub-question are found in **Appendix 1**.*

1.3.4 Methods used for the Audit

Three main methods were used for data collection. These methods included: document reviews, interviews and observation through a number of physical site visits made in selected mining areas. A total of 8 mines namely, Bulyanhulu, Buzwagi, North Mara, Kilimanjaro Gold mine, Shanta Gold mine, Sunshine mining company and Kapuli Gold mining company were visited. Observations were done to colaborate information from the document reviewed and the interviews conducted with NEMC officials at national and zonal levels.

Through document reviews, several key documents were reviewed within the selected audited entities including the environmental and mining legislations and their respective regulations, Medium Terms Strategic Plans, Annual Performance Reports, Inspection Reports, Monitoring and Evaluation Reports, Enforcement and Compliance Reports, Guidelines and other relevant documents. The purpose of review was to find issues related to planning, prioritization of mining based on the risks associated with mining activities, establish level of complains from the public and compare funding with the performance. The comprehensive list of reviewed documents is given in **Appendix 2**.

Interviews were conducted with the officials from VPO-Division of Environment, NEMC headquarters and NEMC'S zones. The interviews aimed at determining whether NEMC enforced implementation of the environmental control systems with the view of mitigating the environmental impacts caused by the mining operations in the country. It also intended to establish success and challenges faced by NEMC in executing its tasks. Details of the interviewed officials are provided in **Appendix 2**.

To validate data collection through document reviews and interviews, the audit team carried out site visits in three zones namely; Lake Zone, Northern zone and Southern Highland zone. The selection was done based on the zones which contain large number of mining facilities and therefore the consequential threat to the environment and human health. We also considered those mines with large number of reported complaints from the citizens and media as well as existence of pollution in the surroundings. The team visited these areas with the view of observing the existing environmental conditions and mining activities along the mines and assessed the impact and control of these impacts at the local government level.

1.4 Data Validation Process

The VPO and NEMC were given the opportunity to go through the draft report and comment on the accuracy of figures and information being presented. They confirmed the accuracy of figures used and information presented in the audit report.

Furthermore, the information was crosschecked and discussed with the experts in the field of Environment and Mining to ensure validity of the information obtained and being presented.

1.5 Structure of the Report

This report is presented in five chapters and covers the following:

Chapter One: provides for the introduction and background of the audit, audit objective, scope, assessment criteria and methodology of the audit.

Chapter Two: provides for the detailed account of the system and process for the management and implementation of environmental control systems/mechanisms in Tanzania. These processes include planning, implementation of enforcement plans, sanctions and follow-up, reporting of enforcement results and Monitoring. The responsibilities of different stakeholders at every stage are also highlighted in this Chapter.

Chapter Three: presents the main audit findings. The findings have been presented under four main sections namely planning, enforcement of environmental control measures, coordination of environmental enforcement matters and monitoring and evaluation of environmental enforcement and mining activities.

Chapter Four: provides for the audit conclusions and;

Chapter Five: provides for the audit recommendations.

1.6 Standards used for the audit

We conducted our audit in accordance with the International Standards of Supreme Audit Institutions on performance auditing. ISSAI 300 provides for principles of performance audit, ISSAI 3000 and 3100 provides guidelines on how to conduct performance audits.

The standard requires that the audit be planned and performed in a manner that will enable auditors to obtain sufficient and appropriate evidence to serve as a basis for findings and conclusions that are based on the audit objectives.

CHAPTER TWO

INSTITUTIONAL ENFORCEMENT OF ENVIRONMENTAL CONTROL SYSTEMS IN THE MINING SECTOR

2.1 Introduction

The objective of this chapter is to provide a description on enforcement of environmental control systems in the mining sector in Tanzania. It also provides for details on key players and their legal mandate and responsibilities to undertake their responsibilities. Also it outlines the key processes of enforcement of control systems.

2.2 Policy and Legal framework

Table 2.1: Applicable environmental policies and laws to the mineral sector

Policy and legal framework	Description
The National Environmental Policy, 1997	Requires implementation regarding overall project cycle be adequately managed to minimize the adverse environmental impacts through controlling mining activities
The Minerals Policy of Tanzania	Requires sustainable mining activities by promoting best practice for health, safety and environmental management
The Environmental Management Act No. 20 2004 and its Regulations of 2005	Framework provides for environmental enforcement to ensure prevention ¹¹ , control ¹² and compliance ¹³ .
The Mining Act, 2010 and its Regulations of 2010	Provides environmental matters to consider prior to starting the mining operations including obtaining environmental permits from NEMC
Tanzania National Environmental Standards Compendium	Provides for guidance to decision makers and developers on minimum acceptance levels on what proposed projects should adhere to.
International Standards Organization (ISO 14001:2004)	Provides for environmental management best practices by miners in reducing environmental impacts, improve environmental performance through a planned and consistent approach
The UNEP's Environmental Management Guidelines in the Mining Operations, 2009 ¹⁴ and International Network for Environmental Compliance and Enforcement, 2012.	Provides for approaches when conducting environmental audits and framework on how environmental issues are planned, enforced and monitored in the mining operation.

11 EMA, 2004: Part VIII

12 EMA, 2004: Part XIV

13 EMA, 2004: Part XVI

14 As compiled by UNDESA and UNEP

2.3 Key players in environmental enforcement and compliance

2.3.1 Vice President's Office (VPO) - Division of Environment

- The VPO is primarily responsible for the development of policies, guidelines necessary for the promotion, protection and sustainable management of the environment in Tanzania. It has also a duty to issue general guidelines to the sector ministries, Government departments, NEMC, National Advisory Environmental Committee (NAEC), City, Municipal or District Environmental Management Committees, Agencies or any other public or private institution.
- Monitor and coordinate the performance of National Environmental Management Council (NEMC)
- VPO also facilitates meaningful involvement of civil society in environmental conservation activities, conducting research on environmental issues and is generally responsible for planning, monitoring and coordination of environmental issues at a national and international level.

2.3.2 National Environmental Management Council (NEMC)

The National Environmental Management Council is the corporate body, re-established in 2004 by the Environmental Management Act Cap.191 (EMA Cap 191) as a national environmental regulatory and enforcement institution responsible for overseeing management and protection of environment in the country.

NEMC's mission and vision

The vision of NEMC is to be a world-class environmental management authority that ensures a clean, safe, and healthy environment for people in Tanzania". NEMC's mission is to promote environmental management in Tanzania through coordination, facilitation, awareness raising, enforcement, assessment, monitoring and research".

The key function of NEMC in respect to environmental enforcement and compliance in the country are:

- conduct inspections to various facilities to ensure that the facilities comply with the requirements given to them either through various legislations or through the conditions provided

- in their EIA certificates;
- enforce and ensure the compliance of the national environmental quality standards;
- coordinate with other key stakeholders in addressing all issues pertaining to environmental management; and
- issuance of administrative notices and prosecution.

Other functions include, carrying out environmental audits, routine monitoring of air, water bodies and soil to determine their qualities in relation to laid down national and international environmental standards, regulating and monitoring the collection, disposal, treatment and recycling of waste. Similarly, NEMC has a role of reviewing and recommending for the approval of Environmental Impact Assessment and keeping records in the forms of registers for all licenses and permits issued under the law.

2.3.3 Relationship between VPO and NEMC

National Environmental Management Council is a government agency under the VPO - Division of Environment, established for the purpose of undertaking environment enforcement roles and ensure compliance of the national environmental conservation and standards.

The Vice President's Office - Division of Environment is charged with the responsibility of overseeing all issues relating to environment in the country. Therefore, NEMC reports to the VPO-Division of Environment on issues regarding environment in the country. According to the EMA 2004, NEMC is required to prepare and submit to the VPO - Environment a bi-annual report with regards to the implementation of the provisions of EMA 2004 and fulfill the objectives and the purpose for which it was established.

2.4. Key stakeholders to NEMC

According to EMA 2004 Part III, Ministry of Energy and Minerals, Tanzania Mineral Audit Agency and Local Government Authorities are key stakeholders to NEMC because they are either main policy-maker on mining sector or a high proportion of mining activities are taking place in their localities.

2.4.1 Ministry of Energy and Minerals (MEM)

MEM has a primary function of ensuring all environmental matters contained in the Mining Policy, The Mining Act and in any other written law on mining which focus on environment are implemented and reports of their implementation are submitted to Director of Environment of Vice President-Office and Director General of National Environmental Management Council(NEMC). MEM is also responsible for handling mining conflicts and providing public awareness on mining activities.

2.4.2 Local Government Authorities (LGAs)

Local Government Authorities have been mandated under section 36 of the Environmental Management Act No.20 of 2004 to regulate all matters relating to environmental issues and ensure enforcement of compliance in their area of jurisdiction. Local Government Authorities are also required by the Act to prepare a periodic report on the implementation of the Act and submit to the Director of the Environment of Vice President-Office and Director General of the NEMC.

2.4.3 Tanzania Mineral Audit Agency (TMAA)

National Environmental Management Council (NEMC) and Tanzania Minerals Agency (TMAA) signed a Memorandum of Understanding (MoU) to enhance efficiency and effectiveness in monitoring and auditing of environmental management activities in mining facilities. The agreement enables NEMC to get important inputs from TMAA regarding non compliance with environmental conditions in audited mining facilities. The information obtained may facilitate enforcement of the Environmental Management Act, 2004.

2.4.4 Inter-linkage of NEMC, MEM, TMAA and LGAs

In order for NEMC to perform effectively the enforcement of environmental compliance on mining sector in the country, it needs to acknowledge and use the potential contribution in the other stakeholder such MEM through its department of Environment, Local Government Authorities (LGAs) and Tanzania Minerals Audit Agency (TMAA). The figure 1 below shows the summary of the key stakeholders involved in management of adverse environmental impacts.

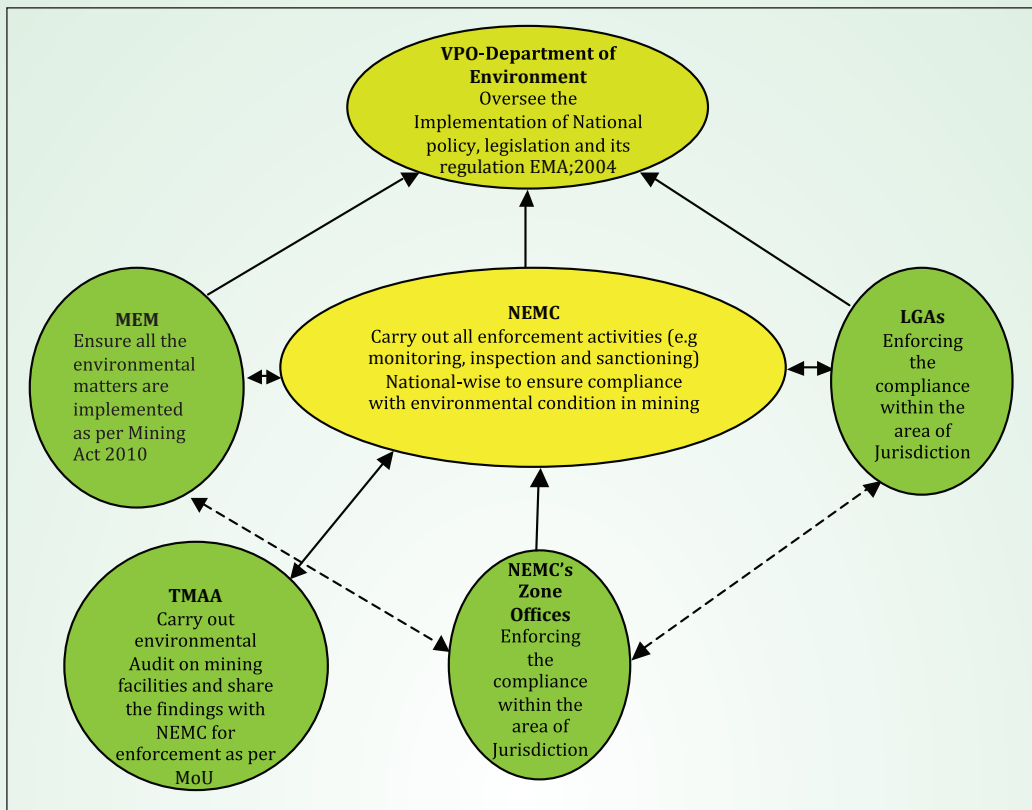


Figure 1: System for information sharing among key stakeholders to ensure compliance with environmental conditions on mining.

2.5 Key Strategic Objectives of NEMC

Strategic Objectives

According to NEMC's 2010-2014 strategic plan, NEMC has set the following strategic objectives with regard to enforcement of environmental compliance in the country:

- Guide sustainable development in the country by preventing, reducing, or mitigating, and as far as possible, eliminating pollution and action that lower the quality of life;
- To ensure environmentally sound and efficient use of both renewable and non-renewable resources in the process of national development; and

- To apply the legal processes and enforcement mechanisms as enshrined in EMA, 2004 and other environmental legislation, in a fair, equitable manner to ensure responsible environmental behavior in the country.

2.6 Thematic areas

The council established six thematic areas on which environmental enforcement is based. These areas are as detailed as below.

Area 1	Area 2	Area 3	Area 4	Area 5	Area 6
Wildlife, Forestry, Tourism, Coastal Development, Agriculture, Livestock and Fisheries	Buildings, Land reclamation and settlements	All types of infra-structural facilities such as roads, railways, communication networks, water supply, harbours, airports, etc	All types of industries involved in manufacturing and production of goods	Electricity (generation, distribution and transmission) , Petroleum and Gas projects	Mining and Mineral exploration projects

However, NAOT selected the mining sector which falls under thematic area six as a focus area of its audit.

2.7 NEMC organization structure

NEMC functions are coordinated under four directorates. They are:

- Directorate of Environmental Compliance and Enforcement (DECE);
- Directorate of Environmental Impact Assessment (DEIA);
- Directorate of Environmental Information Communication and Outreach (DEICO); and
- Directorate of Environmental Planning and Research (DEPR).

The Directorate of Environmental Compliance and Enforcement is the one which has got the responsibility of conducting enforcement and implementation of the environmental control measures at mining operations. Within this directorate, there are three sections namely; Environmental Monitoring, Environmental Compliance and Environmental Enforcement.

The functions of each section in brief are as follows;

i. Environmental Monitoring Section

Deals with routine monitoring of air, water bodies and soil to determine their qualities in relation to laid down national and international environmental standards. The report from this section is used by the Compliance and Monitoring Section to determine if there is significant pollution that needs to be regulated.

ii. Environmental Compliance Section

This section mainly deals with routine inspections to various facilities to ensure that the facilities comply with the requirements given to them either through various legislations or through the conditions provided in their EIA certificates. The information from this unit is used by Environmental Enforcement unit to act upon the situation.

iii. Environmental Enforcement Section

It is in this section that all formal procedures stipulated by the Act are executed, including issuance of administrative notices and prosecution. This unit gets the information of non-compliance from Environmental Compliance Unit in which it uses this information to take action upon the offences.

NEMC's Zonal Offices

Zones officers perform the responsibilities of the National Environmental Management Council aimed at enforcing the compliance within their area of jurisdiction. Zone Offices report on state of the environment in their area to Director General through their zonal coordinator located at the head quarter.

NEMC's zonal offices are categorised as Northern Zone covering Arusha, Kilimanjaro, Tanga and Manyara regions; Sourthen Highland Zone covers Mbeya, Iringa, Rukwa and Katavi regions; Sourthen Zone which covers Mtwara, Ruvuma and Lindi; Lake Zone covering Mwanza, Shinyanga, Mara, Kagera, Simiyu, Geita, Kigoma and Tabora regions; Eastern zone covers Morogoro, Pwani and Dar es Salaam regions

Information sharing between DECE and DEIA

The report focuses on enforcement and compliance which is basically under DECE but in order for DECE to perform efficiently it needs inputs from other directorates such as DEIA which undertakes registration and review of all EIAs in the country.

2.8 NEMC's sources of financial funding

Generally NEMC's sources of funds are outlined under Section 217 of the EMA, 2004 whereas they include amounts appropriated by the parliament, donations, grants, gifts, loans or bequests, fees charged and payable to the council, any project income and any other lawful source of income. The operation of NEMC currently is supported by Government subventions and development activities are funded through grants and loans from donor partners.

2.9 Key processes for enforcing the environmental compliance to safeguard environment

2.9.1 Planning for the enforcement and compliance activities

Inspection and enforcement plans provide a basis for assigning the priorities based on risk and allocate the available resource accordingly. A systematic risk-based approach is employed on allocating greater resource to assess compliance of facilities that carry out complex operations, facilities with significant emission to the environment, facilities with poor environmental performance and facilities that are located within the proximity to high and sensitive pollution receiving environment.

EMA 2004¹⁵ requires NEMC to identify environmental problems prevalent in the area. UNEP guidelines for National Enforcement (dated 9 February 2001), stipulated that the national agencies responsible for enforcement to set the criteria for enforcement priorities that may be based on harm caused or risk of harm to the environment, type or severity of environmental law violation or geographical area.

In National Environmental Management Council, the responsibility for planning for enforcement activities is vested to the Planning Unit. But, the Planning Unit had to be fed the information by Directorate of Enforcement and Compliance (DECE), but DECE also needs information from DEIA and other Directorates within NEMC.

¹⁵ Section 42 (2)(b) and 43(1)(b)

2.9.2 Implementing Inspection to detect non-compliance by miners.

According to the requirements of UNEP enforcement guidelines, the outputs from the Planning Unit are to be used by enforcement and compliance directorate in conducting environmental inspections. The inspectors are supposed to conduct inspection activities to prioritized projects. Also the frequency of inspection should focus on such mines which had been identified in the plans to be of high risk.

2.9.3 Reporting the Results of Inspections

In response to NEMC’s Standard Operating Procedures (SOP’s).The information from inspection reports are regarded as one of the monitoring tools used by the enforcement unit under directorate of environmental enforcement and compliance for detection of weakness and act upon the situation in order to reverse the situation from non-compliance into compliance or issue penalties.

2.9.4 Sanctioning the defaulters

After making the above assessments, if the Inspector identifies any non-compliance with regulations or the requirement set in the Environmental Management Plans (EMPs), the inspector makes an order in writing to the mine operator requiring that they take such systems as are specified in the order for the prevention of harm to the environment and for the correction of such effects of non-compliance.

In addition to the issuing of an order, the inspector may impose a fine on the mine operator. According EMA 2004¹⁶ any person who discharges any dangerous material, substance, oil, oil mixture into land, water, air or aquatic environment or pollutes the environment contrary to the law or discharges the pollutant into the environment contrary to the law shall be guilty to an offence and liable to a fine or imprisonment as indicated in the table 2.2 below:

16 Section 187

Table: 2.2: Different types of sanction applied by NEMC

Level of sanction	Type of sanction
Administrative sanctions	Prohibition notice
	Protection Order
	Emergency Protection Order
	Environmental Compliance Order
	Restoration Order
	Costs Order
Criminal sanctions	Fines/Compounding offence ¹⁷
	Convictions

Source: Interviews with NEMC's legal Officials

2.9.5 Reporting on enforcement activities by NEMC

Reporting is important in ensuring that there is monitoring and evaluation of planned activities. According to NEMC's strategic plan 2010-2014 there are three categories that are involved in reporting, type, frequency of reporting and consumers of the reports. Table below shows types of reports that are to be produced and their frequency.

Table 2.3: Types of reports which are produced and their frequency

Type	Frequency	Consumer
Annual Budget and Budget speech	Annually	Parliament, NEMC Board, Treasury, stakeholders
Progress report	Quarterly	PS-VPO, NEMC board, Treasury, PMO, Development partners
Bi-annual Implementation Report	Semi-Annually	Ministry of Environment, PS-VPO, NEMC Board
Annual Report and Audited Account	Annually	Parliament, NEMC Board VPO, Controller and Auditor General, stakeholders.
Annual Performance report	Annually	NEMC Board VPO, Parliament and VPO.
Ministry's visit report	Annually	Parliament, PS, minister
Project Review Report	Annually	Donor Partners, International financial institution-World Bank Group, FAO

Sources: NEMC's strategic plan 2010-2014

¹⁷ This refers to agreement between NEMC and facilities proponent on a fine/payment that should be paid by the proponent as a result of a particular non-compliance of offence.

2.9.6 Monitoring, evaluation and reporting of enforcement activities

According to the best practice¹⁸, NEMC is required to apply suitable methods for monitoring. These methods shall demonstrate the ability of the processes to achieve planned results and when planned results are not achieved, correction and corrective actions ought to be taken, as appropriate.

In the course of implementing its plans, it is crucial for any entity to be able to monitor and evaluate implementation of its work plans and programs. Monitoring and Evaluation provide information about the entity's strategic plan and business plan's progress and target accomplishment.

The entity is expected to have the manual for monitoring and evaluation, the manual shouldered monitoring and evaluation responsibility. This includes planning, executing and reporting on the results of Monitoring and Evaluation. The result of monitoring and evaluation has to be reported at certain interval of time as may be stipulated in the strategic plan.

- **Monitoring performance within NEMC**

To ensure the effective implementation of the enforcement and compliance plan, NEMC perform monitoring to assess the internal performance of NEMC Action plan whilst evaluation covers the overall impact of the work plan. Internal monitoring and evaluation is conducted by the Planning and Budget Unit and the financial division. External evaluation and auditing is carried out by external Evaluators and Auditors.

- **Evaluation within NEMC**

Evaluation of the impacts or effectiveness of the Council programs in implementing the strategic plan is done by assessing the impacts/effects on the stakeholders and environment. The impact of NEMC activities is evaluated by internal and external expert.

A mid-term evaluation is undertaken after three years of implementation and the final is conducted during the fifth year of the strategic plan of 2010-2014.

¹⁸ ISO 14001:2004

- **Monitoring by VPO-Division of Environment**

According to the EMA, 2004 and the Ministerial Responsibility Government Notice No. 494 of December 2010, the VPO is required to monitor the performance of the National Environmental Management Council (NEMC) in the management of enforcing the implementation of the environmental control systems to the entire project with significant impact to the environment in the country.

2.10 NEMC's success over the last ten years

The audit team noted the efforts that NEMC is undertaking to enforce the implementation of EMA, 2004 and its regulations to safeguard the quality of the environment in the country. This is despite a lot of challenges associated with the execution of its responsibilities as highlighted below:

- The council has developed a number of guidelines in 2014 to enhance the implementation of EMA, 2004 in the country. These guidelines include: penalty guideline, Environmental Compliance Assessment, Classification Scheme (ECACs) and the inspection manual.
- In 2007 NEMC established seven Zones for the purpose of taking its services closer to its customers. Currently four zones are actively operating, these include; Lake, Northern, Southern highland and Southern Zones. The details of these zones are highlighted in Section 2.7 of this report.
- For the period (2011/12 to 2013/14), the council managed to increase the number of its employees from 136 to 159 which also include environmental Inspectors.
- NEMC is currently finalizing the development of an EIA information systems to enhance its operations and also allow investors and other stakeholders to track the status of their EIA reviews. At present the system is being linked with NEMC's website to allow its accessibility by stakeholders through the website. The system has captured different information and data about registered projects at the Council. The system provides the information for each project right from the day the project is registered and all

EIA conditions issued in the certificates can be accessed and used for monitoring purposes.

Despite of the above mentioned successes made by NEMC since its establishment, the audit team noted that there is room for further improvements on the way NEMC is conducting environmental enforcement. Those areas are pointed out in Chapter Three.

CHAPTER THREE

FINDINGS

3.1 Introduction

This chapter presents findings on the performance of the VPO and NEMC in enforcing the compliance with environmental requirement on mining to protect the environment against pollution caused by mining activities. The findings focus on enforcement planning and its implementation. Key issues covered in this chapter are: risk based inspection planning; conducting inspections and reporting of inspection result and sanction to defaulters; coordination among enforcement regulatory; Monitoring, Evaluating and Reporting on Performance of enforcement activities.

3.2 Planning of enforcement activities

In order for the NEMC to give priority to the issue of enforcement of environmental compliance in mining, it is necessary to have clearly stated priorities. This section describes the planning system and to what extent the issue of poor environmental performance in mining is being genuinely addressed by the NEMC in its planning.

3.2.1 Risk-based planning of enforcement activities

Section 43 of EMA 2004, requires NEMC to prioritize areas that have significant impacts to the environment when developing the enforcement plan, according to best practice from ISO 14001:2004 (Clause 4.3) and UNEP (dated 9 February 2001), all these require the agency responsible for implementing the enforcement activities to set the criteria for enforcement priorities that may be based on harm caused or risk of harm to the environment, type or severity of environmental law violation or geographical area. The enforcement plan provides a basis for assigning priorities based on risk and allocating the available resources accordingly.

The audit team reviewed the NEMC's work plans under audit scope from 2011/12 to 2013/14 financial years to check whether it has planned for enforcement activities based on the risk level of environmental pollution of various facilities. It was noted on the one hand that, NEMC did not identify specific projects/facilities or activities based on risk

factors or with high level of pollution to the environment, but rather general explanations of expected outputs or results in their respective annual work plans.

On the other hand, auditors were not able to come across any document that set clear priorities for enforcement programmes. For example, low or no priority was given to mines with significant emission to the environment, and those located in close proximity to highly sensitive environments. Also the plan was silent on matters such as number of sites that were required to be inspected and how often inspections should be conducted.

Interviews were held with NEMC officials together with review of documents revealed that, the reasons for undertaking planning not based on risk factor and prioritization was attributed to absence of survey report, data base, data on the previous inspections, and non-compliance history of the mines.

Based on the inspection reports and other progress reports prepared by NEMC as well as interviews with responsible NEMC officials, we noted that, there was failure by NEMC to establish performance profile showing the risk to the environment with respect to level of compliance. The audit team noted further that NEMC has conducted inspections to most of the large mines which had good technology of handling pollutant compared to other mines.

Equally, the audit team noted that medium and small mines had very low technology of handling pollutants thus much attention was required so that they could be monitored and inspected frequently to ensure that they complied with the environmental requirements.

The auditors were expecting that NEMC has a mineral data base that their mining activities are related to small scale miners; medium and large scale mining operations; various chemicals used in mining; location of these mining centers; sensitivity to water bodies/communities/forestry; dates showing mines visited and priority areas planned for future intervention due to high risks of their operations. However, it was evident that, the four NEMC directorates did not have a mine activities entry data base of which pollution data could be established and prioritized for risk-based action planning.

In this regards NEMC lacks the database for all the mining operations conducted in the country. Consequently, execution of its activities becomes difficult due to difficulty in prioritizing the high-risk mining centers.

3.2.2 Setting of key performance indicators for enforcement

The best practice “UNEP guidelines¹⁹” for enforcement require the agencies to set indicators for achieving the targeted plan.

The team noted that, the annual work plan had no performance indicators which are impact oriented. The plan lacked target to cover the number of mines to be inspected. The review of NEMC’s Strategic Plan of 2010-2014 showed that it had laid down Key Result Objectives. These, among others, included the conducting of routine and incidental Inspections for Environmental Monitoring and Enforcement (including inspections of mines all over the country by 2014). However the reviewed plans did not indicate how these objectives would be met.

Because of absence of these clear indicators which were caused by inadequate planning, NEMC’s plans failed to address the environmental problems in mining areas which were more prone to pollution in the environment.

Table 3.1: Shows types of environmental plans, indicators and whether mining facilities are clearly captured in the plans

Type of plan	Indicators	Mining facilities
Strategic plan 2010-14	Routine and incidental inspections in all mines each year (including all mines)	No specific stipulation of mining facilities with potential impacts to the environment indicated
Annual Work Plan 2011/12	Routine and incidental inspections in all mines each year (including all mines)	No mining facilities shown in the plan
Annual Work Plan 2012/13	Routine and incidental inspections in all mines each year (including all mines)	No Mining facilities shown/ covered in the plans
Annual Work Plan 2013/14	Routine and incidental inspections in all mines each year (including all mines)	No mining facilities shown/ covered in the plans

Source: Strategic Plan, 2010-2014 and Annual Work Plans for 2011/12 to 2012/13

¹⁹ UNEP guidelines on environmental audit on Mining. As compiled by UNDESA and UNEP

Similarly, the auditors noted that it was very difficult for NEMC technical team to set key performance indicators for enforcement of the regulations, as there was neither clear planning process for their day-to-day activities nor geographical locations of different mines in the country.

3.2.3 Absence of environmental database

According to Sections 165 (a) (c) and 178 (5) (b) of EMA 2004, NEMC is required to maintain and keep environmental records and information. This information could originate from research or survey reports, inspections results, reported incidents and complaints or any information that could cause the risk of non-compliance to rise.

It was expected that, NEMC would be documenting and analyzing the complaints and other incidences that happen in the mining areas to establish the trend and categorize those areas that could need immediate attention. However, based on officials of the council, NEMC did not develop any environmental database or environmental management system at the time of this audit. The audit team noted that, although NEMC received a lot of the complaints and information of other adverse incidences that happen in the mining areas, the council did not document the complaints in a database or registers. It was only noted that, some of reported incidents and complaints was recorded on temporary files that were not well organized for easy follow-up of implementation.

The audit team noted further that NEMC received quite a number of complaints but to date they have not established any register that would record such incidents and complaints so as to ease planning of enforcement activities.

Further enquiry revealed that factors contributing to this deficiency was due to lack of coordination and sharing of information among the directorates within NEMC as well as the absence of the registry unit that would specifically deal with recording to all reported incidents and complaints. Accordingly, there were no details as to complaints which were reported or attended in the period under audit and therefore the audit team failed to establish whether these complaints were considered in NEMC's subsequent enforcement plans.

The review of 2012/13 NEMC Annual Progress Report showed that 8 inspections were conducted as a result of reported incidents and

complaints. Out of these cases and subsequent inspection, no mining facility was noted. However, these were not documented thus making it difficult to understand the nature of the complaints and people who reported incidents.

3.2.4 Planning for enforcement activities in NEMC's Zonal Offices

The audit team reviewed the NEMC annual work plans for financial years 2011/12 to 2013/14 to check whether the NEMC zonal office plans address clearly the enforcement of compliance with environmental requirement on mining as required by EMA 2004. The team also assessed whether the plans of each zone visited provided priority to those projects with high risk to the environment or if they stated the number of inspections needed to ensure compliance. The team also was interested to know the criteria used by zone office when planning for the facilities to be inspected.

Prioritization of projects to be inspected

During the review of the work plan of Lake Zone under the audit scope from 2011 to 2014, we noted that there was no prioritization for the inspections to be conducted in their area. For instance, no mention was made in all work plan reviewed for the inspection to be conducted in mines. Activities regarding the enforcement of compliance on mines were implemented on ad-hoc basis. In this regard, the zone was unable to provide detailed description of objectives, activities and resources to be used.

Furthermore, the audit team noted that, one of the factors contributing to non-prioritization of facilities to be inspected was lack of established criteria for determining the severity of non-compliance. The decision of which projects to be inspected was left to the judgment of inspectors/officials which lead to inconsistency in how non-compliance was addressed. It was further pointed out that the absence of set criteria was attributed by NEMC-Headquarters as the Office had no risk-based inspection guidelines that would guide zones when planning for inspection of different mining facilities.

Number of Inspections Needed

The review of annual work plans prepared by zone officers for the financial year from 2011/12 to 2013/14 showed that there were no set milestones

determining the number of facilities to be inspected. Equally, there was limited frequency of inspections done to ensure environmental compliance within their area of jurisdiction. Interviews with Lake Zone officials from NEMC revealed that this was the case because the plan was prepared in ad-hoc basis depending on the availability of funds from NEMC's Headquarters. For that reason the plans did not identify any mining facilities to be inspected for each respective financial year.

The reasons for these weaknesses include the absence of database of facilities within the zones. However, Northern Zone had established the data base but did not cover mining facilities. The audit team noted that all three zones visited did not know exactly the number of mining facilities available within their zones. This was attributed by absence of comprehensive registers of environmental complaints or incidents within the zone which could be used to assess the number of reported incidents or complaints and thus assess environmental risk levels of the various facilities.

The interviews with NEMC's Lake Zone officials to establish the reasons for the identified weaknesses in the inspection plans revealed that it was NEMC-HQ which had to rectify the planning processes through concerned officials under the Planning Unit. NEMC-HQ should issue instructions to zonal offices in respect of planning strategy for enforcement of environmental control systems.

3.3 Implementation of enforcement activities

3.3.1 Coverage and extent of inspection

According to NEMC's Strategic Plan 2011 to 2014, the council is required to conduct routine and incidental inspection for environmental monitoring and enforcement (including inspection of mines all over the country) annually. NEMC is therefore expected to conduct inspections in order to ascertain the level of compliance to environmental conditions by mining operators and identify breaches.

The review of inspection files and interview with the head of enforcement unit revealed that, NEMC was not adequately carrying out inspections to check whether miners consistently complied with environmental requirement. The team reviewed the annual progress report for head office.

Table 3.2: Number of registered mines and inspected mines for the years 2011/12, 2012/13 and 2013/14 as reported by NEMC-HQ

Year	Number of registered mines	Number of mines inspected
2011/12	Not known	Not known
2012/13	Not known	1
2013/14	Not known	12

Source: NEMC's Progress Reports and Inspection Reports of 2011-2014 and auditors' analysis

As shown in table 3.2 above, for the period of three financial years under audit, NEMC and specifically the DECE officials did not know total number of registered mining facilities in the country. Following the review of NEMC's annual work plans, inspection reports as well as interviews with DECE, it was noted that this situation was attributed to absence of proper sharing of information between DECE and DEIA. Since DEIA is the directorate which is supposed to feed the information to DECE about the number of mining facilities which are registered. Due to this reason the audit team failed to establish the actual number of mining facilities which are required to be inspected by NEMC for each particular year. This undermined the establishment of the inspection performance in ensuring the enforcement of the environmental compliance on mining facilities.

Despite NEMC's annual work plans for the years 2011/12, 2012/13 and 2013/14 requiring NEMC to conduct inspections in all mining facilities in the country, only 32% of mining facilities were inspected. (See table 3.3).

Table 3.3: Schedule of inspections performed by NEMC for the years 2011/12 to 2013/14

Year	Number of projects inspected ²⁰	Number of mines required to be inspected	Number of mines inspected	% of mines inspected
2011/2012	Not established	Unplanned	0	0
2012/2013	30	Unplanned	1	3
2013/2014	41	Unplanned	12	29
Total	71	Unplanned	12	32

Source: Interview and review of annual progress report, 2011 to 2014

²⁰ This means all projects inspected by NEMC including mines, construction of buildings, manufacturing industry etc. as per annual progress report.

Table 3.3 indicates that no mining facilities were inspected in the year 2011/12. During the year 2012/13, out of 30 projects inspected only 1 mine was inspected making 3 percent of the inspected mining facilities. Out of the 41 projects inspected in the year 2013/2014, only 12 mining facilities were inspected, 11 large mining facilities were inspected²¹ and one medium scale mine making 29 percent of all inspected facilities for the year.

Furthermore, the auditors noted that there were no small scale miners which were inspected despite the fact that they were “easily” reachable and located in vicinities of all these large scale mines. Still more, environmental impacts caused by small mines were quite visible - physical land destruction (pits, mine rock wastes, dust and water pollution) and the use of toxic chemicals for those mining and processing gold ores. Upon the discussion with NEMC’s officers they pointed out that this is attributed by inadequate coordination between NEMC and MEM as MEM is responsible for issuing the licence but did not furnish the information about number of licensed small miners to NEMC.

3.3.2 Inspection conducted by NEMC’s Zonal Offices

The audit team noted that NEMC Zonal offices had conducted a number of inspections in facilities under their territories. The team noted further that inspections in mining operations were not adequately conducted despite the fact that the mining operations had high significant impacts to the environment. For instance, the Lake and Northern zonal offices did not carry out any environmental inspections to most of the mining facilities in their respective zones, at the same time the Southern Highland Zone carried out inspection to only one mining facility for the whole period under the audit. During interviews with Zonal Coordinators it was revealed that zonal offices are supposed to inspect all mines in their respective zones at least once every year as per NEMC’s strategic plan. However, due to limited budget the zones could not carry out the inspections as required.

The audit team reviewed quarterly progress report and annual progress reports for the year from 2011/12 to 2013/14 to determine the performance of the Zones in inspecting mining operations in order to detect environmental defaulters within their areas of jurisdiction, if any. Table 3.4 below provides the analysis of coverage of inspection

21 However, these were not included in the annual work plan. They were a result of the outcry from civilians and parliament which led to the establishment of a task force comprising of different staff and professionals from different government institutions.

made in mines in relation to the number of mines present in the three zones.

Table 3.4: Inspection conducted in the mining facilities by three zones from 2011 to 2014

Zone	Category of mine	Number of mines present in the zone	Number of mines inspected	% of mines inspected
Lake Zone (Mwanza)	Large Scale	6	1	17
	Medium Scale	70	6 ²²	9
	Small Scale area ²³	43	-	0
Northern Zone (Arusha)	No categorization	0	0	0
Southern Highland Zone (Mbeya)	No categorization	44	1	2

Source: Inspection and progress reports for the year from 2011/12 up to 2013/14

Table 3.4 indicates the inspection of mines conducted by three Zonal offices. As it appears in the table above the Lake Zone Office had a total of 6 large scale mining projects operating in Lake Zone from a period of 2011 to 2014 only one large scale mine that was inspected by the zone. Also 6 medium scale mines were inspected out of more than 70 mines present in the zone. Likewise, no small scale mines were inspected for that period of time under audit.

The table indicates that, during the period under review (2011/12 to 2013/14) the Northern Zone (Arusha) conducted a total of 33 inspections. However, no mining facilities falling within NEMC's Northern Zone were inspected by Zonal Offices. The table also indicates that out of 44 mining facilities listed by NEMC's zonal office, only one mining facility had been inspected in the Southern Highland Zone.

Furthermore, it was noted that the inspection team needed to be fully equipped with mine protective gears; otherwise mining authorities would reject them once they enter in their working promises. It's obvious also, large scale mines visited, one of the immediate impacts was large volumes of accumulation of acid bearing ores, which was usually not

²² Inspection conducted in 2011

²³ Small scale mines are located in the same area therefore the inspection is done on the area of operation

treated by the mines because of some technical reasons, i.e. it could not be recovered using the cyanidation process (some of them were packed in containers and shipped to Japan for pyro metallurgy and refinery). These accumulations were visible in all large gold producing mines in Lake Victoria Goldfield. This accumulation frequently attracted small scale miners, which invaded the mines and grabbed this acid bearing ore for extracting the gold by using amalgamation process.

3.3.3 Nature of inspections conducted

NEMC is expected to conduct routine and ad-hoc inspections in order to ensure compliance as required by its own Strategic Plans and the UNEP's environmental guidelines in the mining sector. Routine inspections are those which are continuous and specifically planned for while ad-hoc inspections may be those resulting from reported incidents, complaints or disasters.

The review of the reports revealed that all mines inspected were not in the respective plans and only the inspected facilities were shown in the progress reports most of which were done based on reported incidents and complaints or directives from the Ministry²⁴. This means that the inspections were conducted without taking into account the need to categorize facilities on risks they pose to the environment.

The audit team carried out an analysis in order to identify the nature of inspections that were preferred by NEMC during inspection. Table 3.5 below shows a number of planned against ad hoc²⁵ inspections.

Table 3.5: The comparison between the natures of inspections carried out during the year 2011 to 2014

Year	Total number of mining facilities inspected	Number of planned mines Inspected	Number of ad-hoc mines inspected	% of planned mines inspected	% of ad-hoc mines inspected
2011/12	-	-	-	-	-
2012/13	1	-	1	Not known	Not Known
2013/14	11	-	11	Not known	Not known
Total					

Source: NEMC's Annual work Plans, Progress reports and auditor's analysis

²⁴ Such as the task force that was created to address and undertake inspection on the issue of leakage and discharge of effluents in river Tigite caused by North Mara Gold Mine in 2012-213

²⁵ Those based on reported cases (not planned)

From Table 3.5 it can be seen that NEMC had a tendency of conducting ad-hoc inspections other than routine inspections. The reason as highlighted by NEMC officials was that the routine inspections in the mining facilities were not conducted due to budget constraints. That is why the inspections were based on the complaints received or incidents. However, the audit noted that the absence of mining facilities in the annual work plans was one of the major factors which contributed to ad hoc inspections on mining facilities. This tendency of basing inspections on reported incidents or complaints led NEMC to conduct inspections to a very low number of mining facilities. It was also noted that NEMC officers sometimes carried inspections in the same mining facilities repeatedly based on personal experience or on the existing past knowledge on the mining facilities, despite the fact that there was increase in mining operations in the country.

If routine inspections are not conducted on each mine, mining facilities which do not implement the environmental mitigation measures prescribed in the EIA/EMP will not be detected resulting in threat or damage to the environment and public health. For instance physical observation made during the audit at the Northern Zone on Tanzanite-One Mining company, the management of Tanzanite-One company acknowledged that NEMC had officially conducted environmental inspections only once (in September, 2013), since the company started to operate about 10 years ago in Tanzania and issued penalties and fines of Tshs 40 million. The same case was with the Kilimanjaro Mines Ltd which had neither established any EMP nor implemented any environmental mitigation measures since its establishment.

Furthermore, it was evident to the auditors that budget constraints was not the only reason for NEMC's failure to conduct routine inspections. There were other reasons for the failure in addition to budget constraints. For example, Wazo Hill quarry and milling of the ore for cement production, sand mining along Gongo la Mboto, Kibaha etc, salt pans along the beach and Bagamoyo, aggregate mining and crushing in several centers in Dar es Salaam did not require significant budget. These sites could have been the model sites for NEMC to demonstrate its strength in inspection and enforcement capabilities.

3.4 Factors contributing to inadequate coverage of inspections in the mining facilities

Further inquiry to establish the factors which contributed to the inadequate coverage of inspections at the mining facilities were carried out by the team of Auditors. The following factors were pointed out through the interviews with NEMC officials as well as from reviewed plan, inspection reports and progress reports.

3.4.1 Inadequate planning for mines inspections

One of the factors contributing to inadequate coverage of routine environmental inspections at mining facilities as per interviews with NEMC's officials at zonal offices as well as review of work plans is inadequate planning for the inspections. It was acknowledged that most of the challenges faced were as a result of failure to assess risks among mines and plan inspections based on the identified risks. Similarly, it also came out of the discussions with officials within NEMC that the set goals of inspecting all mines at all zones were not realistic taking into account the available resources in terms of time, human capacity, inspection tools and budgetary allocations for the inspections.

3.4.2 Ad-hoc planning and inspections

The reason for ad hoc planning and inspections as pointed out by zonal officials is associated to the fact that their plans mostly relied on the general plan from NEMC-HQ. The plan from NEMC-HQ did not put strong emphasis on the number of mines present in particular area/zone together with the level of compliance of mine to the environmental standards. The audit team revealed that NEMC-HQ did not set a system that enabled the zones to have the information about the number of mines together with their level of compliance to the environmental safety standards to be used for preparing the work plan as well as general budget.

It was further observed that there is a potential risk for some of the high risk projects including mines to remain un-inspected for a number of years because ad-hoc inspection system in place does not allow for proper goal and target setting for ensuring environmental compliance with environmental requisites in mining operations. The inability to inspect mines some of which pose high risk to the environment could subject the surrounding population to the risks of diseases associated with such as pollution in case the uninspected facilities violate environment requisites.

3.4.3 Inspections of mines not fully delegated to Zone Offices

The auditors noted that although Zonal Offices have autonomous administrative powers in their respective areas of jurisdiction, still these offices receive inspection orders from the headquarters.

During the interviews with zonal officials as well as reviews of zone's progress reports it was observed that all three zones visited did not effectively conduct environmental inspection to most of the mining facilities especially for large scale miners in their zones. When asked why no inspection has been undertaken on the mines in their area of jurisdiction, 7 interviewed zonal officers claimed that inspection of most of the mines especially large scale mines is normally done by the officers from NEMC headquarters. In few occasions one zone staff may be appointed to join the team of inspectors from NEMC headquarters when and if deemed fit.

Upon further inquiry with zonal officers to establish the reason as to why they do not take lead in conducting inspection in most of the mining facilities, it was highlighted that zonal offices are still growing therefore they are lacking enough skilled staff to perform the task of inspection. For instance, the zonal offices did not have legal officers to assist them when it comes to issues of applying sanctions to defaulters. The Department of Law is located at the NEMC Headquarters. However, the Zonal Coordinator admitted that sometimes they conduct inspections especially for medium scale mines and when it comes to the issue of sanctioning; they have the guideline which assists them to impose sanctions.

Furthermore, it was noted that Zonal Offices were equipped with necessary working tools for undertaking inspection and monitoring activities in both surface and underground mining operations and processing plants. In addition, it was noted that they have not undergo in-house brush-up training course on managing the tools and essential approaches to undertake site inspection.

During the interviews, Zonal Officials pointed out that they should learn and practice how to conduct inspection of environmental problems in an active mine including the four essential steps which cover:

- i. Step 1: Identification of the environmental threats of mining;
- ii. Step 2: Identification of the mines responses to these threats;

- iii. Step 3: Choice of inspection topics and priorities; and
- iv. Step 4: Deciding on inspection approaches (scoping).

3.4.4 Budgeting and funding system for enforcement activities in NEMC's Zonal offices

The financing of inspection and enforcement activities in the zonal offices is done by NEMC-HQ. The funds are required to be disbursed quarterly to NEMC Zonal offices. Usually Zonal Offices prepare their proposed Annual Work Plans and Budgets and submit them to the HQ. HQ reviews them and proposes adjustments or else remit the requested funds to the respective Zonal Offices.

This section therefore analyses the sources of funds, disbursement process, sufficiency of the disbursed funds, use of such funds as well as review of collection and use of environmental fees and charges as done by the zonal offices.

Sources of funds

The major sources of funds in the NEMC's Zonal Offices are the disbursements of funds from NEMC-HQ. The zonal coordinator writes a request letter with proposed plan and budget to HQ requesting for funds in quarterly basis in order to facilitate their activities in the zone.

However, some of the funds which were disbursed were not directly linked to the Zone's activities. Some were deposited to cater for other activities which involved NEMC's-HQ's activities in the respective zones. The actual analysis of funds disbursed to the zones has been detailed in table 3.6.

Developed budgets are too general

NEMC Zonal Offices are preparing their Financial Year Budget depending on the main Annual Work Plan from NEMC-HQ. The Zones' respective annual work plans do not specify a number of facilities to be inspected, no specific mining facilities have been identified in the work plan for inspections or enforcement purposes and prioritization of enforcement activities is not shown in the annual work plan.

Accordingly, the audit team found out that the budgets in the Zones are too general because they did not identify the enforcement activities to be performed in each respective financial year.

Funds not disbursed on time

The audit team reviewed bank statements and annual budget for the three year 2011/12, 2012/13, 2013/14 in order to establish whether there are delays on disbursement of funds in the zones from NEMC-HQ to the zones. Disbursements are required to be done on quarterly basis that is, the requested or amount that is planned to be disbursed to the zones should at latest reach the zones at the end of a month of every quarter as can be seen in Table 3.6.

Table 3.6: Amount of funds disbursed to three zonal Offices for the period 2011/12 to 2013/14 (Million.TShs.)

FY	Quarter	Lake Zone Mwanza	Northern Zone Arusha	Southern Highland Mbeya
2011/2012	1	0	10	8
	2	0	2	7
	3	7	19	6
	4	3	8	3
Total		10	39	24
2012/2013	1	6	13	0
	2	5	1	0
	3	12	2	2
	4	0	12	7
Total		23	28	9
2013/2014	1	2	3	4
	2	1	5	4
	3	3	10	3
	4	10	12	3
Total		16	30	14

Source: NEMC's Bank Statements of 2011/12, 2012/13, 2013/14 from selected Zones.

As it appears in Table 3.6 the disbursement of funds from NEMC-HQ to the zones are in quarterly basis. As it can be seen Mwanza Zone, in the financial year 2011/12 1st and 2nd quarters and financial year 2012/13 4th quarter, no disbursement was done from HQ for the facilitation of their enforcement activities. Therefore, disbursement of funds were delayed for an average of two quarters and this leads into delay of some enforcement activities in the zone.

Amounts of funds disbursed is not sufficient

During Planning and Budgeting, the Zones are aggregating their annual activities and thus propose an annual budget that is required by each

respective zone in discharging their inspections and enforcement activities. However, during the review of annual budgets and work plans and interview with officials in the zonal offices, it was noted that, the amount that was requested or budgeted by the zones was not fully disbursed, and for that matter, was not ample to facilitate the undertaking of any inspection activities in particular to mining facilities or facilities which were situated outside the region in which the zonal office is situated.

Furthermore, the audit team reviewed the budgets and trends of disbursement of fund in order to compare the budgets against actual amount received from headquarters to establish if sufficient funds were disbursed as requested to perform their day to day activities. This analysis was important for the audit team as one of the Zonal Offices concern of not carrying out inspections and enforcement activities was insufficient funds.

The analysis of budgeted amounts and actual received amount of funds for Zonal Operations were found to vary greatly. Also the amount that was requested as a budget and actual amounts received were different in all three financial years (2011/12, 2012/13, 2013/14). Table 3.7 below shows the amount of funds that was budgeted by the respective zone and the amount that was disbursed by NEMC-Headquarters.

Table 3.7: Amount of funds Budgeted and Actual amount Received for the Financial Year 2011/12 to 2013/14

Zone	Financial year	Budgeted (Million TShs.)	Actual Received (Million TShs.)	%age of fund released (Million TShs.)	%age of fund not released (Million TShs.)
Lake Zone (Mwanza)	2011/12	76	10	14	86
	2012/13	40	29	72	28
	2013/14	20	16	80	20
Northern Zone (Arusha)	2011/12	102	40	39	61
	2012/13	40	29	72	28
	2013/14	194	30	16	84
Southern Highland (Mbeya)	2011/12	0	24	-	-
	2012/13	0	9	-	-
	2013/14	122	15	12	88

Source: NEMC-zone Annual Budget and Bank Statements for Financial year (2011/12, 2012/13, 2013/14).

Table 3.7 therefore shows how NEMC HQ disburses the funds to the zonal offices. From the table it is noted that for the whole period under review, NEMC-HQ has been disbursing insufficient funds to zonal offices. Such non execution of budget estimates to zones led to unfulfillment of their enforcement obligations in the mining facilities within their respective jurisdictions.

Amount of funds received for environmental inspections

The audit team carried further analysis to ascertain the use of the disbursed funds in inspection activities. The analysis included the funds budgeted, actual amount received and funds that were allocated for inspections of mining facilities. The team found out that all Zonal Offices face the challenges of implementing enforcement activities because disbursements of funds were not enough to enable them perform their duties effectively.

The other reasons were due to the fact that NEMC-Headquarters did not assess particular needs of each Zonal Office, thus distribution of funds did not take into account the level of environmental compliance and needs for inspections and enforcement in each particular zonal office.

Table 3.8: Amount of funds Budgeted and Received by Zonal Offices for Inspections for financial years 2011/12, 2012/13 and 2013/14

Zone	Financial year	Budgeted for Inspections (Million TShs.)	Actual Received for inspections (Million TShs.)	Variance (Million TShs.)	%age of Variance (Budgeted vs Actual)
Lake Zone (Mwanza)	2011/12	17	0	17	100
	2012/13	6	7	1	(21)
	2013/14	3	2	1	36
Northern Zone (Arusha)	2011/12	27	0	27	100
	2012/13	7	0	7	100
	2013/14	30	7	23	77
Southern Highland (Mbeya)	2011/12	No records	10	No records	Not known
	2012/13	No records	0.325	No records	Not known
	2013/14	No records	1	No records	Not known

Source: NEMC Zone Annual Budget and Bank Statements for Financial year (2011/12, 2012/13, 2013/14).

Table 3.8 therefore clearly indicates how the allocated funds for environmental inspections were insufficient to enable Zonal Offices

to conduct periodic or routine environmental inspections in their respective zones. As elaborated above, usually once the funds were disbursed to the zonal offices, it is a usual practice to cater first for administrative costs of the offices and the remaining balance, if any, is used for environmental inspections. The team found that more often the remaining balance was very little to enable the Zonal Offices to conduct any substantial inspections in the mining facilities and that is why they ended up inspecting facilities situated within the city in which the office is situated.

Inadequate management of fees and charges collected in zones

The audit team also reviewed the amount of fees and charges which are collected by the zonal offices with the view of establishing the alternative sources of funds for the zones. However, it was noted that fees and charges collected from various facilities in the zones are not managed effectively, because they didn't know the number of facilities in each zone, and this has been difficult for them to perform their enforcement activities efficiently.

Further discussion with zonal officials revealed that, the fees and charges collected from various sources are not used for inspection activities, because all fees and charges collected are submitted to NEMC-Headquarters. No funds were retained in the respective zone in order to facilitate the zone's enforcement activities. In this regard inspection activities mainly depended on funds from NEMC-Headquarters. The zones therefore do not know the amount of fees and charges collected for a particular year because payments are made directly in the bank account without the payee submitting Cash Deposit Slips to the zonal offices. Therefore, it becomes difficult for the zones to know the actual amount that was collected within their zones for a particular financial year.

3.4.5 Weakness on information management

NEMC lacks adequate record of management processes and systems (consolidated performance information) to ensure that the information received from the inspections is captured and used to monitor compliance of mining facilities with environmental conditions. This means it has limited ability to assess which sites have been inspected, what was found, and what action was taken as the result of inspection conducted by either NEMC itself or other government departments. Information about

compliance is kept in multiple system and places and it is not recorded consistently. Accordingly, lack of sufficient information limits NEMC's ability to analyze and demonstrate the effectiveness of its inspections.

The team noted that there are several cases of environmental mismanagement in mines including outcry on acid mine drainage in large scale gold mines and elevated levels of cyanide and mercury in environment surrounding VAT leaching plants, dust emissions in quarries and cement plants etc.

It was expected that a positive risk assessment planning programs from the ad-hoc or task force teams formed from the public outcry, which would enhance compliance and enforcement of environmental protection laws. Since there is no action taken, the acid drainage mines are continuing draining acid to the rivers and streams, devastating most of aquatic organisms, toxic chemicals will still continue to spill to the environment.

The result of this practice is poor quality and unreliable information that is inefficient to access and use. Not surprisingly, we saw no evidence of regular NEMC analysis of trends in mining facilities compliance with regard to environmental requirement achievement.

3.5 Reporting on the enforcement activities and status of compliance

According to NEMC's Environmental Investigation Manual of 2012²⁶, it is indicated that once the Inspectors have carried out any inspection activities, they shall prepare and submit an inspection report. In addition best practices from UNEP guidelines for national enforcement and compliance environmental requirement²⁷, requires the agency with environmental enforcement duties to have a mechanism which allows inspections to be reported and documented.

3.5.1 Adequacy of the inspection reports

However, a review of the inspection reports revealed that, NEMC did not have adequate record management processes and system to ensure that information from inspections is captured, well reported and used to monitor the compliance with environment requirements. The reason for this is due to the fact that NEMC did not maintain ongoing consolidated inspection performance information about which site have

²⁶ Paragraph 3.5

²⁷ Dated 9 February 2001

been inspected, what was found, and what action was taken as the result of inspection by either the council itself or any other enforcement agent. Upon request of documents we noted that, the information about compliance is kept in multiple systems and places and some of the inspection report were not available.

As noted, auditors reviewed some of the inspection reports and pointed out three important points, namely:

- i. inadequate record management processes - this situation can be solved by the establishment of inspection performance information system of which most of its data will be sourced from NEMC environmental mining database (Central Environmental Information System);
- ii. inadequate record management systems - data base inputs (all management plan as provided in Section iv and v of the proposed template below);
- iii. improper structure for capturing and reporting - establish standard inspection / auditing template which can be used nationwide.

However, the inspection report is expected to reflect the real situation on the ground; it should be duplicable once the same work is done by an independent auditor; it should contain tangible results/outputs for the enforcement and compliance of the environmental regulations.

3.5.2 Submission of progress reports from Zonal Offices to NEMC Headquarters

It is noted that NEMC has Zonal Offices spread over the country, however the administration is not decentralized. Hence, Zonal Offices perform their duties depending on the orders from the headquarters.

According to NEMC's organizational structure and strategic plan, Zonal Offices are supposed to submit quarterly progress reports (which include inspection results and follow-up inspections) to NEMC Headquarters for further analysis and compilation.

However, during interviews with zone officials of NEMC it was pointed out that, reporting of the enforcement results and feedback mechanism on the conducted inspection of environmental compliance was not adequately functioning and coordinated. As for the period under audit large number of reports were not produced and submitted to NEMC head office as required. Similarly, the same officials explained that, zones

offices are still growing in terms of manpower and skills, therefore most of the enforcement activities are still undertaken by NEMC Directorates which are based or located at the headquarters. The consequence of not submitting quarterly progress report has led to NEMC's HQ not to get a real picture of the performances of the zonal offices in enforcing environmental compliance in their area of jurisdiction.

Table 3.9: Number of Quarterly Progress Reports submitted to NEMC-HQ by Zonal Offices (2011/12 to 2013/14)

	Financial year	Quarter 1	Quarter 2	Quarter 3	Quarter 4	No of reports submitted
Lake zone (Mwanza)						
	2011/12	Not Submitted	Not Submitted	Not submitted	Not submitted	0
	2012/13	Not submitted	Submitted	Submitted	Submitted	3
	2013/14	Submitted	Not submitted	Submitted	Submitted	3
Northern Zone (Arusha)						
	2011/12	Not submitted	Not submitted	Not submitted	Not submitted	0
	2012/13	Not submitted	Not submitted	Not submitted	Not submitted	0
	2013/14	Submitted	Submitted	Submitted	Submitted	4
Southern Highland Zone (Mbeya)						
	2011/12	Not submitted	Not submitted	Not submitted	Not submitted	0
	2012/13	Not submitted	Not submitted	Not submitted	Not submitted	0
	2013/14	Submitted	Submitted	Submitted	Submitted	4

Source: Submitted Quarterly Reports to NEMC-HQ

Table 3.9 shows the extent of which NEMC's zonal offices report to NEMC-HQ on quarterly basis on the progress of its enforcement activities. In all three Zonal Offices visited a total of 14 out of 36 quarterly progress reports were submitted to NEMC-HQ by all three zones. This is about 39 percent of all reports that are required to be submitted to NEMC-HQ for analysis and monitoring of enforcement activities in Zonal Offices.

Furthermore, year 2013/14 was the most efficient year as all Zones submitted almost all of the required quarterly progress reports.

3.5.3 Submission of compliance report from mining facilities to NEMC

Annual Environmental Reports (AERs) are a key source of information about mining facilities compliance with conditions and hence should be carefully reviewed by NEMC. AERs can include the information about planned environmental management activities, self-reported non-compliance and corrective action. Submitting an AER is a condition for most mines under mining Act 2010 and EMA 2004²⁸. They also include the information showing the adherence of the mitigation of shortfall found during the inspection.

NEMC received reports from mines showing the implementation of the recommendation given to them during inspections; however during the review of the inspections reports and interviews with NEMC Inspectors, we noted that, most of the reports submitted to the council are from the large mines only. No reports from medium scale mining facilities or small scale have been submitted for the whole period under audit.

On other hand audit team found that, small scale mines have not submitted their report to NEMC and this is attributed by the absence of a clear regulation to enforce small and medium scale mines to report to the NEMC on the issues regarding compliance of the environmental requirements.

The audit team noted that NEMC's capacity to monitor and ensure compliance with reporting conditions is undermined by poor records management and the absence of central records of annual environmental reports received. The only way to find which mine facility submitted the annual environmental status report was to search for hard files in the registry. This process is time consuming and unreliable. In some cases we had to verify the results of our search by checking with the specific staff member who had oversight responsibility for the mine. However, the exercise was in vain and no specific or clear number of reports of mining facilities was found which submitted annual environmental status report to NEMC for the whole of the audit period.

The failure to submit and review such reports limits NEMC's knowledge of the performance of individual mines operators - knowledge that can be used in allocating scarce resources to conduct routine inspections, thereby increasing the risk that non-compliance and detrimental impacts will not be identified and may not take appropriate enforcement action due to non-detection of non-compliance.

²⁸ Section 101 (3) and (4)

Furthermore, the auditors noted that NEMC lacks environmental performance indicators, which actually facilitate tracking of the mining facility's overall environmental performance. Such indicators include; (i) receiving water quality; (i) aquatic or wildlife populations; air quality etc. These indicators provide benchmarks against which environmental performance of the facilities may be measured. They incorporate applicable environmental standards and environmental quality objectives for compliance and enforcement of the environmental regulations.

NEMC has not developed environmental performance indicators to facilitate tracking of the mining environmental performance. It was expected that those environmental performance indicators would be used to measure the mining environmental performance. The tracking process has to show mining facility's environmental performance and effects. Example is provided in Table 3.10.

Table 3.10: Examples of indicators of a mining and mineral processing facility in the context of environmental performance analysis

Phase	Environmental management indicator (Management)	Environmental Performance indicator (Operational)	Environmental Indicator (State of the environment)
Exploration	% Reduction of the number of trees removed	Number of trees removed	Number of hectares of forest lost
Overburden Removal and disposal	Investments in reduction of energy consumption	Air emissions of particulates and gases	Quality of air in the operation area
Mining	Investments to reduce impacts on aquifers	Hectares of pasture or farming land lost	Change in the local level of aquifers
Mineral processing	% Reduction of water consumption	m ³ of water per ton of ore processed	Local reduction of water supply
Waste disposal	% Reduction of contaminants in the effluents	Concentration of contaminants in effluents	Concentration of contaminants downstream
Decommissioning	Investments to sale equipments and debris	Number of equipments for sale	Land returned to other uses after decommissioning
Reclamation	Investments in reclamation	Re-vegetated area	Number of animal species living in the area

Source: Environmental performance analysis (adapted from CETEM, 2001)

3.5.4 Continuous reporting of enforcement performance by NEMC to VPO

NEMC is required to prepare and submit to the Minister responsible for Environment within six months after the close of each financial year an annual report²⁹ regarding the status of implementation of the enforcement of environmental control systems in mines operations. Accordingly, NEMC among other reports, is required to prepare and submit three reports which should also be submitted to VPO - Director of Environment. Table 3.11 shows the type of reports which are to be submitted to VPO and their frequencies.

Table 3.11: Types of Reports which are produced and their Frequencies

Year	Type of report to be submitted	Produced	Submitted
2011	1. Progress Report	No ³⁰	No
	2. Bi-annual implementation report	No	No
	3. Annual Performance Report	No	No
2012	1. Progress Report	No	No
	2. Bi-annual implementation report	No	No
	3. Annual Performance Report	No	No
2013	1. Progress Report	No	No
	2. Bi-annual implementation report	No	No
	3. Annual Performance Report	No	No
2014	1. Progress Report	No	No
	2. Bi-annual implementation report	No	No
	3. Annual Performance Report	No	No

Source: Analysis of Progress reports, Implementation reports and performance reports

Whilst it is required by law for these reports (as indicated in the table above) to be prepared and submitted to the Director of Environment (VPO), NEMC neither prepared nor submitted these reports as required for the whole period under audit. See Table 3.11. This makes it difficult for the VPO to underscore the performance of NEMC and NEMC itself has failed to establish whether its own performance meets its own objectives as set out in its Strategic Plan. Thus for this reasons, environmental compliance level of mining facilities have not been reported so far.

²⁹ EMA 2004 Section 17(2)

³⁰ "NO" or "YES" referring to a situation whereas NEMC was supposed to prepare and submit the relevant reports to VPO.

3.6 Coordination of reporting and Feedback among Key Stakeholders

Compliance inspection involves recognition of what other stakeholders are doing with regard to the aspects of the environmental management such as TMAA, District Environmental Management Officer (DEMO) and Water basin authorities offices. It is useful having information from other stakeholders who conducted similar inspection to the mining firms. For instance the information from TMAA, MEM (department of environment) and LGA were very useful as they could help the NEMC when identifying the mining facility that needs to be inspected. Environmental information from other stakeholders may be used as a benchmark for NEMC to plan and conduct environmental enforcement for a particular year.

3.6.1 Environmental reports from Ministry of Energy and Minerals (MEM)

The auditors noted that MEM through its organs - TMAA, MEMs Department of Small Scale Mining, eight Zonal Mining Offices, is quite aware of on-going environmental impacts resulting from small, medium and large mines.

However, VPO is not informed on mining pollution, as its sources of information come from NEMC reports, which have not been submitted. According to Section 17 (2) of EMA 2004, NEMC has not fulfilled its obligation of preparing and submitting to the Minister a bi-annual report concerting how it has implemented the provisions of the EMA 2004.

The Ministry responsible for Energy and Minerals through its Department of the Environment and the Tanzania Minerals Audit Agency (TMAA) is required to prepare the bi-annual report³¹ and submit to the Vice President's Office - Director of environment concerning the state of that segment of the environment and the systems adopted by that sector Ministry to maintain or improve the environment.

Upon interviews with NEMC and VPO officials, they pointed out that, the MEM through its Department of Environment has not submitted any environmental reports to VPO and NEMC as stipulated in the Act. It is only TMAA that submits the report to NEMC as they have a Memorandum of Understanding (MoU) with NEMC though the audit team could not verify if they were actually submitted as per the MOU. Similarly, NEMC officials pointed out that, NEMC requested them to submit those reports but are yet to do so.

³¹ EMA 2004 section 32(a)

The main reason for non-submission of bi-annual and monitoring reports pointed out by NEMC and VPO officials during the interviews include lack of awareness and reluctance on part of the responsible MDAs and LGAs. It was further added that, the Ministry responsible for Environmental Affairs is mandated under the Environmental Management Act to ensure that MEM are properly reporting to enhance the enforcement of the control systems.

3.6.2 Environmental monitoring report from local governments authorities

As required under EMA 2004³² it was noted that there is a lack of clear and defined involvement of LGAs in terms of monitoring and reporting of environmental issues. The cooperation between NEMC and LGAs is weak as there are no set-up reporting or enforcement mechanisms between the two. For example, the Local Government Environmental Officers does not report to NEMC on environmental issues associated with mining on regular basis, as a result NEMC does not get updates of the status of environment on mining sites from the local government environmental officers.

On the other hand, enforcement and inspection reports including reports on sanctions imposed to defaulters in the mining sector were not submitted by the LGAs to NEMC or VPO as per requirements. Interviews held with the District Environmental Management Officers (DEMOs) in selected councils revealed that, there is poor coordination between NEMC and the LGAs in respect of sharing reports generated from the LGAs thus it became difficult to ascertain the status of what is happening in mines situated in the respective LGAs.

The reasons for this situation is due to the absence of clear reporting mechanisms which is put in place by NEMC as the regulatory and enforcement body which would compel every LGA to submit environmental reports and any environmental information to NEMC for further follow ups or actions.

32 EMA 2004 Section 36(3)

Table 3.12: Reporting schedule for various actors involved in enforcing the environmental compliance in mining sector since 2011/12 to 2013/14

Key prayer	Type of the report	When to report?	Where to report?	No. of reports	Submitted
NEMC's Zonal Offices	Progress of implementation of the enforcement of environmental compliance in zone	Quarterly	NEMC-HQ	36	14
Local Government	State of the local environment	Quarterly	VPO-DOE NEMC-Director General	No records	Not known
Sector Ministry (MEM)	State of the segment of the environment and the systems taken	Bi-annual	Director of Environmental (VPO)	6	Not known

Source: NEMC, VPO and MEM Reports (2011/12-2013/14)

Based on the Table 3.12, the analysis of the present practices at all levels of government showed that actors are not submitting their reports to the relevant authorities as it should be the case. It was acknowledged that there is a reporting challenge from local government to council. Environmental reports from the local governments with regard to enforcement activities in their area of jurisdiction are not sent to the NEMC. This noted absence of reporting tendency results in NEMC not getting the updates of the status of the environmental issues on mining sites from the local government.

When Officers from NEMC were interviewed, they pointed out that the major problem of not reporting properly was due to lack of clear system on what the VPO as the main conduit between the central and LGAs is supposed to do. NEMC's capacity to monitor and ensure compliance with reporting conditions is therefore undetermined by poor records management and undefined reporting mechanisms.

3.6.3 Environmental reports from TMAA

During the audit, it was noted that NEMC has signed a Memorandum of Understanding (MoU) with TMAA in carrying out environmental audit and inspections particularly in the mining sector. The MoU provides for procedures and mode of reporting on environmental matters and sharing

of information. The basis for this understanding as per the MoU is based on the fact that:

- the activities carried out by TMAA are of the similar nature as to those carried out by NEMC although in case of TMAA all environmental activities focus on the mining operations
- Inadequacy of resources
- Need to aggregate environmental results and findings between NEMC and TMAA to ease enforcement by NEMC especially in mining facilities.

According to the MOU, TMAA is supposed to share any environmental information when conducting audits, inspections and monitoring activities in the mining operations and likewise on the part of NEMC itself.

However, the audit revealed that, the sharing mechanism of information and reports between the two entities was very weak. This was because there was no coordinator who was supposed to coordinate the implementation of the MoU as the MoU suggested³³.

3.7 Application of sanctions for environmental non-compliance

3.7.1 Nature of sanctions for non-compliance

According to section 25 of the EMA Act 2004, NEMC is charged with the power to exercise all necessary powers required to bring about compliance to any directives issued by it including bringing action in the court of law or tribunal.

Following the analysis of inspections reports and sanctions that were issued to the inspected mines, it was noted that, NEMC applied a range of sanctions during the environmental inspection held in 2013. However, there was no evidence of incremental sanctions and penalties on the part of mining facilities which were found to be non-compliant. This is due to absence of follow-up of the sanctioned facilities. In all mining facilities which sanctions were imposed, no follow-up has been done and thus status of implementation of the issued sanctions is unknown.

From the interviews and review of documents it was noted that in the end of the year 2013, NEMC conducted a number of inspections and monitoring activities in large mines which covered a total of 11 mines. Various environmental orders and notices were issued as a result of such

³³ Article 5 of the MoU, provides for establishment of the coordination Unit and a Coordinator who would serve as a central coordinating team between NEMC and TMAA.

enforcement undertakings. The monitoring and inspections done and action taken are as portrayed in the Table 3.13.

Table 3.13: Mining facilities Inspected and Sanction taken and Response from facilities for the years 2010/11 to 2013/14

	Name of facility	Environmental issue identified	Sanction issued	Response from facilities
1	Golden Pride Ltd	discharge of dangerous materials	Emergency Protection Order Fine: 60,000,000/=	Appealed on the ground that it was not issued with the report
2	Bulyanhulu Gold Mine	Discharge of dangerous materials	Emergency Protection Order Fine: 55,000,000/=	That inspectors did not verify their findings as they had no working instruments
3	North Mara Gold Mine	Pollution and emission	Environmental compliance order Fine: 60,000,000/=	Partly agreed with the report but aggrieved by the fines. Disputed on how NEMC arrived at the figure
4	Tulawaka Gold Mines Project	Discharge of hazardous chemicals	Environmental Compliance Order Fine: 25,000,000/=	Paid the penalty
5	Kabanga Nickel Mine	Dumping of wastes	Verbal directives	No response
6	Geita Gold Mine Ltd	Discharge of dangerous materials	Emergency Protection Order Fine: 170,000,000/=	Disputed the calculations of the fines, disputed the report as it was not issued to them upon completion of the inspection
7	The El-Hillal Minerals Mine Ltd	Operating without an Environmental Impact Assessment	Environmental Compliance Order Fine: 40,000,000/=	Claimed to have a compliance certificate from Mwanza Region (one of the NGOs) ³⁴
8	Williamson Diamond Mines Ltd	Dumping of dangerous wastes	Verbal directives	No response

³⁴ Further analysis revealed that the facility had no genuine EIA. The facility had obtained an environmental Compliance order from one of the environmental NGO in Mwanza Region.

9	Tanzanite One Mining Ltd	Non-submission or environmental compliance reports, emission of noise and discharge of dangerous materials	Emergency Protection Order Fine: 40,000,000/=	Has paid part of the fine equaling Tshs. 20 million
10	Tanzanite Africa Mine	Non-submission or environmental compliance reports, emission of noise and discharge of dangerous materials	Emergency Protection Order Fine: 80,000,000/=	Disputes the order and fine for not being involved in the monitoring process and how the fines were calculated. Claimed to have not been served with the monitoring/ inspection report and challenged NEMC to apply such consistent penalties to other facilities.
11	Kilimanjaro Mine Ltd	Not described	Fine: 6,000,000/=	Paid Tshs. 2m and has requested for NEMC's leniency to waive the remaining amount

Source: Mines Monitoring/inspection Reports issued by NEMC, 2013

Table 3.13 shows a number of inspected mines for the year 2012/2013 that were issued with various sanctions. The table above indicates that in a total of 11 large mines inspected, 9 were issued with fines in terms of monetary values and only two had verbal sanctions. However, even when other administrative orders were given, yet fines were concurrently issued.

In that case the deterrent effects on part of the applied sanctions were questionable as there was no proof as to whether these administrative orders and fines were complied with, also due to uncoordinated and unsatisfactory record keeping on the orders and fines that are issued by NEMC both administrative and criminal. Consequently, NEMC has received a number of objections and appeals which were filed by all sanctioned facilities that were inspected citing their dissatisfaction with such orders and fines.

3.7.2 Balance in the use of sanctions and follow-up

NEMC has a range of sanctions on its disposal that it may apply to ensure compliance. These include those sanctions which are provided for by law. These sanctions are categorized in two levels; Administrative sanctions³⁵

³⁵ Those which are applied by NEMC without intervention by a court of law

and criminal sanctions³⁶. These levels of sanctions are issued with regard to environmental non-compliance or offence that has been committed by the proponent of the facility.

The audit team carried an analysis to assess the extent to which NEMC was balancing the available sanctions. Table 3.14 below depicts various offences and sanctions which were applied in the inspected mining facilities indicated in Table 3.13 above.

Table: 3.14: Type of sanctions and number of preferred actions taken, 2010/11 - 2013/14

Type of sanction	Number of sanctions taken			
	2010/11	2011/12	2012/13	2013/14
Prohibition orders	No records	No records	No records	-
Protection Order	No records	No records	No records	-
Emergence Protection Order	No records	No records	No records	5
Environmental Compliance Order	No records	No records	No records	3
Restoration order	No records	No records	No records	-
Costs order	No records	No records	No records	-
Fines/compounding offence	No records	No records	No records	8 ³⁷
Prosecutions	No records	No records	No records	-

Source: NEMC's Monitoring/Inspection reports and Sanction Orders

From Table 3.14, it is noted that NEMC's trend in applying sanctions was based mostly on penalties other than alternative options available. It was observed that in all inspected mining facilities, there were no follow-ups done by NEMC on the implementation of the issued sanctions. NEMC applied two sanctions simultaneously making it difficult for the facilities to comply with either of the two sanctions imposed or else would make those non-compliant facilities to pay fines and proceed with their mining activities without correcting the environmental anomaly identified during inspections.

For example, in one of the mining facility visited, it was noted that despite NEMC issuing the environmental compliance order and fine, the facility ended up paying the fine without complying with any of the

³⁶ Those which involve courts of law

³⁷ These include the 5 facilities with Emergence Protection Order as they were both applied

instructions issued in the compliance notice. At the moment when the auditors asked for EMP it was not available.

The reason for this is due to the absence of enforcement directives or criteria which quantify what extent of environmental violations constitute severe, multiple or recurring non-compliance. Without more specific criteria during enforcement and sanctions, NEMC have resorted to imposing options not to pursue the most serious violations as well as choosing different courses of actions leading to mining facilities being treated inconsistently during enforcement and sanctioning activities.

3.7.3 Sanctions Systems from NEMC's Zonal Offices

NEMC's Zonal Coordinators and Officers conformed that Zonal Offices have not issued sanctions to mining facilities for the whole period of the audit. Further review of the sanction conducted during the period under review indicated that, in case of Lake Zone (Mwanza), 70 sanctions were issued in all three years (2011/12 to 2013/14), however only 2 gold elution plants (medium scale mining facilities) were inspected and sanctioned due to non-compliance.

The Zonal officials were of the views that, in case of mining facilities, all inspections and sanctions are dealt with by NEMC-HQ. For example, in the year 2013, inspections were conducted to all large mines in the Northern and Lake Zones, however the inspection team was from NEMC-HQ and only one staff from the zone was picked to join the inspection team. All subsequent sanctions resulting from such inspections were issued by NEMC-HQ and not the Zonal offices.

The reason for this is due to non-availability of inspections and monitoring tools in particular for mining facilities. The Zonal offices had no tools including Personal Protective Equipment to enable them enter the mining facilities and laboratory for measuring samples taken from facilities for monitoring purposes or inspection for compliance which would result from findings based on laboratory as well as physical findings.

The effect of this is that most of the mining facilities and in particular medium scale facilities are left unsanctioned and therefore cause a lot of environmental pollutions as most of them are located within the towns.

Table 3.15: Sanctions issued to mining facilities in the zone during the years 2011/12 - 2013/14

S/N	Mine site	Scale	Nature of offence	Sanction	Source of information leading to sanction	Remarks/ Response from Proponents
1	APEX Co Ltd	Medium Scale (Gold Elution Plant)	Discharge of effluents containing alkali without pre-treatment; Operating construction without EIA	Compliance notice; Fine: Tshs 3,000,000 (Discharge of effluents) Tshs 2,000,000 (Construction without EIA)	Complaint	Proponent (through Rwelu Advocates refuted the penalty on the basis of double punishment)
2	Woshi Metal elution Plant	Medium Scale (Gold Elution Plant)	Discharge of effluents containing alkali without pre-treatment; Operating construction without EIA	Protection Order; Tshs 10,000,000 (fines for pollution S. 187 of EMA, 2004)	Inspection	Proponent requested NEMC to reverse the penalty as the plant was still under preliminary operations -request was denied
3	Mr Baraka (Gold Elution Plant)	Medium scale	Operating without EIA; Obstructing env. inspector	Protection Order; Tshs 15,000,000	Inspection	Proponent appealed to the PS-VPO requesting waiver of the penalty imposed on the basis that it was frivolous and unjustifiable

It is shown in Table 3.15 that NEMC Zonal Office is basically not performing well on enforcement of the control measures on the part of the mining sector. Inspections are rarely carried out in the mining sector. Despite the fact that the table above shows three medium scales which were inspected and sanctioned due to environmental anomalies in the respective elution plants. On the other hand APEX Ltd was inspected by the Head Quarter and the sanctions were issued by the Head Quarter despite the fact that NEMC's zonal office is almost 4 kilometers away from the Plant. No, sanctions were issued by other remaining Zones.

3.7.4 Sanctioning systems not effective

The audit team had also an opportunity to interview the mining facilities within each respective zone with the aim of obtaining the facilities' perceptions of NEMC's performance and sanctioning system. However, the management and owners of various mining facilities challenged the sanctioning system of NEMC especially on the part of fines and penalties on the basis that monetary penalties were not consistent. This is because there was no clear basis for calculating the penalties and fines imposed. Where fine existed in law books they were not shared with the facilities to avoid unnecessary appeals and arguments.

The penalties especially monetary fines were calculated on NEMC's free discretion without consulting the affected party (Proponent) and without considering the direct impact to the society. The proponents of this argument were of the view that such sanctions should be considered whenever any environmental noncompliance's impact were directly affecting the people on or off site.

3.8 Follow-up on enforcement result

The National Environmental Investigation Manual of 2008 requires NEMC to conduct follow-up to assess the action taken by the management of the mine to correct the deficiencies disclosed by the monitoring process. However, upon review of inspection reports we found throughout our audit that, NEMC was not carrying out re-inspections to those mines revealing significant violations.

The review of 21 follow-up inspection reports from Lake Zone revealed that Zones carry-out re-inspections to few mining facilities that have revealed significant violations during previous inspections. Upon interview with zone officials, it was disclosed that, the follow-up inspections were done on ad hoc basis when there is environmental incidence or complaint reported from different source e.g. media, citizen, CBO or NGO. Zonal officials, acknowledged that, failure to re-inspect those mines is undermining the achievement of underlying goals of enforcing compliance with environmental requirement on mining.

Among the main reasons that were pointed out for not following-up mines inspections which were found to have significant non-compliance include:

- the review of the work plans under the audit scope disclosed that, the plan did not have any element of follow-up hence it was not possible for the inspectors to engage themselves on re-inspections. The only follow-up that are done are those arising out of a reported incident;
- absence of inspection record registers which could guide inspectors on identifying mines which were supposed to be re-inspected and
- lack of coordination among the key stakeholders responsible for enforcement of the environmental legislations in the country.
- Budget constraint and late releases of funds especially for zone offices as elaborated in section 3.3.3 above.

3.9 Coordination within NEMC

3.9.1 Coordination within NEMC's Directorates

i) Overlapping of activities within NEMC'S

The interviews held with NEMC's senior officials³⁸ noted that NEMC's Directorates' roles and responsibilities are not clearly described in their plans or job descriptions. There are a lot of overlapping activities of the same nature within the directorates as shown in **Figure 3.1**.

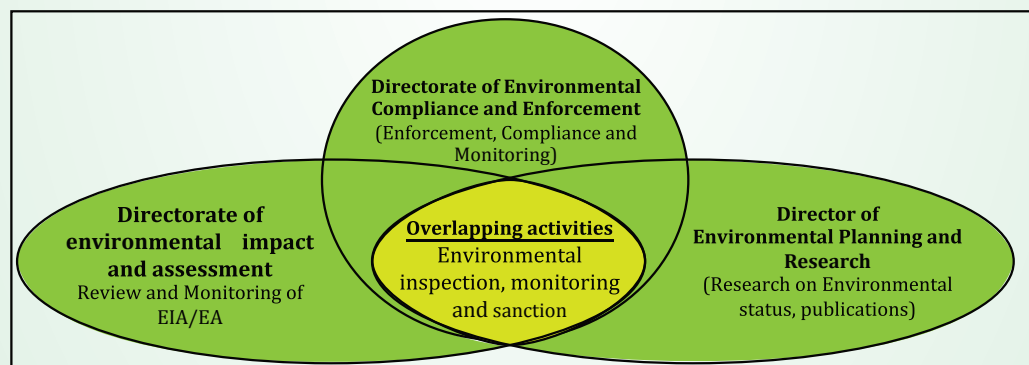


Figure 3.1: Showing conflict of roles and responsibilities among NEMC's Directorates³⁹

It was further noted that, enforcement activities which are the key responsibilities of Directorate of Environmental Enforcement and Compliance are also carried out by Directorate of Environmental Impact and Assessment. Also the responsibilities which are carried out by

³⁸ Head-DECE, Ag. Head - DEIA, Head-CPU and DEPR

³⁹ Interviews and Responses from NEMC's officials

respective sections/units in a respective Directorate were also carried out by other sections/units from other Directorates which made it difficult to ascertain the efficiency of the enforcement activities done by NEMC as a whole.

ii) Sharing of data information within NEMC'S directorate and its Zones

Environmental protection in Tanzania is very much determined by the existing structures of both the EIA and ECE. During the visit in Lake Zone, Northern zone and Southern zone the team noticed that there is a gap of information between DECE and DEIA departments. Specific information is needed from DEIA to the DECE staffs who are involved in the compliance inspection field work.

It was further expected that DECE should be furnished with information about mining facilities that have been undertaken by EIA or EA or mining facilities that are known to exist but do not have any of the certificates. Interview with Northern Zone officers disclosed that, most of Zones did not know the number of mining facilities granted by EIA in their Zones. Lack of information about facilities with EIA posed numerous challenges for the team conducting compliance inspection. The interview with zone officials pointed out that, more often they had to request for the information from the proponents on whether they had conducted EIA or EA which somehow affect the effectiveness of the inspections.

On the other hand it was expected that the EIA directorate should have a data base that is easily accessible to DECE staff involved in the compliance inspection. The data base should have information about all mining facilities in the zones that have conducted EIA or EA and whether they have received certificates and specific conditions that were incorporated with certificates. This information is very important for the inspection team and will form a basis for checking what aspects needs to be checked when conducting compliance inspection.

3.9.2 Coordination between NEMC headquarters and its zone offices

According to NEMC objective, the purpose for which the zonal offices were established is to undertake the responsibilities of NEMC within zone territory. According to EMA; some of the responsibilities of NEMC's zone relating to environmental compliance and enforcement includes;

- Ensuring environmental compliance and enforcement

- Ensuring compliance on environmental impact assessment and audit
- Responding to queries and complaints in the zone

The interviews with zonal coordinators and zonal officers disclosed that there is no clear coordination between NEMC-HQ and zone offices. For example, as part of strengthening the performance of NEMC in enforcing the compliance in mining facilities, NEMC and TMAA agreed to share information regarding to environmental inspections. However, interviews with zone officers in all three zones visited shows that there were no TMAA reports available not only that but also Zonal officials were not aware of the memorandum which was signed between NEMC-HQ and TMAA. But when TMAA officers were interviewed they acknowledged that as part of the MoU reached between NEMC and TMAA they have always submitted the inspection reports to NEMC head quarter.

Further enquiry made by the team of auditors to establish whether zone offices are well known by mining communities as one of the objective of their establishment, after discussion with management of Bulyanhulu Gold mine, Buzwagi Gold Mine, Sun shine Gold processing mine and North Mara Gold Mine it was observed that they don't even know if there is NEMC zone office. This is because most of the activities they do is reported to the NEMC headquarters. The mining facilities management admitted that it is better if some of the issues would be shared with zone offices but the current system does not favour sharing information with zone offices. This undermines the performance of the zones in enforcing the environmental compliance in their zones as they are very close to the mining facilities.

Another weakness is on information about inspection conducted to zones by NEMC-HQ . According to the conducted interview with coordinator of zones, zone officers and mining facilities, the team of auditors noticed that, there is a lack of proper information about inspection conducted by NEMC-HQ to the zones. For example there are some inspection activities which NEMC-HQ does in the zone without informing the zone office. The result of this is that when zone offices go to perform inspection in some of the areas they find out that NEMC-HQ has already visited the facilities.

As a result, zonal offices could not know the status of environmental compliance of mining facilities in their territories. This is contrary to the objective of the establishment of the zone which was to bring NEMC's

services much closer to the stakeholders. It was further revealed that zone offices are in good position to attend any incident or make follow-up inspection at the right time because they are very close to mining facilities.

The consequence of this inadequate coordination within the organization itself is that, some mining facilities remained un-inspected for a long period of time and also there is a possibility of non-follow-up upon those facilities that were to be found out non-conforming with environmental conditions which may pose risks to the environment and public health.

3.10 Coordination with other Government Departments

According to Section 5(2)(f) of EMA 2004, NEMC is supposed to work with other government departments in order to achieve its set objective of enforcing environmental compliance at the mining operations. These Other Government Departments include; Ministry of energy and minerals through its department responsible for environment and Tanzania Mineral Audit agency (TMAA), Local Government Authorities etc.

Through the interviews that were held with zonal coordinators and officers it was evident that there was very little coordination between NEMC and other stakeholders such as MEM Zonal - TMAA and local government environmental management officers. On the other hand, it was noted that, reporting of environmental issues to NEMC as the sole enforcer was minimal. Despite the fact that these are required to report to NEMC on any environmental activity done, there were no reports submitted to NEMC for the whole period under review. Environmental inspectors and officers from the local governments and MEM were not submitting environmental reports of their activities. Therefore the audit team could not verify any reports which were submitted in the NEMC's Mwanza zone.

The review of availed Annual Work Plans and Annual Progress Reports, as well as interviews with officials from NEMC, VPO, MEM and TMAA showed that coordination between NEMC and other government institutions was inadequate. This was evidenced by the following factors;

- Non-Sharing of statistical data and environmental findings;
- Lack of defined reporting mechanism between them;
- Limited sharing of environmental enforcement results; and

- Un-balanced and arbitrary enforcement activities among them.

3.10.1 Non-Sharing of data

NEMC was expected to coordinate environmental statistical information from other sector Ministries and government departments (in particular from MEM and TMAA) and provide guidelines on how enforcement in the mining sector could be handled. This information include number of licensed mining facilities, number of mining facilities operating without licenses, categories of licensed mining facilities according to class e.g. Large, Medium, Small and Artisanal, number of mining facilities inspected per annum, details of sanctions as a result of enforcement activities, annual performance records from miners etc.

The audit further found that NEMC has no mechanism that would facilitate its staff to make use of information from other government institutions for enforcement purposes. However, the audit team noted that monitoring reports for the year 2013/2014 in 11 large mines referred TMAA's reports as the reason of such inspections although when such documents were requested from NEMC, they could not be availed to the audit team.

Upon interviews, the officers from NEMC appreciated the fact that, failure to utilize such information affects the whole process of planning for enforcement purposes thus left enforcement being all ad-hoc and incident-based.

Non-Sharing of environmental reports

A number of other government departments were also conducting environmental inspections and enforcement in various environmental mediums. Some of key departments include MEM - Directorate of Environment, TMAA - Department of Environment and MOW - Water Quality Department.

The table below indicates various enforcement roles carried out by different government institutions in the mining sector and types of reports that are required to be produced.

Table 3.16: Types of environmental enforcement conducted and reports produced by other government institutions

Government Departments	Objectives in relation to environment	Scope/focus area in relation to environmental issues	Reports produced
VPO	To coordinate all matters related to environmental management ⁴⁰	<ul style="list-style-type: none"> • Audit • Inspections • monitoring 	<ul style="list-style-type: none"> • audit reports • Inspection reports • Monitoring reports
MEM	To ensure that the minerals are explored in a manner that will not cause adverse effects on the environment	<ul style="list-style-type: none"> • Inspections 	<ul style="list-style-type: none"> • inspection reports
TMAA	To monitor and audit environmental management, environmental budget and expenditure for progressive rehabilitation and mine closure	<ul style="list-style-type: none"> • Audit in mining operations • Monitoring 	<ul style="list-style-type: none"> • Audit reports • Monitoring reports
LGAs	To enforce the application of EMA 2004 in the areas of their jurisdictions	<ul style="list-style-type: none"> • Inspection • Monitoring • Sanction 	<ul style="list-style-type: none"> • Inspection reports • Monitoring reports • Sanctions status

Source: Strategic, Annual and Operational Plans (2010/11-2013/14)

Table 3.16 above shows that different government departments were also conducting environmental activities of similar nature to those done by NEMC. Knowing that there was such kind of environmental activities being conducted by other government departments, the audit checked with NEMC to establish whether they had access to these reports as indicated in the table above. It was found out that, NEMC had no access to these reports as they were not submitted nor availed to them.

The failure to have such information sharing of such reports will lead to failure of getting the real picture or situation of the status of environment in the mining operations, difficulty in preparation and execution of appropriate environmental enforcement programmes due to limited

⁴⁰ VPO Strategic Objectives - from Strategic Plan

information; and application of double-standards⁴¹ during enforcement and monitoring activities.

Upon interview with NEMC and government department officials it was quite clear that unclear reporting of enforcement activities is attributed by improper defined reporting mechanism of the results of enforcement activities.

3.10.2 Un-harmonized enforcement activities

In every government entities⁴² visited it was noted that all of the entities were conducting environmental inspections as well as issuing sanctions to the defaulting facilities.

In this respect, the audit team failed to establish a clear boundary between these government departments. The reasons for these conflicting roles were due to lack of coordination among the entities during carrying out of their respective enforcement roles. At some point, an inspector or official from these entities would conduct environmental inspections without consulting the other.

Repetitive inspections and enforcement systems by various government entities on the same environmental aspect can result in unnecessarily disturbing the mining facilities or proponents of a particular mining project thus increasing the costs of operation on part of the facilities or project proponents.

3.11 Monitoring and Evaluation of enforcement activities

3.11.1 Monitoring and evaluation within NEMC

The review of NEMC's Strategic Plan (2010 - 2014) showed that the Central Planning Unit (CPU) is supposed to conduct monitoring and evaluate their performance. By the end of each year, NEMC is supposed to examine what they had set out to achieve in their annual work plan, how much has been achieved, reasons for non-achievement and prepare monitoring reports. However, upon interviews with CPU Officials, it was found that NEMC has not conducted monitoring and evaluation to assess the performance of enforcement activities. There were no bi-annual or

41 This is because a number of government departments are involved in environmental enforcement roles but their reports are not submitted to NEMC for references or further analysis. Therefore at some points a facility or project may be sanctioned four times for the same environmental offences.

42 NEMC's zonal offices, VPOs Zonal Mines Offices, Resident Mines Offices, TMAA's Zonal Offices as well as LGAs

annual monitoring reports prepared during period under review. This is attributed to the fact that the council did not have monitoring and evaluation manual. However, at the time of the audits we found that the council is currently working on preparation of a monitoring and evaluation manual.

It was also noted that failure to monitor performance of enforcement activities against the set enforcement targets denied NEMC an opportunity to establish whether they are performing well or lagging behind the specific objectives established.

3.11.2 Monitoring of NEMC's performance conducted by the VPO

Monitoring and evaluation are critical oversight and program management tools that could help in ensuring that strategic objectives and intermediate goals of VPO are met.

This section focuses on how VPO conducts monitoring and evaluation of environmental enforcement activities in the mining sector in the country as conducted by NEMC. It includes how the Ministry responsible for environment plans the monitoring and evaluation of NEMCs performance, criteria used for evaluation, how it is conducted and remedial actions taken on the evaluations conducted.

Performance Monitoring of NEMC

The VPO has the responsibilities of monitoring performance of NEMC as detailed in Chapter two paragraph 2.8.6 of this report. However, results from documentary review and interviews with the VPO-Environment officials during the course of this audit revealed that the Ministry does not perform monitoring and evaluation of NEMC's activities.

The audit team noted that VPO has a number of monitoring plans envisaged within the Strategic Plans⁴³. VPO also has individual annual monitoring plans for monitoring purposes. These are functioned by the Planning Unit. However, despite the plans covering wide areas of environmental aspects to be monitored, they did not adequately identify the mining areas that would be monitored. The monitoring parameters do not widely address issues of mining as one of the major polluting industry thus requiring special interest for monitoring purposes.

43 For period 2013/2016

Similarly, VPO lacks a comprehensive plan for monitoring the performance of NEMC on the issues of enforcement of environmental compliance as stipulated in EMA 2004. The audit also found out that the ministry, despite being the overseer of implementation of environmental enforcement compliance, the Ministry has not developed monitoring system which could have been used as guidelines for monitoring the performance of NEMC.

Equally, there was no documented statement in the Ministry's Strategic Plan detailing the overall objectives, strategies and priorities for monitoring NEMC operations.

Lack of monitoring plans has hindered the Ministry from having reliable information for guiding and controlling the implementation of enforcement to ensure environmental compliance and making sure that the right decisions are made in attaining set goals.

Inadequate monitoring and evaluation of NEMC's activities

According to EMA 2004, Ministerial Responsibilities Statement of 2010 and review of VPO's Strategic Plans of VPO, it was noted that VPO has a primary role in monitoring and evaluating the performance of NEMC's activities.

The review of the VPO's Medium Term Strategic Plan of 2011-2016 (MTSP) and Monitoring and Evaluation Plans as indicated in the MTSP showed that VPO did not set out the performance indicators for assessing NEMC's enforcement activities. Further, interviews held with VPO officials indicated that no monitoring and evaluation was carried out to assess NEMC's performance in environmental enforcement in mining sector or in other related areas. The performance was instead gauged against the utilization and uses of funds disbursed to NEMC by VPO⁴⁴ although no reports were issued in this regard.

Reasons for failure to conduct such monitoring of NEMC's activities were lack of well documented monitoring guidelines or manuals which are tailored specifically for mining activities; lack of monitoring indicators specifically with regards to NEMC's environmental enforcement performance; lack of prioritization of monitoring activities within VPO and its departments, in particular in respect of mining sector as one

⁴⁴ If such disbursed funds were used according to NEMC's plan or whether environmental incidents were managed accordingly

of the key environmental aspects whose enforcement is required to be regularly monitored.

The impact of not monitoring NEMC's environmental enforcement performance is that VPO lacked well analyzed information to enable them to take proper systems, actions or decision. VPO also could not be able to assess the systems for actual performance of NEMC based on actual input of resources injected in the environmental enforcement activities as against the actual output resulting from NEMC's enforcement activities. The VPO has therefore failed to assess whether NEMC's environmental enforcement objectives were actually met.

3.12 Summary of Findings

3.12.1 Cause and effects relationship

Appendix 4; as presented in the tabular form summarizes causes and effects relationship of each findings.

CHAPTER FOUR

CONCLUSIONS

4.1 Overall Conclusion

Based on the facts presented in the findings chapter, the auditors concluded that the National Environmental Management Council (NEMC) has not adequately fulfilled its objectives on environmental compliance and enforcement as mandated by the Environmental Management Act No. 20 of 2004. This is mainly because it lacks strategic capacity to plan, prioritize and implement environmental compliance and enforcement in the mining sector. Generally NEMC has failed to undertake enforcement systems to the mining facilities despite the fact that its strategic plan required this institution to conduct inspections to all mining activities.

NEMC also has not adequately used the information from other actors such as LGAs and concerned MDAs in performing its compliance and enforcement activities.

Non availability of the parameters for guiding the enforcement of the implementation of environmental control systems on the mining facilities made it difficult for NEMC themselves to assess its level of performance.

Although, it might be true that the resources availed to NEMC are inadequate to implement their tasks but even the little resources that were made available to them for reinforcement of mining activities were not used efficiently.

4.2 Specific Conclusions

4.2.1 Planning for enforcement not satisfactorily done

Based on the auditor's findings, the auditors concluded that planning for enforcement of environmental control systems in the mining sector is not based on risky factors. Also, strategies for enforcement of the implementation of environmental control systems are not clearly set out. All facilities were given equal priority in inspection despite the fact that some of them are more risky in terms of health and environment hazards than others. Due to poor planning NEMC has failed to allocate resources, inspectors, inspection tools and funds for inspection, in a rational manner.

Failure to prioritize for risky areas which require continuous enforcement hindered the effectiveness of NEMC to apply various enforcement tools such as inspections, sanctions and monitoring of mining activities for the whole period under review. The Auditors further concluded that due to such scantiness in planning, NEMC failed to allocate resources during enforcement and were in most cases forming task forces during the discharge of its enforcement duties.

4.2.2 Inadequate enforcement mechanisms

Inspections: Based on the auditors findings it was concluded that NEMC is generally not proactive rather its actions are based on reported complaints and incidents. In the case where NEMC does not receive complaints or incidents, then all enforcement undertakings are given equal priority despite the fact that some facilities may carry higher risk in terms of health and environmental hazards. Inspection on part of the medium and small scale mines was not attended.

Sanctions and follow-up: Sanctions used by NEMC allow progressive repetition of defaulters and offenders. NEMC has been applying penalties and fines simultaneously thus allowing the defaulters and offenders pay the fines and proceed with defaults. The follow-up to determine environmental compliance is weak as a number of inspected mining facilities have not been revisited for follow-up purposes. Facilities are repeatedly being fined instead of applying other stern sanctions available including closure of facilities.

Reporting: The reporting mechanisms in NEMC are not well defined. It is concluded that, reporting of environmental issues to NEMC as the sole enforcer is fully developed. Despite the fact that MEM and LGAs are required to report to NEMC on any environmental activity done there were no reports submitted for the whole period under review. Quarterly performance reports and annual progress reports were not submitted to VPO as required by EMA 2004. The consequence of this is that VPO does not adequately disclose the performance of NEMC and how NEMC has achieved its enforcement objectives during the year.

Documentation and record keeping: NEMC has weak and inaccurate documentations resulting from its enforcement activities. The reports are not well recorded and kept. Complaints and incidents reported are not well documented. Fully documenting active records and reports would not only facilitate the recording decisions but would help to serve

as a proper tool in planning and measuring the enforcement performance thus identify the areas for further improvement.

Roles and responsibilities between NEMC and its Zonal Offices: With regards to findings the auditors concluded that the division of responsibilities is not clear as NEMC-HQ seemed to do most of enforcement activities on the mining facilities despite of having Zone Offices.

4.2.3 Poor coordination of environmental enforcement activities

It was therefore concluded that there was a poor coordination in environmental enforcement within NEMC itself, between NEMC and MDAs (MEM and TMAA) as well as LGAs.

Interdependence of directorates: Auditors found that Directorate of Environmental Compliance and Enforcement lack relevant information from Directorate of Environmental Impacts and Assessment with regards to mining facilities possessing or not possessing EIA certificates. The information includes Environmental Management Plan for every mining facilities.

Overlapping of activities within NEMC: The auditors concluded that inspections activities which are core functions of the Directorate of Environmental Compliance and Enforcement (DECE) is also being done by directorate of Environmental Impacts and Assessment. Auditors also concluded that there is no clear reporting framework between the two directorates.

Coordination between NEMC and LGAs: The auditors concluded that the coordination between NEMC and LGAs was inadequate. This is mainly due to lack of clearly developed systems which enables enhancement of coordination between NEMC and LGAs. Also LGAs are not submitting the reports to NEMC as required by EMA 2004.

Coordination between NEMC and MEM: It was concluded that NEMC does not have clear coordination and reporting systems with MEM. Despite the fact that MEM has an environmental department, there is no information regarding implementation of environmental management that is submitted to NEMC for enforcement purposes.

Coordination between NEMC and TMAA: The auditor findings concluded that despite the presence of memorandum of understanding signed between NEMC and TMAA which is aimed at enhancing efficiency of enforcing environmental compliance in the mining facilities, the key agreements in the MoU are not effectively implemented.

4.2.4 Inadequate monitoring and evaluation mechanisms

The monitoring and evaluation of NEMC's enforcement activities is not well functioning. NEMC does not monitor its enforcement activities. According to the NEMC's strategic plan, the Central Planning Unit has been charged with the role of monitoring and evaluation, which has not been done. The CPU does not issue quarterly or bi-annual or annual monitoring or evaluation reports. The monitoring and evaluation is dormant as NEMC has not developed any parameters that would be used as indicators of its enforcement activities. In that case NEMC has failed to even put in place systems that will assess the performance of individual directorates in enforcement of the implementation of environmental controls in the mining sector.

As per the Strategic Plan 2010 - 2014, NEMC was supposed to conduct two evaluations so as to determine and assess the extent to which the strategic objectives envisaged in it have been met. Evaluation was to be made twice, that is during the first two years and the last two years of the implementation of the strategic plan 2010-2014. NEMC has not carried out the evaluation of its performance both internal and external. On the other hand, VPO which has a role of monitoring NEMC's performance has not adequately monitored its performance and therefore unable to determine the actual performance of NEMC in the enforcement activities in general and on the mining facilities in particular.

The miss-functioning of the Monitoring and Evaluation systems has provided a room for a number of mining facilities not being monitored, inspected and thus enforcement systems not implemented as laws or need require. Lack of monitoring and evaluating the performance has led to non-availability of statistical data which would identify the level of compliance in the mining sector and thus measuring performance has become a mammoth challenge on part of NEMC and VPO in general.

A number of deficiencies are associated with lack of monitoring and evaluation of enforcement activities including but not limited to:

- (1) non-submission of environmental reports or information from sector ministries and from the LGAs;
- (2) Poor flow of information and coordination between NEMC Head Office and the zonal offices including roles and responsibilities of zonal offices;

- (3) sanctions imposed to a facility severally on the same environmental offence; and
- (4) difficulties in assessing enforcement performances.

All the above deficiencies would have been detected if NEMC and VPO would have effective and working monitoring and evaluation systems.

CHAPTER FIVE

RECOMMENDATIONS

5.1 Preamble

The audit findings and conclusions indicated that there are weaknesses in the enforcement activities that were designed to ensure compliance with environmental requirement which are being performed by NEMC especially in the mining sector and in particular in the medium and small scale mines. The weaknesses were noted on all four audited parameters namely: (i) Planning of enforcement activities, (ii) actual enforcement, reporting, sanctioning and follow-up (iii) coordination of enforcement activities and; (iv) monitoring and evaluation of enforcement activities.

This chapter therefore provides for recommendations to the Vice President's Office - Environment as well as the National Environmental Management Council on what should be done in order to address the weaknesses and thus improve performance in enforcement.

The audit office is of the view that, once these recommendations are fully implemented there is going to be improvement in the way VPO and NEMC together with other sector ministries enforce the implementation of environmental control systems in the country thus improve environmental standards and sustainability.

5.2 Planning for enforcement of environmental control systems

The National Environmental Management Council should:

- 1) undertake proper monitoring/inspection to establish performance profiles of those facilities whose enforcement is vital with the view of establishing the compliance level of each of the mining facilities and use such information as the basis for planning the enforcement;
- 2) make sure that all zonal offices are developing enforcement plans based on risks posed by each mining facility in their jurisdiction and use such information to guide realistic setting of the targets and appropriate allocation of the resources for enforcement activities; and

- 3) establish performance standards or parameters for enforcement activities including carrying out risk assessment, developing enforcement manuals, guidelines, and timeframes for each enforcement activity.

5.3 Enforcement, reporting, sanctioning and follow-up

The National Environmental Management Council should:

- 1) Institute systems to ensure consistent enforcement of environmental control systems by carrying out routine, timely and prompt enforcement activities rather than based on only reported incidents and/or complaints;
- 2) Carry out an analysis between enforcement activities and the available resources and take corrective actions to enhance efficient use of the available resources;
- 3) Ensure the applications of sanctions are of a deterrence nature other than encouraging nature. This is possible if sanctions are issued according to laws and regulations and by periodically following up their respective implementation or impacts;
- 4) Make sure that information from zonal offices, LGAs and MEM is correctly reported to relevant channel of communication to enable keeping of records that is effective. This includes handling of environmental complaints and incidents that are reported;
- 5) Ensure each directorate performs its responsibilities accordingly and in case either directorate discharges duties of the other, there should be clear mechanism of reporting to the relevant directorates responsible for the tasks performed;
- 6) Ensure that DEIA establish the system which will be updating the DECE with the information about mining facilities that have undertaken EIA or EA or mining facilities without EIA certificate; and
- 7) Zonal offices have to be empowered in term of staff; fund and equipment to enhance them perform their duties in zones by doing so, NEMC should also consider retaining to the zones part of the fees and charges collected from each respective zone in order to cater for enforcement activities in their respective zone.

5.4 Monitoring and evaluation of enforcement activities

The National Environmental Management Council should ensure that:

- 1) Monitoring and evaluation indicators for enforcement of environmental control systems in the mining sector are established and approved and periodic monitoring and evaluation of enforcement activities is done accordingly and the results are used as the basis for further improvements; and
- 2) All reports resulting from environmental enforcement activities from zonal offices, LGAs or other sector ministries as received are properly scrutinized to determine any deficiency and provide feedback to the concerned officials for corrective actions and further improvements.

5.5 Recommendations to the Vice President's Office - Directorate of Environment

The Vice President's Office - Directorate of Environment should ensure:

- 1) That environmental enforcement activities done by NEMC, Sector Ministries and LGAs are properly coordinated, harmonized and all stakeholders establish a firm reporting line of environmental matters;
- 2) A general environmental status report on mining sector in the country is prepared annually. An annual compilation of reports on environmental enforcement roles in the mining sector as carried out by other government departments are made available and used for assessing enforcement of performance annually and be the basis for further improvements;
- 3) That it monitors NEMC's performance on enforcement of the implementation environmental control systems in the mining sector by regularly reviewing its performance as well as improving the NEMC's capacity in meeting its overall enforcement objectives; and
- 4) That it sets up clear enforcement guideline that will be consistent with all environmental enforcement and monitoring organs.

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APPENDICES

Appendix 1: Audit Questions and Sub Audit Questions

Question 1	Has NEMC developed adequate environmental plan for the enforcement of implementation of environmental control mechanisms in the mining sector
1.1	<i>To what extent do the enforcement plans identify risky areas with environmental problems caused by mining operations?</i>
1.2	<i>Do the strategic, operational and annual plans for enforcement developed as a result of risk assessment of environmental problems in the mining areas?</i>
1.3	<i>Are the available plans based on surveys on the state of the environment with regard to environmental conservation and management particularly in areas with mining activities?</i>
1.4	<i>To what extent are the reported environmental incidents and complaints considered in developing environmental enforcement plans?</i>
Question 2	To what extent does NEMC conduct enforcement: inspection, reporting, sanctioning and follow-up of the implementation of environmental control systems in the mining sector?
2.1	<i>To what extent does NEMC conduct inspections in the mining areas to assess the level of compliance?</i>
2.2	<i>Does NEMC's inspection guidelines, criteria and controls address key risky environmental areas in mining sector?</i>
2.3	<i>Are the inspections conducted by NEMC define the number, frequency of inspections needed to give assurance about compliance with conditions including risk assessments to select the sites to be inspected?</i>
2.4	<i>To what extent does NEMC establish reporting mechanism resulting from inspections in order to assist in enforcing the implementation of the control systems in the mining areas?</i>
2.5	<i>To what extent does NEMC apply sanctions and other deterrent systems against environmental offences and how are they efficiently used to mitigate the environmental impacts resulting from mining activities?</i>
2.6	<i>To what extent does NEMC conduct follow-up on the implementation of its directives on environmental control systems?</i>
Question 3	To what extent does VPO and NEMC adequately coordinate with other sector ministries in environmental conservation issues?
3.1	<i>To what extent does VPO and NEMC's planning and execution of enforcement of environmental control systems are taking into account other key players in the mining sector?</i>
3.2	<i>Are the reporting of results from enforcement of control systems in mining activities widely shared and to what extent are the sanctions and follow-up of environmental activities widely coordinated?</i>
3.3	<i>To what extent does NEMC used the established environmental database in enforcing the implementation of environmental control systems in the mining affected areas?</i>

Question 4	To what extent do VPO and NEMC monitor and evaluate the existing environmental control systems in areas with mining operations/activities?
4.1	<i>Has NEMC and VPO developed monitoring plans by clearly showing each performance indicators and environmental threats that may result from mining operations?</i>
4.2	<i>To what extent does VPO conduct regular monitoring of NEMC's enforcement activities in order to assess the performance of enforcement of the implementation of control systems in the mining sector?</i>
4.3	<i>Does VPO evaluate the NEMC's performance of enforcement of the implementation of control systems in the mining sector?</i>
4.4	<i>Has NEMC developed adequate enforcement monitoring plans and does it monitor its enforcement performance?</i>
4.5	<i>Does NEMC adequately monitor the status of the level of pollutants in ongoing mining projects using the set out indicators and immediately institute remedial action?</i>
4.6	<i>Does NEMC evaluate its performance and performance of the mining activities and report on performance of each enforcement activity through the year?</i>

Appendix 2: List of Reviewed Documents and Officials Interviewed

List of Reviewed Documents

Document reviewed	Reason
Strategic Plans	To obtain the information about strategies towards addressing the problem of environmental impacts caused by the mining activities.
Activity Plans	To gain an understanding of the planned activities.
Approved Medium Term Expenditure Framework	To find out how the Ministries and LGAs allocate resources to issues that concern environmental protection.
Implementation and Performance Reports	To assess the performance and implementation status of planned activities concerning controlling of environmental degradation.
Monitoring and Evaluation Reports	To find out if the responsible authorities adequately monitor and evaluate the projects and activities that concerns environment in the mining sector.
Planning Guidelines	To find out if responsible authorities have these guidelines in place and if they follow the directives given in these guidelines.
Meeting Minutes for Technical Committee and Council Management Team Committee	To find out how LGAs address issues concerning Environmental Management.
Environmental Impact Assessment Reports	To gain understanding on environmental impacts that are likely to occur on the environment during mining activities.
Environmental Management Plan	To assess whether the plans are executed accordingly

List of Officials Interviewed

Organization	Official Interviewed	Reason
VPO	Director of environment and other officials responsible in environmental management	To obtain overall information about environmental management in the mining areas.
MEM	Commissioner for Minerals, Director for environment, Licensing Officers.	To understand their effort in implementing the control systems to protect the environment from damage caused by mining companies and miners which are licensed by them.
NEMC	The CEO and other officials responsible in management of EIAs in the mining sector.	To understanding their effort made in the implementation of the control activities to ensure that the environment is protected from being damaged by mining activities.
TMAA	The CEO and other officials	To gain information on how do they ensure that rehabilitation funds are remitted by mining entities to government for conservation of the environment and restoration activities.

Appendix 3: List of Recommendations and Audited Entities' Responses

List of Recommendations and VPO's Responses

No.	Recommendations	Response/Comment	Action to be taken
1	Environmental enforcement activities done by NEMC, Sector Ministries and LGAs are properly coordinated, harmonized and all stakeholders establish a firm reporting line of every environmental phenomena	This is an important recommendation in improving and enhancing enforcement of the Environment Management Act. It will improve coordination and reporting mechanism.	<ul style="list-style-type: none"> • Ensure sector, LGAs and other institutions have clear reporting systems that are functional and within the context of Environmental Management Act, 2004. • Ensure adequate funds for activities to enhance follow-up and regular checks to ensure that all environmental management activities by sectors, LGAs and institutions are regularly monitored and well-coordinated

No.	Recommendations	Response/Comment	Action to be taken
2	<p>A general environmental status report on mining sector in the country is prepared annually. An annual compilation of reports on environmental enforcement roles in the mining sector as carried out by other government departments are made available and used for assessing enforcement of performance annually and be the basis for further improvements</p>	<ul style="list-style-type: none"> The recommendation is noted for implementation. As part of the Environmental Management Act, 2004, a state of the environment report is prepared (Second State of Environment Report 2014). Some of the issues related to mining activities are covered in the report. Vice President's Office has been receiving annual Mining Environmental Reports from Large Scale Mining. 	<ul style="list-style-type: none"> Hold consultative meetings with relevant stakeholders to remind them and clarify this recommendation Include the activity in the VPOs budget accordingly Improve further the state of the environment reporting on mining issues Operationalization of the Strategy for Urgent Actions on Conservation of Land and Water Catchments. Improve monitoring and compilation of the General Environmental Status reports on mining.

No.	Recommendations	Response/Comment	Action to be taken
3	Monitors NEMC's performance on enforcement of the implementation environmental control systems in the mining sector by regularly reviewing its performance as well as improving the NEMC's capacity in meeting its overall enforcement objectives	An important recommendation noted for implementation	Develop a comprehensive Plan for Monitoring the Performance of NEMC. <ul style="list-style-type: none"> • Develop Performance Indicators, • Monitoring indicators

List of Recommendations and NEMC's response

S/No.	Recommendation	Response/Comment	Action to be taken
1	Undertake proper monitoring/ inspection to establish performance profiles of those facilities whose enforcement is vital with the view of establishing the compliance level of each of the mining facilities such information as the basis for planning the enforcement	<ul style="list-style-type: none"> Inspections of large mines have been conducted to a large extent and the baseline information for those mines exist which can form basis for planning enforcement action Inspections for Medium and Small scale mining have not been done adequately as a result there is inadequate baseline information to be used as a basis for planning the enforcement. 	<ul style="list-style-type: none"> For large mines, frequent inspections and monitoring will be conducted to assess their compliance levels. The capacity of Zonal Officers will be built to enable them to conduct regular inspections in mines within their areas of jurisdiction. For the Medium and Small scale miners, the Council in collaboration with the MEM, LGAs and Zonal Offices, will carry out an inventory followed by baseline inspections to ascertain key environmental issues that need to be addressed in each mine. Based on these enforcement plans will be established.
2	Make sure that all Zonal Offices are developing enforcement plans based on risks posed by each mining facility in their jurisdiction and use such information to guide realistic setting of the targets and appropriate allocation of the resources for enforcement activities	<ul style="list-style-type: none"> Enforcement plans are not in place. Instead we use site specific inspection procedure guidelines to conduct inspections in the mining facilities. 	<ul style="list-style-type: none"> Staff at the Zonal offices, in collaboration with staff from NEMC HQs, after carrying out the inventory and baseline inspections, will develop enforcement plans for all the mining facilities in their areas of jurisdiction.

S/No.	Recommendation	Response/Comment	Action to be taken
3	Establishes performance standards or parameters for enforcement activities including carrying out risk assessment, developing enforcement manuals, guidelines, timeframes for each enforcement activity	<ul style="list-style-type: none"> There are Regulations in place prescribing Environmental Quality Standards (for air, water and soil) against which various parameters tested in the mines are measured. 	<ul style="list-style-type: none"> The Council shall liaise with the Tanzania Bureau of Standards to see the possibilities of developing specific Environmental Quality Standards for mining facilities
4	Institute systems to ensure consistence enforcement of environmental control systems by carrying out routine, timely and prompt enforcement activities rather than based on only reported incidents and complaints	<ul style="list-style-type: none"> Currently, inspections of mines are not consistent. They are mainly conducted following incidences or complaints 	<ul style="list-style-type: none"> The Council in collaboration with our key stakeholders (TMAA, Water Basin Offices, GCLA Zonal offices, NEMC Zonal offices and staff from NEMC HQs) will draw up a framework for regular inspections and monitoring of mines in the country, depending on availability of funds
5	Carry out an analysis between enforcement activities and the available resources and take corrective actions to enhance efficient use of the available resources	<ul style="list-style-type: none"> NEMC has noted the Auditor's recommendation. 	<ul style="list-style-type: none"> NEMC will continue to solicit for funds from the Government and other development partners to facilitate capacity building in terms of staff, knowledge, skills and equipment for effective enforcement activities NEMC will continue to conduct inspections to facilities basing on their risk to causing environmental pollution.

S/No.	Recommendation	Response/Comment	Action to be taken
6	Ensure the applications of sanctions are of a deterrence nature other than encouraging nature. This is possible if sanctions are issued according to laws and regulations and by periodically following up their respective implementation or impacts	<ul style="list-style-type: none"> Sanctions imposed to violators have always been in accordance to the applicable Laws and regulations. Follow ups have always been done either by follow up inspections or by self reporting by the facilities on their status of the implementation/compliance to the served sanctions. 	<ul style="list-style-type: none"> NEMC will continue with the close monitoring of the mining facilities. Deterrent sanctions will be given whenever necessary and in accordance to the relevant legislations.
7	Make sure that information from Zonal offices, LGAs and MEM is correctly reported to relevant channel of communication to enable keeping of records that is effective. This includes handling of environmental complaints and incidents that are reported	<ul style="list-style-type: none"> Auditor's recommendation noted and to be taken seriously 	<ul style="list-style-type: none"> NEMC will continue to remind the Zonal Offices, LGAs and MEM to report to the relevant authorities following the relevant channels of communication Complaints and incidences reported to NEMC will be addressed promptly and will be correctly stored in the database specifically developed for that purpose
8	Ensure each Directorate performs its responsibilities accordingly and in case either Directorate discharges duties of the other, there should be clear mechanism or reporting to the relevant directorate responsible for the tasks performed	<ul style="list-style-type: none"> Each Directorate has been performing its duties in accordance to its approved work-plan and budget 	<ul style="list-style-type: none"> Where there is a danger of overlap, the tasks will be performed by a team consisting of representatives from responsible Directorates. Hence each staff will report to their respective Directorates.

S/No.	Recommendation	Response/Comment	Action to be taken
9	Ensure that DEIA establish the system which will be updating the DECE with the information about mining facilities that have undertaken EIA or EA or mining facilities without EIA certificate	<ul style="list-style-type: none"> The recommendation is noted and taken 	<ul style="list-style-type: none"> NEMC is finalizing the database/system in which all information of each specific project will be loaded. This will enable any interested directorate to access information needed.
10	Zonal offices have to be empowered in terms of staff; fund and equipment to enhance them perform their duties in zones by doing so, NEMC should also consider retaining to the zones part of the fee and charges collected from each respective zone in order to cater for enforcement activities in their respective zone	<ul style="list-style-type: none"> The Council depends on the approval from the President's Office - Public Service Management to recruit new staff. The Council depends on Govt subvention and donations/grants from development partners. The Zones are involved in the collection of fees and charges from facilities located in their zones 	<ul style="list-style-type: none"> The Council will continue to request for permission from the government to recruit more staff to meet its requirements. The Council will continue to solicit for more funding from different sources, including Government subvention, grants/donations from donor partners and Identifying more sources for fees and charges. The Management has agreed in principle to retain some of the funds collected by the zones through fees and charges to facilitate activities at the zone.

S/No.	Recommendation	Response/Comment	Action to be taken
11	Monitoring and evaluation indicators for enforcement of environmental control systems in the mining sector are established and approved and periodic monitoring and evaluation of enforcement activities is done accordingly and the results are used as the basis for further improvements	<ul style="list-style-type: none"> Each mining facility develops an Environmental Management Plan (EMP) and Monitoring Plan (MP). Both EMP and MP are reviewed and approved by the Council, which guides the implementation of the project activities and parameters to be monitored/audited. 	<ul style="list-style-type: none"> The Council will continue to oversee the development and approval of the EMPs and MPs for each facility to ensure their quality. Using the EMPs and the MPs, the Council will conduct regular inspections and monitoring of the facilities.
12	All reports resulting from environmental enforcement activities from Zonal offices, LGAs or other sector ministries as received are properly scrutinized to determine any deficiency and provide feedback to the concerned officials for corrective actions and further improvements	<ul style="list-style-type: none"> The Auditor's recommendation is noted and well taken 	<ul style="list-style-type: none"> The NEMC will ensure that reports on enforcement activities' from the zones, LGAs and Sector Ministries are critically reviewed. Corrective actions and further improvements will be communicated accordingly. Where necessary, appropriate interventions or any other technical assistance from NEMC HQs will be provided.

Appendix 4: Causal-effect relationship of major issues observed during the audit

Issue	Section from the report	Main finding	Identified causes	Consequences
Planning for the enforcement and compliance activities	3.2	NEMC did not plan based on risks associated to mining activities in the country.	Lack of Environmental Risk Assessment mechanisms which would provide for risky mining facilities in the country.	Mining facilities with low risks will be inspected while those with high risk remain uninspected thus pose large environmental risk of pollution to environment.
		NEMC did not prioritize the type of mining facilities to be covered for enforcement purposes during the year in order to ensure effective use of resources.	NEMC did not maintain a comprehensive environmental compliance status database for all mining facilities in the country; as a result it is difficult to prioritize the facilities to be inspected in a year. Inadequate sharing of information between DECE and DEIA.	Inadequate utilization of available resources due to improper allocation of resources. High risk mining facilities will remain un-inspected throughout the year thus posing threat to public health and environment.
		The plan also did not include Performance Indicators which would be used to measure its performance at the end of the year.	NEMC did not maintain a comprehensive environmental compliance status database for all mining facilities in the country; as a result it is difficult to quantify the facilities to be inspected in a year. Inadequate sharing of information between DECE and DEIA.	Difficult to assess the effectiveness of enforcement programmes as the result provide little assurance that mining facilities meet their conditions. Also difficult to assess the efficiency of funding for enforcement activities.
		Inadequate recording of environmental incidents or complaints brought forward	Lack of proper record keeping systems of environmental information, incidents or databases, lack of special unit for receiving incidents and complaints, and also absence of reporting and receiving procedure.	Difficult to analyze the trend of incidents or complaints whether it is increasing or decreasing. As the result lack of information to be used when planning for the inspection and also can lead to improper allocation of resource e.g. fund.

Issue	Section from the report	Main finding	Identified causes	Consequences
Implementing Inspection to detect non-compliance by miners	3.3	The Coverage of mining facilities during inspections as most inspections done are not concentrated on the mining facilities for the whole period of the audit. Only 32 percent of mining facilities were inspected for the period of three years under audit. NEMC has not inspected small mining facilities for the whole time of the audit period.	<p>Inadequate planning for inspection. Thus no priorities have been placed on the small mining facilities though their impact is acknowledged.</p> <p>Inadequate sharing of information between two directorates DEIA and DECE regarding to statistical information about the number of mines with or without EIA certificates.</p>	A number of mining facilities will remain uninspected for years if they are not known by NEMC or brought into attention of NEMC, thus pollution caused by Mining may continue to affect the environment and the people overtime.
		NEMC's Zonal Offices have not carried out inspections to mining facilities for the whole of the audit period as a few inspections done to mining facilities during the period were carried out by NEMC-HQ.	<p>Delays and un-proportional distribution of funds to zonal offices.</p> <p>In sufficient fund released to zone offices</p>	<p>Most mining facilities especially small and medium and small scale facilities have remained uninspected.</p> <p>Uninspected mining facilities have continued to operate without being inspected.</p>
		Inspections conducted by NEMC have been more of ad-hoc in nature other than routine or planned inspections.	<p>NEMV's plan did not indicate the number and type of facilities to be inspected in a year Also Lack of prioritization for inspection.</p> <p>Interaction with unplanned activities</p>	Inspections not conducted thus mining facilities are operating without being inspected

Issue	Section from the report	Main finding	Identified causes	Consequences
Reporting the Results of Inspections		NEMC did not have adequate record management processes and systems to ensure that information from inspections is captured, well reported and used to monitor the compliance with environment requirements.	NEMC does not maintain ongoing consolidated inspection performance information about which site have been inspected, what was found, and what action was taken as the result of inspection by either itself or any other enforcement agent.	Accordingly, lack of sufficient information limits NEMC's ability to analyse and demonstrate the effectiveness of its inspections.
		<p>Reporting of the enforcement results and feedback mechanism from zonal offices on the conducted inspection of environmental compliance was not functioning and effective. Other agencies or sector ministries as well did not produce and submit to NEMC head office as required by law.</p> <p>Mining entities (especially medium and small scale mining facilities) did not submit annual environmental compliance report.</p>	<p>Absence of follow up of zonal offices performances as well as to other sector ministries to enable them to submit the required reports as per the law.</p> <p>NEMC does not have records nor does it maintain a comprehensive register of all mining facilities in the country. Poor sharing of information, especially of registered mining facilities with EIA, between DECE and DEIA.</p> <p>Medium and Large Scale mines are not inspected meaning they are not aware of this requirement.</p>	<p>Performance of Zonal Offices and other sector ministries (MEM) on environmental enforcement status is unknown. Without knowing such status NEMC has failed to establish environmental compliance status for mining facilities in the country.</p> <p>NEMC's does not have knowledge of the performance of individual medium and small scale mining facilities thus it has been receiving reports from large mines only meaning NEMC does not have environmental status of these mines.</p>

Issue	Section from the report	Main finding	Identified causes	Consequences
Sanctioning the defaulters	3.7	NEMC had a tendency of applying sanctions which aimed at collecting revenue rather than barring/ preventing the facilities from non-compliance or the application of both.	In all mining facilities which were sanctions, no follow-up has been done and thus status of implementation of the issued sanctions is unknown.	If entities are only sanctioned without follow-up of the implementation of the given orders or instructions, it is likely that they will continue to pollute even after payments of such fines thus put environment and the citizens and other natural living organisms surrounding the mining areas in risk of endangering their health.
Coordination	3.9 and 3.10	There were poor coordination between NEMC, MEM, TMAA and the LGAs in respect of sharing reports generated from each one.	<p>Non-Sharing of statistical data and environmental findings;</p> <p>Non-defined reporting mechanism between them;</p> <p>Limited sharing of environmental enforcement results;</p> <p>Un-balanced and arbitrary enforcement activities among them</p>	Difficult to ascertain the status of what is happening in mines situated in the respective LGAs. Thus lack of these information will lead to some of the mining facilities remain unknown to NEMC for until their presence is brought forward by the LGAs or MEM.

Issue	Section from the report	Main finding	Identified causes	Consequences
Monitoring and Evaluation	3.11	<p>NEMC has not conducted monitoring and evaluation to assess the performance of enforcement activities. There were no bi-annual or annual monitoring reports that were prepared during the whole audit period under review.</p> <p>Ministry has not conducted monitoring and evaluation to assess the performance of NEMC in enforcing environmental compliance in the country .</p>	<p>NEMC did not have monitoring and evaluation manual.</p> <p>Ministry has not developed monitoring system which could have been the guide for monitoring the performance of NEMC.</p> <p>Equally, there was no documented statement in the Ministry's Strategic Plan detailing the overall objectives, strategies and priorities for monitoring NEMC operations.</p> <p>Lack of well documented monitoring guidelines or manuals which are tailored specifically for mining activities as well as lack of monitoring indicators specifically with regards to NEMC's environmental enforcement performance, also lack of prioritization of monitoring activities within VPO and its departments in particular in respect with mining sector as one of key environmental aspect whose enforcement is required to be regularly monitored.</p>	<p>Lack of monitoring performance of enforcement activities against the set enforcement targets denied NEMC an opportunity to establish whether they are performing well or lagging behind the specific objectives established.</p> <p>Lack of monitoring plans has hindered the Ministry from having reliable information for guiding and controlling the implementation of enforcement to ensure environmental compliance and making right decisions in attaining set goals which may lead to use of funds for monitoring and evaluation of NEMC's performance for other non-environmental or enforcement purposes.</p>



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