

# ZAMBIA



## National Guidelines for Design and Management of Tailing Storage Facilities (TSFs) and Waste Rock (WR) Dumps in Zambia

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**INTERNATIONAL TRAINING  
PROGRAMME 308**  
Mine Water & Mine Waste Management



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## THE CHANGE PROJECT

Zambia is one of the largest producers of copper in the world and has a mining history dating back more than 100 years. However, the country has in recent years experienced the collapse of tailings storage facilities (TSFs). Pollution which emanates from poorly managed TSFs as well as waste dumps poses a great danger to nearby communities and water bodies where devastating effects can be evident. To date, Zambia does not have regulations or a standard guide for review of site selection, design, construction, management, inspections, rehabilitations, and closure of waste rock dumps (WRs), overburden dumps and tailings storage facilities. This leaves mining and environmental inspectors without a reference for technical guidance during inspections of TSFs and dumps, leading to poor reports and flawed decisions during the permitting process.

The guideline 'National Guidelines for Design and Management of Tailing Storage Facilities (TSFs) and Waste Rock (WR) Dumps in Zambia' aims to a) provide legal backup and framework for effective enforcement of regulations governing the safety and environmental concerns relating to TSFs and WRs, b) improve management of Tailings Storage Facilities (TSF) and Waste Rock (WR), c) promote adoption of best international approved industry standards and, d) to accord developers/owners a good reference tool for proper management of the facilities. The guidelines were initiated in 2019 by the Ministry of Mines through Mines Safety Department, Mines Development Department and by Zambia Environmental Management Agency (ZEMA) and has through this project progressed in its goal to be implemented in Zambia.

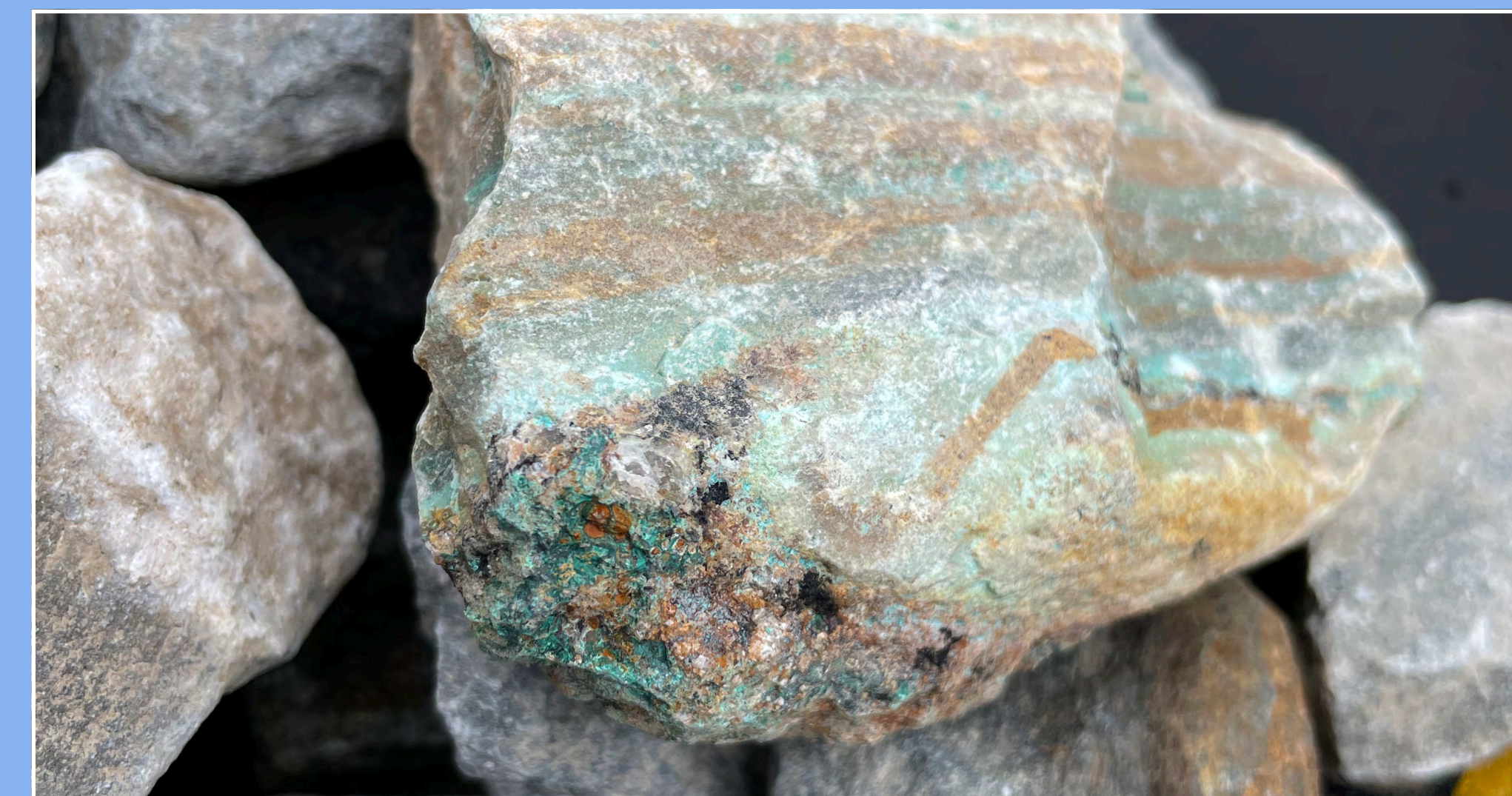


By the time of the start of this project, the guidelines had been drafted and amended by three working groups and the main task of current project team was to communicate the document outside the home organizations to get external feedback on the content. During the period of between October 2022 and August 2023, the project has progressed after several activities, for example:



## SIGNIFICANCE FOR THE PEOPLE AND THE ENVIRONMENT

**Pollution of the physical environment** is a negative effect of poorly managed mine waste management. This has been displayed in Zambia and in other mining regions in the world after devastating TSF failures where contamination of land, water and in the longer run human bodies has taken place. Hence, regulating, or guiding construction and management of TSFs and WRs is essential for safeguarding human health, protecting biodiversity, and minimizing the environmental impact of mining operations. By doing so, we can promote sustainable development for current generations and for the generations to come and that will rely on the same physical environment and communities as today, mitigate ecological harm through mitigation of pollution, and ensure a healthier future for both the. By implementing the National Guidelines for Design and Management of Tailing Storage Facilities (TSFs) and Waste Rock (WR) Dumps in Zambia, this future is more likely to be achieved.



- A meeting with previous working groups was held with the view of getting guidance on reviewing and including points where necessary in the development of the guidelines.
- Collaboration with the United Nations Development Project (UNDP) and the Swedish EPA was initiated with the aim to lobby for funds for stakeholder meetings.
- A new draft of the guideline document was created and sent in for review to external experts from Swedish EPA for an initial review. The comments have been received and acted on.
- Draft invitation letters to the stakeholder's engagement meeting were written and are awaiting approval and dispatching.

The importance of the project has been highlighted among several stakeholders in Zambia and was further emphasized after yet another TSF failure at a mineral processing licensed area where a water stream was heavily contaminated.



## RESULTS AND ACHIEVEMENTS

The guidelines had been drafted and amended by three working groups prior to this project and the main task of current project team was to communicate the document outside the home organizations to get external feedback on the content. During the period of between October 2022 and August 2023, the project has progressed after several activities, for example:

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The guidelines still need work before they can be used by stakeholders in Zambia. A document intended for national use and by multiple stakeholders must undergo thorough review by various types of experts. Prior to that, it's important for the actors at the governmental level to agree on the content, how the guide should be utilized, and by whom. Therefore, stakeholder meetings will be conducted with relevant authorities in the near future.

Once the concerned authorities reach a consensus, the document will be sent for technical review by external experts. Subsequently, external stakeholders will be consulted before the guide is submitted for the signing of a Memorandum of Understanding between ZEMA, MDD, and MSD, in order to be incorporated into Zambian regulation in the form of a Safety Letter. The timeline for completion of the guidelines is not yet determined but the work will continue in autumn 2023.