MINISTRY OF MINES AND MINERAL DEVELOPMENT

ENVIRONMENTAL AND SOCIAL MANAGEMENT FRAMEWORK

Zambia Mining Environment Remediation and Improvement Project

June 2016

EXECUTIVE SUMMARY

Project background and rationale for Environmental and Social Management Framework

1. *Project description*. The proposed Mining and Environment Remediation and Improvement Project (MERIP) in Zambia will contribute to reducing environmental health risks and lead exposure to the local population related to mining activities in critically polluted areas in Kabwe and Copperbelt provinces. This will be done through: (a) Optimizing existing financial mechanisms to identify, finance, implement and monitor feasible environmental and social measures for prioritized contaminated areas; (b) Strengthen environmental management in the mining sector through improved regulatory and institutional capacity of regulatory agencies (ZEMA, MSD, RPA) and the local governments to strengthen environmental management in the mining sector; and (c) Targeted health interventions and improved job opportunities for affected people, particularly women and youth through collaborative partnership with local government and neighboring communities, through improved capacity of the key institutions at the national, subnational and local levels. The Project includes the following components: (i) Investments for remediation of contaminated sites and environmental infrastructure improvements; (ii) Enhancing Institutional capacity to strengthen environmental governance and compliance; (iii) Reducing environmental health risks through localized interventions; and (iv) Project Management.

Rationale for ESMF

2. The majority of the proposed project activities are expected to have mostly moderate environmental impacts, which can be readily mitigated through an environment and social impacts assessment process. However, the project was categorized as A, as the Project through Component I, will support a number of higher risk activities, such as the closure or rehabilitation of tailing dams; remediation of contaminated hotspots in Kabwe; upgrading/development of solid and hazardous waste disposal facility in Kabwe; and improving the drainage and flow of Kabwe canal. Such sub projects would be screened when location details are available for environment and social risks, requiring full scale Environment and Social Impact Assessment. Other planned activities under Component II and component III are likely to have low to moderate risks include capacity building interventions, lab equipment upgrading, lead poisoning treatment program for target population in Kabwe, and small scale community driven projects in support of environmental health outcomes (nutritional support, income generation small grants). All site specific details and design will be informed through a demand driven and consultative approach. The two investments i.e. lining of Kabwe Canal and waste management facility will require pre-feasibility studies to establish various technological and construction alternatives. The environmental and social risks and impacts will relate to final site selection which will be the basis for a detailed Environmental and Social Impact Assessment (ESIA) and preparation of Management Plan. Since the exact locations of the activities and scope of works are not yet identified, the relevant instrument is an Environmental and Social Management Framework (ESMF). The ESMF provides project description, environment and social baseline, identification of anticipated risks and impacts, management and monitoring plan and institutional arrangements.

3. The negative environmental impacts that are likely to be caused by the proposed subprojects will include, but not limited to: loss of vegetation due to earth works and land clearance, increase in noise levels due to construction, structural failure risks from the

rehabilitation of tailing dams and overburden dumps from earth movement and stabilization, alteration of top soils, contamination of surface and ground water, increased effects on aesthetics, visual intrusion and landscapes.

4. The ESMF which has been prepared, consulted upon, disclosed prior to appraisal, includes procedures for screening of the sub-projects and their categorization and also the development of ESIA and/or ESMP once specific activities and locations have been identified. The ESIA/ESMPs will be prepared, consulted with local communities and disclosed prior to commencement of detailed planning and physical works, consistent with the World Bank policy on Environmental Assessment (OP4.01). Management and supervision requirements for the physical, chemical and biological environment (waste, water and sanitation etc.), health and safety of construction workers and safety and security of neighboring communities are built into the ESMF.

5. The project envisions a number of positive social impacts as the project aims to contribute to reduction of environmental health risks and lead exposure to the local population related to mining activities in critically polluted areas in Kabwe and selected towns on the Copperbelt province. In addition, the project has a dedicated subcomponent for providing livelihood improvement opportunities to communities affected by lead exposureSince the specific project activities and locations are not yet known (they will be identified through a consultative process during project implementation), the proposed environmental assessment instrument is an Environmental Social Management Framework (ESMF).

Main provisions of the ESMF

6. The types of sub-project activities that might cause significant adverse impacts, proposed for funding starting with the second year of the project include: (a) the closure or rehabilitation of tailing dams and remediation of contaminated hotspots; (b) upgrading of the existing dump site as a of solid and hazardous waste disposal facility in Kabwe; and (c) improving the drainage and flow of Kabwe canal to reduce the risks of flooding in the neighboring community. Based on the application of the procedures outlined in the ESMF, site specific ESIA and/or ESMP will be prepared for all sub projects based on the screening, and publicly disclosed, prior to finalization of the design and commencement of construction. During subproject preparation, the project implementing teams will use an opportunity to use the ESIA/ESMP findings to further improve project designs and minimize adverse impacts while maximizing positive impact on people and environment.
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7. A potential risk would be that the upgraded infrastructure is not maintained by the local government, which may cause the reversal of environmental conditions to the pre-project level. Copperbelt Environment Project provided a lesson learned for ZMERIP which will take participatory approach for all of its planned activities, including involving the public in the operation and maintenance of the project infrastructure post project closure. All subproject activities will be subjected to environmental and resettlement screening, using a series of protocols and templates. A separate protocol was developed

for CDD activities under Component 3 as described in the project ESMF and RPF. These procedures will allow project implementers at the national and municipal levels to identify, minimize or treat any potential adverse impacts, where needed by calling upon subject specialists to modify designs or propose alternatives. All project activities' design will be reviewed to avoid or minimize involuntary resettlement and land acquisition. Another risk is related to insufficient policy and regulatory support to tailing dump closures and overall management of environmental liabilities from past and present mining. In addition, there are social risks associated with implementation of the lead poisoning treatment program (e.g. poor communication about the program, community mistrust, etc.). The Component 2 of ZMERIP is dedicated to reduce this risk and provide support to a more sustainable approach for managing such liabilities, engaging MoM, MSD, ZEMA and other relevant agencies.

8. The Capacity Building and remedial measures required for the ESMF and RPF will be funded by ZMERIP under Component 4. The implementation of the measures to address safeguards policy issues include (1) development of ESIAs/ESMPs and, where required, RAPs, once the subprojects are designed; (2) knowledge sharing and ongoing capacity building for environmental and social management at all levels of project implementation including the communities; (3) environmental and social monitoring and reporting, including annual audits for Component 3 activities conducted by participating Municipalities. The training requirements for the implementation of the recommendations of the safeguard documents and for overall environmental management have been factored into the project budget. The project will be implemented by 3 PIUs (MSD, ZEMA and Kabwe MC), which will include dedicated environmental and social staff responsible for the implementation and monitoring of the ESMF and RPF. The responsibilities will include screening, preparation of the subproject specific documents, consultations, monitoring, auditing, training for other implementation partners and stakeholders.

9. The project stakeholders include relevant ministries at the national level (including MOM, MOH, Ministry of Environment), agencies (ZEMA, MSD, RPA), communities in the target areas – Kabwe, Kitwe, Chingola and Mufulira, especially the poor and vulnerable, living in contaminated areas affected by mining activities. The interventions will target about 500 women and unemployed youth in these communities through direct support for income generating activities and enhancements of livelihoods using a community based approach in order to reduce their current exposure to hazardous employment activities. Project stakeholders will also include more than 3,000 children who have been impacted by lead pollution, primarily in Kabwe, through direct health interventions including blood lead level testing, treatment and nutritional supplements. In Kabwe, remediation activities and management of contaminated hotspots will benefit around 70,000 people living in hotspots and an estimated 30,000 children will be beneficiaries of education and awareness building campaigns.

10. ZMERIP design is built on a participatory approach which requires community development activities to be defined, designed, planned and implemented by the local community groups. The project supports Government's decentralization agenda, whereby decision making has been devolved to the Municipal councils. The Municipal Councils of Kabwe, Kitwe, Chingola and Mufulira are the implementing agencies for their respective components and will be responsible for designing and implementing activities within their jurisdiction and also be the interlocutors with the local communities for the community development livelihood enhancement activities. All Component 3 activities will be preceded with an active communication and education campaign providing information about the risks of exposure to lead, proposed remedial actions and available project inverventions, such as the decentralized health program to reduce environmental health risks associated with chemical contamination and support to local income generation and livelihood activities.

11. Overall the project envisions a number of positive social impacts as the project aims to contribute to reduction of environmental health risks and lead exposure to the local population related to mining activities in critically polluted areas in Kabwe and selected towns on the Copperbelt province. In addition, the project has a dedicated subcomponent for providing livelihood improvement opportunities to communities affected by lead exposure. The ESMF identifies broad mitigation, monitoring and

institutional measures to be undertaken in order to ensure that the implementation of the project activities avoids as much as possible adverse social and environmental impacts, and when avoidable, mitigates such impacts. For potential loss of vegetation associated with construction, constructors and communities should minimize the loss of natural vegetation, and re-vegetate any plant loss with native species to protect susceptible soil surfaces. Contractors will be required to mitigate increased air pollution and noise levels during construction/ or rehabilitation of roads or other infrastructure by employing dust control measures, e.g. by spraying and moistening the ground, and limiting construction noise to restricted times agreed to in the permit. Possible contamination of water sources should be mitigated through disposal of contaminated water in addition to decisions on site locations location done in collaboration with relevant planning authorities, and in consultation with surrounding communities (where possible siting of building in locations previously used for infrastructure) to minimize negative environmental impacts.

Implementation and Monitoring System

12. Implementation of the ESMF will be coordinated by Project Coordination Unit (PCU) at the Ministry of Mines and managed by three Project Implementation Unit, each at Mines Safety department; ZEMA and Kabwe municipal Council. The PCU and PIUs include well trained and experienced safeguards specialists, familiar with World Bank safeguards policies. For environmental infrastructure to that involve larger scale physical works, a detailed and specific assessment to identify impacts are required. ESIA and resulting ESMPs will be contracted to be available during the design phase of these infrastructure works, and cleared by ZEMA, facilitated by the environmental and social safeguards responsible at the PIU. The ESIA will be reviewed and cleared by the World Bank Safeguards Advisor. The safeguard instruments for these infrastructure sub-projects are required to be sent in consultation with stakeholders. These works and safeguard measures will be monitored by ZEMA and the PIU through routine and independent audits. For sub-projects under the CDD process the management of safeguards will be embedded in the participatory identification of projects. The screening for environmental and social impacts is included in the process for submitting proposals for sub-projects.

ESMF outline

13. The first three Chapters (Chapters 1 to 3) of the ESMF provide background information that starts with a description of the proposed project which is followed by a brief explanation of the methodology used in formulating the ESMF as well as baseline information obtained in the target project areas. Chapter 4 provides an overview of the World Bank Operational Policies and national environmental management policies and regulations. The last four chapters of the ESMF provide guidelines on potential environmental and social impacts that are anticipated for various proto-type sub-projects, respective possible mitigation measures as well as relevant institutional arrangements for implementation and monitoring of safeguards. Chapter 8 of the ESMF takes into account prevailing institutional capacities and needs and recognizes the need for capacity building in safeguards application and monitoring.