

REPORT OF THE COMMITTEE ON LANDS, ENVIRONMENT AND TOURISM ON THE AUDITOR GENERAL'S REPORT ON ENVIRONMENTAL DEGRADATION CAUSED BY MINING ACTIVITIES FOR THE FOURTH SESSION OF THE ELEVENTH NATIONAL ASSEMBLY APPOINTED ON 25TH SEPTEMBER, 2014

Consisting of:

Mr R K Chitotela, MP (Chairperson); Mr R Muntanga, MP; Ms M Miti, MP; Mr R Mwewa, MP; Dr S Musokotwane, MP; Mr H S Chansa, MP; Mr O Mulomba, MP; and Mr K Chipungu, MP.

The Honourable Mr Speaker,
National Assembly,
Parliament Buildings,
LUSAKA

Sir,

Your Committee has the honour to present its Report on the Auditor General's Report on Environmental Degradation Caused by Mining Activities for the Fourth Session of the Eleventh National Assembly.

Functions of the Committee

2. In addition to any other duties placed upon it by the Honourable Mr Speaker or any Standing Order or any other order of the Assembly, the duties of the Committee on Lands, Environment and Tourism are as follows:

- i. to study, report and make appropriate recommendations to the Government through the House on the mandate, management and operations of the Government ministries, departments and/or agencies under their portfolio;
- ii. to carry out detailed scrutiny of certain activities being undertaken by the Government ministries, departments and/or agencies under its portfolio and make appropriate recommendations to the House for ultimate consideration by the Government;
- iii. to make, if considered, necessary recommendations to the Government on the need to review certain policies and/or certain existing legislation; and
- iv. to consider any Bills that may be referred to it by the House.

Meetings of the Committee

3. Your Committee held seven meetings to study the Auditor General's Report on the Environmental Degradation Caused by Mining Activities.

Procedure adopted by the Committee

4. During the course of its deliberations, your Committee studied the Report of the Auditor General on the Environmental Degradation caused by mining activities. To further assist your Committee appreciate the subject matter, it invited the following to provide both written and oral submissions:

- (i) Zambia Consolidated Copper Mines Investment Holdings;
- (ii) Community Based Natural Resources Management Forum;
- (iii) Zambia Chamber of Mines;
- (iv) Office of the President, Copperbelt Province;
- (v) Office of the President, North Western Province;
- (vi) Ministry of Mines, Energy and Water Development; and
- (vii) Ministry of Lands, Natural Resources and Environmental Protection.

Audit Report Background

5. Zambia has predominantly been a mining country and is endowed with a wealth of natural resources such as copper, limestone and coal. During the last decade, several new mines had been opened which had raised considerable interest for their potential to contribute towards economic growth and poverty alleviation.

The mining sector had contributed to national economic growth through taxes, socio-economic infrastructural development, creation of employment and provision of education and health services, among others.

However, the mining sector had faced challenges in achieving sustainable mining practices which caused minimum impact on the environment. Poor mining and mineral processing practices pollute the environment and their effects continue long after the mine had stopped operating.

The environmental effects of mining and mineral resource activities affect all environmental media – land, air, water, and associated flora and fauna, and human health and safety.

It is, therefore, important that mining activities are managed in such a way that the negative impacts to the environment and humans are minimised.

Audit Findings

6. Audit Findings are set out below.

a) The mining companies were not complying with environmental rules, laws, regulations and environmental licensing conditions set by Government

Examinations of bi-annual reports submitted by mines to the Zambia Environmental Management Agency (ZEMA), correspondence files between ZEMA and the mines, the compliance monitoring reports, environmental audit reports from ZEMA and a physical inspection conducted on the facilities revealed that mining companies were failing to produce monthly returns or bi-annual reports on air emission to the environment. As a result, the contents of Sulphur Dioxide (SO₂), dust from stack emissions, Arsenic (As), Copper (Cu) and Lead (Pb) in the air emitted to the environment was way above the minimum limits set by ZEMA.

In addition, the audit revealed that both surface and ground water were also being polluted. For instance, the pH value was as low as three in some mines instead of the recommended six to nine. This meant that the water released to the environment was acidic. Total Suspended Solids (TSS) and Total Dissolved Solids (TDS) and in cases sulphates in the effluent was also high. Dissolved solids were an indicator that the chemical content of the waste water released to the environment was high. This was the case for some mines in that Total Copper (TCu), Total Cobalt (TCo), Total Manganese (TMn) and Total Iron (TFe) were very high in some instances.

The management of dumps and dams was also poor. Tailing Storage Facility (TSF), slag dumps, overburden dumps and waste rock dumps all had unrestricted access. In some dumps, there were no warning signs as required by law. Some mines did not carry out progressive re-vegetation of the embankments of the dumps while in the case of those that had started, the vegetation was sparse such that it did not provide adequate protection against erosion. The dumps were also polluting the surface water bodies and the underground water bodies or aquifers while some dumps' proximity to residential areas was below the required 500m. The close proximity of residential areas had exacerbated the problem of illegal mining and exposure to hazardous waste materials which in some instances had led to death.

Used oil storage facilities were equally poorly managed by some mining companies. According to the licensing conditions for storage of used oil, all hazardous waste should be stored in an area with limited access to unauthorised personnel, a bunded and impermeable floor and adequate ventilation to avoid build-up of hazardous fumes. The licensing conditions stipulated that the hazardous waste should be handled safely to avoid emergencies such as poisoning, fire, explosion, spills, etc. The licensing conditions issued by ZEMA also stated that the storage facility should be inspected periodically and the inspection results should be recorded in a record book that should always be kept within the storage facility for inspection by ZEMA Inspectors.

A review of compliance monitoring reports and physical inspections carried out revealed that licensing conditions that required that adequate warning and safety signs were visibly displayed were not adhered to and access to storages facilities was not restricted. It was also observed that there were oil spillages in storage facilities which were finding their way in the drainages and subsequently polluting the environment. Further, some mines had no periodic inspection records on site contrary to the licensing conditions.

b) Measures Government had put in place to ensure that the environmental degradation caused by mining activities was adequately managed were not working effectively

Although the Government had put in place a comprehensive National Policy on the Environment (NPE) that had domesticated a number of international conventions or protocols on protection and control of the environment, the Ministry responsible for the environment and ZEMA had not carried out any review to assess how well the policy was being implemented by various stakeholders including mining companies. However, some of the conventions required costly technology to be put in place which was in fact a challenge for Zambia.

Strengthening of the regulatory framework had not been effectively carried out. Despite the Government providing resources through CEP to review the laws, only the principal legislation had been reviewed and replaced. The subsidiary legislation such as the statutory instruments on Environmental Impact Assessment (EIA), Water and Air Pollution Control Regulations, *Statutory Instrument No. 29 of 1997, the Mines and Minerals Act (Act No. 31 of 1995), the Mines and Minerals (Environmental) Regulations 1997, Statutory Instrument No. 102 of 1998, The Mines and Minerals Regulations (Environmental Protection Fund) Regulations of 1998* had not been reviewed. As a result of failure to review the sub-regulations, the current laws were inadequate to provide guidelines and hence difficult to enforce. Furthermore, legislation on all producer responsibility for all companies generating waste had not been developed. The audit also revealed that there was no law on noise pollution and that segregated management of the various pieces of legislation by various government organisations was in fact one of the causes for a fragmented approach to management of the environment.

ZEMA had no standards on how to manage Uranium. Instead, ZEMA relied on the Ionizing and Radiation Protection Regulations which were administered under the Radiation Protection Board which it could not effectively enforce on the management of Uranium.

The Environmental Protection Fund (EPF), put in place by the Government, had not worked effectively. Mining companies were not complying with the EPF's regulations in that the majority were not paying the stipulated contributions. For those that had issued the bank guarantees and bonds, the bank guarantees or bonds were not validated by Bank of Zambia as per investment policy. The Mines Safety Department (MSD) had failed to enforce sanctions on defaulters to the Fund. The operation account was not functional and the hedging strategy put in place to ensure time value of money for the Fund was maintained was also poor. Only bank interests had been used as a hedging strategy thus not taking advantage of the full array of options the Fund's investment policy provides for. The MSD had also failed to appoint a competent External Fund Manager.

Monitoring and evaluation had also been ineffective as environmental monitoring activities were being carried out independently by various departments and there was no coordination in the collection of information and its storage.

Due to lack of capacity and resources, most institutions, including ZEMA and MSD, were unable to carry out monitoring regularly and consistently as they were mandated. Although equipment costing K880,847,632 was procured under CEP and delivered in 2009, for ZEMA to set up a laboratory, the laboratory was still not operational as of April, 2013. Some of the reasons advanced for the laboratory not being operational were that the laboratory did not meet the criteria required to have certification, such as adequate and specialised equipment and lack of a laboratory technician primarily assigned to handle laboratory work. Some equipment such as the portable gas monitoring equipment and portable pH meter were not in working condition while other equipment needed calibration and standards for checking their performance and that the laboratory did not have its own procedures and methods for carrying out tests.

As a result, ZEMA has had to rely on the test results provided by mining companies through bi-annual reports, a practice that renders the test results unreliable as ZEMA had no means of verifying them. ZEMA had on occasions used other organisations to carry out sampling and testing, a practice that makes data collection very expensive and unsustainable. This was one of the causes for mining companies to continue to release effluents and emissions that were higher than set limits.

Therefore, the goal and overall objective of the Government on environment and natural resources as set out in the National Policy on Environment of supporting its developmental priority of improving the quality of life of the people of Zambia through protection and management of the environment and natural resources in its entirety, balancing the needs for social and economic development and environmental integrity to the maximum extent possible, while keeping adverse activities to the minimum was not being achieved.

Recommendations by the Office of the Auditor General (OAG)

Based on the findings mentioned above, the Office of the Auditor General recommended as set out below.

a) Air, Ground and Surface Water Pollution

ZEMA should ensure that air released to the environment by mining companies did not exceed the standards prescribed and that companies that were polluting the air should be held accountable.

b) Management of dumps/dams

ZEMA and MSD should ensure that dumps and dams were managed properly by ensuring that:

- (i) **Restricted access** - Tailings, slag and overburden dumps should be secured and access restricted to authorised personnel only. This would not only preserve the integrity and stability of the dumps and thus reduce erosion, but safeguard the public from exposure to contaminants. In addition, illegal mining would be curbed.
- (ii) **Warning and safety signs** - All tailings, slag and overburden facilities should have warning and safety signs displayed at appropriate places.
- (iii) **Disposal of waste other than tailings material** - Mines should be penalized for disposing waste other than tailings, slag and overburden material on dump sites to deter offenders/would be offenders except for those that seek prior authorisation from ZEMA.
- (iv) **Progressive re-vegetation** - Progressive rehabilitation, including vegetation management should be carried out regularly, in line with licensing conditions and other guidelines.
- (v) **Proximity of residential areas to the dams/dumps** - In line with licensing conditions, there should be no residential areas within 500 metres of tailings, slag and overburden dumps. In addition, the practice of communities cultivating vegetables on toe dumps should be halted forthwith.
- (vi) **Submission of bi-annual reports** - Mines should submit bi-annual reports as stipulated in licensing conditions. ZEMA should ensure that bi-annual reports were analysed promptly to ensure that polluting facilities were identified and correction taken promptly.

c) Used oil storage facilities

All used oil storage facilities should have bunded and impermeable floors, adequate ventilation, warning and safety signs and restricted access at all times. In addition, firefighting equipment and fully stocked first aid kits should always be available at used oil storage facilities. Further, all storage facilities should be inspected periodically and inspection records readily available for inspection by regulatory authorities.

d) Policy formulation

ZEMA and the Ministry responsible for environmental protection should review the National Policy to assess its suitability for implementation in protecting the environment.

e) Development and enforcement of legislation

The statutory instruments on Environmental Impact Assessment (EIA), Water and Air Pollution Control Regulations should be revised in line with changes in mining practices as a matter of urgency, given that the regulatory framework was supposed to have been revised in full by 31st December, 2008. Furthermore, legislation on all producer responsibility for all companies generating waste should be developed and implemented.

Sub-regulations of *Statutory Instrument No. 29 of 1997, the Mines and Minerals Act (Act No. 31 of 1995), the Mines and Minerals (Environmental) Regulations, 1997 and Statutory Instrument No. 102 of 1998, the Mines and Minerals Regulations (Environmental Protection Fund) Regulations 1998* should be revised in order to address deficiencies identified in the current mining laws. The Government should also consider ZEMA administering the regulation to ensure that there was no duplication of work among government departments.

f) Environment Protection Fund (EPF)

MSD should ensure that all mines that were required to contribute to the Fund were compelled to do so. Punitive action should be taken against erring companies. Particularly, the small scale mines should lodge bank guarantees. In addition, the committee should select new account signatories who must begin to work immediately. All bank accounts held by EPF should be brought to the fore and reconciled by competent personnel. In addition, the Ministry of Mines, Energy and Water Development should ensure that a qualified person was deployed to manage the funds on behalf of the Mine Safety Department and the EPF committee as a matter of urgency.

The EPF funds should be invested in such a way as to ensure that the time value of money was maintained and the risk of the investments was diversified as per the investment policy.

The Legal Status of the Mining Development Agreements (With Regard To Indemnity to Pollute) Vis-À-Vis Their Cancellation by the Mines and Minerals Development Act, 2008

In view of some submissions that suggested that environmental degradation caused by mining could not be resolved due to the indemnities against environmental pollution that had been granted to most mining firms in the mining development agreements, and in view of the *Mines and Minerals Development Act of 2008* cancelling all such agreements, your Committee sought clarification from the Office of the Attorney General on the matter.

Submission from the Attorney General

The Attorney General stated that his submission was based on the analysis of the Development Agreement ("DA") and Environmental Liabilities Agreements ("Environmental Agreement") relating to Mopani Copper Mines Plc.

He submitted that the DA and Environmental Agreement made references to a Sale and Purchase Agreement and an Environmental Plan. The Attorney General's office could not obtain these documents despite efforts to do so from the Ministry of Mines, Energy and Water Development and the Ministry of Finance. The failure to obtain the aforementioned documents was attributable to absence of key officers from the Ministry of Finance and total absence of the documents from the Ministry of Mines, Energy and Water Development. The foregoing limitations notwithstanding, the Attorney General submitted as set out below.

Background

Section 9 of the *Mines and Minerals Act*, Chapter 213 of the Laws of Zambia permitted the Minister responsible for Mines to enter into Development Agreements "*For the purpose of encouraging and protecting large scale investments in the Mining Sector in Zambia*".

The *Mines and Minerals (amendment) Act No. 2* of 2000 introduced Section 9A which provided a statutory indemnity for environmental liabilities to Mining Companies which had purchased Zambia Consolidated Copper Mines (ZCCM) Assets.

Mining companies such as Mopani, further protected themselves by entering into both DA's and Environmental Agreements.

The *Mines and Minerals Act* Cap 213 was repealed and replaced by the *Mines and Minerals Development Act No. 7* of 2008.

Section 159 of the *Mines and Minerals Development Act* effectively prevented any Minister from entering into Development Agreements while Section 160 (1) of the *Mines and Minerals Development Act* cancelled all Development Agreements.

The Environmental Liabilities Agreement

Although Section 160 of the *Mines and Minerals Development Act* purported to cancel Development Agreements, the cancellation did not extend to other Agreements such as the Environmental Liabilities Agreement, which were described earlier as the Environmental Agreement.

Clause 2.1 of the Environmental Agreement provides as follows:

"Without prejudice to the statutory assumption of liabilities referred to in Recital (E) and without limiting or compromising the company's rights to claim in full under the statutory assumption in any form or manner, the Government of the Republic of Zambia undertakes to and covenants with the Company under this Agreement to indemnify and hold the Company harmless against any and all:

- (a) Environmental Losses suffered or incurred by it, provided that, if the acts or omissions giving rise to the Environmental Losses have or may have occurred over a period of time part of which is before and part of which is after the Environmental Loss Indemnity Termination Date, this indemnity shall only apply to that portion which occurs prior to the Environmental Loss Indemnity Termination Date; and (b) Environmental Clean Up Costs."*

The Environmental Agreement defines Environmental Loss as:

"any and all losses, damages, liabilities, costs and expenses which are suffered or incurred by the Company in respect of any Environmental Liabilities (including any costs and expenses which the company is required to pay):

- a. by court or regulatory order (which is not capable of appeal or which the Government of the Republic of Zambia or, if the Government of the Republic of Zambia has not exercised its rights under Clause 3, the Company has elected not to appeal);*
- b. pursuant to any settlement;*
- c. any reasonable substantiated costs and expenses of the Company in defending and/or settling any claim against it; and*

- d. *the reasonable substantiated costs of doing such investigative, upgrading or remedial work as may be ordered by the court or regulatory authority or agreed pursuant to any settlement, but which shall not include Environmental Clean Up Costs"*

The term '*Environmental Clean Up Costs*' is defined as:

"Environmental Clean Up Costs' means all the costs and expenses incurred by the Company in complying with any lawful direction of the Government of the Republic of Zambia made or issued after expiry of the Stability Period (as defined in the Development Agreement) to clean up and remove or otherwise retreat, stabilise or work over any stock of pollutant and/or remedy any other condition which either

- (a) was pre-existing at the date of this Agreement; or*
- (b) has arisen since the date hereof where such direction is issued prior to the date set for any such clean up, removal, retreat, stabilisation or working over in the Environmental Plan, but which shall not include Environmental Loss"*

From the definitions given above, the Government of the Republic of Zambia gave wide ranging environmental indemnities to some mining companies. The indemnities were only valid if they occurred prior to what the Environmental Agreement defined as the "*Environment Loss Indemnity Termination Date*". The Environmental Loss Indemnity Termination Date was defined in the following manner:

"Environment Loss Indemnity Termination Date" means, subject to Clause 2.2, the last date by which the Company is required under the Development Agreement to achieve the objectives and to comply with the requirements specified in the Final Environmental Plan."

In defining '*Environment Loss Indemnity Termination date*', the Environmental Agreement invited the provisions of the Development Agreement into the Environmental Agreement.

The last date by which the company was required under the Development Agreement to achieve the objectives was defined with reference to schedule 5 of the DA which states the following in paragraph 2:

"The Environment plan shall bring the operations (with the exception of Mufulira Smelter) into compliance with existing Environmental Laws within a period of three (3) years from completion".

The DA defined completion as follows:

"completion has the meaning assigned to it in the Sale and Purchase Agreement".

Contentions over cancellation of Development Agreements

Some mining companies such as First Quantum Mining Operations Limited ("FQMO") and Kansanshi Mining Plc ("KMP") had challenged the cancellations of the Development Agreements.

Since the Development Agreements were also made subject to international law, it was arguable at law that the unilateral cancellation of the Agreements by the Government amounted to a breach of contract.

FQMO sued the Government of the Republic of Zambia in the Permanent Court of International Arbitration last year over the cancellation of the Bwana Mkubwa Development Agreement. The Attorney

General led a team of lawyers that aggressively defended the Government culminating in the withdrawal of the arbitration. There was presently threatened arbitration by KMP in which it was threatened that arbitration would be commenced against the Government for US\$2.5 billion for the cancellation of the Kansanshi Development Agreement.

The Attorney General stated that the mining companies entered into both Development Agreements and Environmental Agreements, which were separate agreements. Although the Development Agreements were cancelled by law, the cancellation did not extend to the Environmental Agreements which were entered into with mining companies. The validity of the Environmental Agreements would need to be scrutinised with due reference to the Sales and Purchase Agreements and the Environmental Plans of the concerned mining companies.

Submission by Ministry of Lands, Natural Resources and Environmental Protection

7. The Ministry of Lands, Natural Resources and Environmental Protection submitted as set out below.

National Policy on Environment

The National Policy on Environment was comprehensive and there were several stakeholders involved in the implementation of the policy, ZEMA being just one of them. The Policy was in its seventh year of implementation and the Government intended to commence its review in 2015 so that it could adequately deal with the latest developments in the sector. Therefore, the concerns raised by the Auditor General's Report would be taken into account during the review process of the policy.

Lack of monitoring capacity by ZEMA and MSD

The Ministry agreed with the observation in the Report of the Auditor General on the monitoring capacity by ZEMA. The Government through the Ministry of Lands, Natural Resources and Environmental Protection was aware of the challenges faced by ZEMA in executing its functions as a result of its limited capacity as well as inadequate staffing levels. As a result, the Government intended to strengthen the capacity of ZEMA so that it could efficiently operate according to its mandate including enhanced monitoring capacity.

Goals Set-Out in the National Policy on Environment not fully achieved

The Ministry largely agreed with the conclusion that the goal of Government on environment and natural resources as set out in the NPE was not being fully achieved. She stated that the country faced challenges in balancing economic development and environmental protection. However, the Government, through the Ministry of Lands, Natural Resources and Environmental Protection and ZEMA, would continue to ensure that the environment and its natural resources were managed on a sustainable basis and retained their integrity to support the needs of the current and future generations without compromising either of them. For example, the Ministry of Lands, Natural Resources and Environmental Protection through ZEMA ensured that all projects that were deemed to have the potential environmental impacts including mining projects, undergo through an Environmental Impact Assessment (ETA) to safeguard the environment.

Failure to review the implementation of the National Policy on Environment

The Government intended to commence the review of the National Policy on Environment in 2015.

However, the implementation of the Policy was not limited to ZEMA. Other Government departments, communities, private sectors and non-state actors including ZEMA itself were implementing various aspect of the Policy. Therefore, it may not be entirely correct to conclude that the challenges faced by ZEMA rendered the Policy to be a mere statement of intent.

Policy Formulation

The Ministry noted the recommendations in the Auditor General's Report and the Government would commence a broad review of the National Policy on Environment to address, among others, suitability of the policy for implementation in protecting the environment.

COMMITTEE'S OBSERVATIONS AND RECOMMENDATIONS

8. Your Committee makes the following observations:

- (i) all observations and recommendations of by the Auditor-General are valid and have not been disputed by the various stakeholders;
- (ii) the management of the environmental degradation caused by mining is complicated by the development and environmental agreements that were entered into between the Minister responsible for mines on behalf of the Zambian Government and mining companies which gave indemnities to these companies against environmental pollution.
- (iii) the major sources of environmental degradation were from the mining and energy sectors;
- (iv) there appears to be lack of coordination and inter linkages between the various Government departments resulting in environmental issues being relegated to secondary position;
- (v) the Zambia Environmental Agency has failed to perform up to the expectation of safeguarding the environment and the people of Zambia;
- (vi) the need for energy fuel and the lack of alternative sources of fuel is increasing the rate of deforestation to unsustainable levels; and
- (vii) the regulatory framework for the mining sector is weak resulting in mining firms involving themselves in environmental malpractices that they would never allow or engage in their countries of origin.

Your Committee, therefore recommend as follows:

- (i) the Government should act on all of the Auditor-General's recommendations;
- (ii) the power to enter into agreements should not be left to an individual Minister but should have input from the Attorney-General's Chambers and the backing of Cabinet;
- (iii) there is need for the Government to explore and develop alternative sources of energy in order to lessen the dependence on wood fuel;
- (iv) there should be a complete overhaul of the Zambia Environmental Agency to make it responsive to its mission and vision;

- (v) there is need for inter-ministerial and inter departmental links within the Government to facilitate monitoring and regulation of the environment; and
- (vi) there is need to review all mining and environment related policies and legislation in order to come up with more stringent and workable laws that promote environmental sustainability.

CONCLUSION

9. Your Committee wishes to express its gratitude to you, Mr Speaker, and to the Clerk of the National Assembly for the support rendered to it during the year. Your Committee is also indebted to all the witnesses who appeared before it for their co-operation in providing the necessary memoranda and briefs.

Your Committee is hopeful that the observations and recommendations contained in this report will go a long way in improving the environmental sector in Zambia.

APPENDIX I

List of Officials

Mr S C Kawimbe, Principal Clerk of Committees
Ms M K Sampa, Deputy Principal Clerk of Committees
Mr F Nabulyato, Committee Clerk (FC)
Mr M F Kateshi, Committee Clerk (SC)
Ms S Sianga, Assistant Committee Clerk
Ms C Musonda, Assistant Committee Clerk
Mrs D Mukwanka, Assistant Committee Clerk
Mrs T C M Kasonde, Assistant Committee Clerk
Ms K Chisenga, Typist
Mr R Mumba, Committee Assistant