

London Mining Network

Comments on the Global Tailings Standard: Draft for Public Consultation

London Mining Network is an alliance of 30 human rights, environmental and solidarity groups all based in the UK. We support communities badly affected by mining and some of the ways we do this are advocacy, research and working for policy change.

London Mining Network welcomes this initiative by the United Nations Environment Program (UNEP), International Council on Metals and Mining (ICMM), and Principles for Responsible Investment (PRI) to create a Global Tailings Standard. Two major mining waste dam collapses and ensuing disasters in Brazil (in November 2015 and January 2019) demonstrate the urgent need for such Standards. London Mining Network welcomes the opportunity to comment on the draft Global Tailings Standards and has the following general comments.

1 Lack of a Problem Statement

It is usual, when planning actions to tackle an issue, to start with a Problem Statement, a clear and comprehensive statement of the issues being addressed or the condition to be improved on (including the perspectives of the different stakeholders). A Problem Statement identifies the gap between the current (problem) state and the desired (goal) state. Only after a Problem Statement has been agreed can a solution be discussed, then a course of action be determined. A problem cannot be solved if it is not understood fully.

There is no Problem Statement attached to the draft of the Global Tailings Standard. The mining industry has not published a document that states the Lessons Learnt from the collapse of the two dams. It is therefore difficult to assess whether the Standard fully addresses the issues and whether the perceptions of all stakeholders about the issues have been incorporated.

Possibly the mining industry itself has reached a consensus about the issues and there is urgency to begin tackling them. If this is the case, London Mining Network believes that the mining industry should provide a Statement detailing the lessons learnt from the collapse of two tailings dams in Brazil, its perceptions of the issues and the actions that it is taking (and planning to take) to address these issues. A further period of consultation should be agreed, in which the perceptions of other stakeholders (particularly local populations and organisations) about the issues are incorporated into the Problem Statement and Standards are agreed that address these aspects of the issue.

2 Consultation with local populations and organisations.

London Mining Network welcomes the fact that the Chair of the Global Tailings Review will visit areas that have suffered from the collapse of tailings dams and will consult with local populations and organisations. London Mining Network, however, is of the opinion that the time available for the present consultation is not sufficient to listen to and analyse the views of local populations and organisations about the issue of tailings dams and to discuss with them the acceptability of possible courses of action.

The Foreword by the Chair of the Global Tailings Review says:-

“It is vital that we continue to learn and understand what must be done to eliminate tailings facility failures. By continuing to integrate diverse insights and points of view, we will drive the change process forward.”

The implication of this statement is that there will be an ongoing process of improving and updating the Standards and that this will include the insights and points of view of local populations and organisations. Local populations and organisations can only provide their insights and points of view if they have time to prepare, have full information about the process of consultation and the timetable. If there is to be an ongoing process, its nature and timetable should be agreed during the present phase of consultation.

3 Towards a Problem Statement

This submission includes a series of statements that, in the opinion of London Mining Network, should be incorporated into a Problem Statement. They focus on the wider aspects of the tailings dams issue, namely Topic II (Affected Communities), Topic V (Emergency Response and Long-Term Recovery) and Topic VI (Public Disclosure and Access to Information). Because of the short period available for the Consultation, they should be considered as a provisional listing of issues based on the observations of London Mining Network in areas affected by the two recent serious mining waste dam collapse incidents in Brazil and conversations with local people and organisations. There has been no time to consult with them. As stated above, local populations and organisations can only provide their insights and points of view if they have time to prepare, have full information about the process of consultation and the timetable. If there is to be an ongoing process, its nature and timetable should be agreed during the present phase of consultation.

4 Causes of failure

Dam I at Corrego de Feijão (Brumdinho) was a marginally stable dam, because of a critical combination of ongoing internal strains due to creep and a strength reduction due to loss of suction in the unsaturated zone caused by the intense rainfall towards the end of 2018. An analysis is required of why no action was taken and lessons learnt need to be incorporated in a Problem Statement and then in the Standards.

Knowledge of the physics and engineering of tailings dams has improved since the 1970s, when many existing tailings dams were begun. However this knowledge was available at the time of the collapse and a full analysis is required which includes the internal management system and incentives and external regulation.

5 Duty bearers

The creation of Standards implies that certain stakeholders are taking on certain duties and responsibilities. The implications of the Draft are that it is individual mining companies who are taking on a series of duties and responsibilities. This should be stated explicitly. It should also be stated explicitly that mining companies will ensure that Non-Operated Joint Ventures accept these standards.

The Foreword by the Chair of the Global Tailings Review mentions that the standards should be embedded in other organisations. The implications of this (which organisations, which responsibilities) need to be made explicit. States in which there are tailings dams will presumably need to accept responsibilities to police many aspects of the Standard. States in which mining companies are registered will presumably need to police certain aspects of the Standard (for example regarding what is reported at AGMs and in Annual Reports about risks from tailings dams and the impacts of tailings dam collapses). A process should be defined for the embedding of these duties and responsibilities.

6 Situations to which Standards should apply

Standards about tailings dams will apply to different situations. These include:-

- The planning and building of new Tailings Storage Facilities (TSF)
- The takeover of existing TSF by another company
- The management of existing TSF

Significant reductions in risks from TSF will only come from Standards that include existing facilities. Almost all planned waste disposal in the next 5 years will take place in existing facilities (data from World Mine Tailings Failure's analysis of recent data on TSF).

It should be explicit in the Standards that there are Standards that apply to all situations (including existing facilities) and which parts of the Standards apply to which situations.

7 Specific Technologies

The draft Standards make no mention of banning or recommending specific technologies, but the question of which technologies will fit the Standards cannot be avoided: without resolution of this question further disagreements are inevitable. The Standards are of little utility if the technologies are not available to meet them.

Experts disagree as to whether:-

- Upstream tailings dams are safe if they are well managed and regulated
- Upstream tailings dams are safe if they are well managed and regulated, but it is in only in few circumstances that there is the necessary level of management and regulation
- New upstream tailings dams should not be permitted.

Thus an assessment needs to be made as to whether new upstream tailings dams should be completely banned or permitted only in very special circumstances.

An assessment needs to be made about what strategy should be followed for existing tailings dams, which is an unavoidable question in the context of Minas Gerais (and probably other regions).

An assessment needs to be made as to whether new technologies (storage of dry or filtered tailings) can be rapidly deployed at the scale required because, at present, these technologies have been assessed only on a small-scale in relatively dry and flat areas.

8 Tailings Dam issues that need to be addressed.

Among the issues that need to be addressed in analysing the gap between the current (problem) state and the final (goal) state are the following.

Topic I - Knowledge base

Knowledge of the physics and engineering issues of tailings dams has improved since many existing tailings dams were initiated, but that improved knowledge has not been incorporated into management and regulation.

Measurement of impact has not incorporated risks from increasing size of tailings dams and has been based on optimistic assumptions about impacts of collapse (such as a higher proportion of tailings escaping from dams than in some theoretical impact models).

Topic II - Affected communities

A mining project is a powerful political actor representing significant capital investment and potentially representing a large part of the economic income of an area. People potentially affected by a mining project, especially a potential collapse of a tailings dam, are widely

dispersed with different interests and often marginalised from political processes. Creating mechanisms of effective dialogue and negotiation are potentially difficult.

Topic III – Design, construction, operation and management of tailings facilities

Upstream tailings dams are unforgiving structures and require high levels of management.

Large-scale failures are likely to become more common as size of tailings dams increased: tailings dams of ever-increasing size were constructed. Tailings dams of larger size were initiated as mining technology improved to extract lower grade ores. Higher risk profile of larger dams, greater stresses in the dam

Dam I at Corrego de Feijão (Brumadinho) was a marginally stable dam, because of a critical combination of ongoing internal strains due to creep and a strength reduction due to loss of suction in the unsaturated zone caused by the intense rainfall towards the end of 2018. This went undetected and was not dealt with. This represents a typical risk.

Topic IV – Management and governance

Weak regulation in countries such as Brazil. The National Mining Agency openly states that it has inadequate capacity and its resources are being further cut.

Projects are almost always approved with conditional requirements (which speed up the licensing process) but in practice it is difficult to ensure that the conditional requirements are met once the project is underway.

The need for clear standards in law (essential to ensure no deviation from best practices) was not acknowledged and the regulatory capacity to enforce them not available.

In terms of voluntary operational mining sector guidance, we note that ICMM proposed in November 2018 “new membership requirements to advance the sustainability performance of the mining sector, ... to implement the United Nations Guiding Principles on Business and Human Rights”, and it is “developing guidance on how members will validate the performance expectations at the operational level including through independent third-party assessments. We expect this guidance to be complete in the middle of 2019. The guidance will be piloted during the second half of 2019 followed by full implementation across the membership”.

We are pleased that the draft Tailings standard comprises language which is more specific and meaningful.

Topic V - Emergency response and long-term recovery

Collapse of Dam I at Corrego de Feijão (Brumadinho) involved 75% of tailings in the dam escaping in five minutes. The material in the dam showed a sudden and significant loss of strength and rapidly became a heavy liquid that flowed downstream at a high speed.

Movement of large quantities of waste at a high velocity, transforms the system and remobilises other elements, and significant change in river basin. Large scale tailings dam failures lead to an active transformation of the whole fluvial system.

Active transformation of the river system and wide range of effects of the dam collapse were not contemplated by the Environmental Impact Assessments of dams in Mariana and Brumadinho. There was no preparation for large-scale impacts, either by the State or mining companies.

There is impact on water supply, environment, livelihoods, the economy, health and society.

The scale of the effects on the Rio Doce may mean that a full clean-up is not possible. Most of the 10.5 million cubic metres of waste in the Candonga water retention Dam is still there and there is no clarity about a way forward for disposing of material behind the dam. There is no clarity about the removal of waste material deposited on flood plains along the Rio Doce, and it is possible that waste deposited on former fields and meadows on river-banks and flood plains will remain permanently as limited vegetation grows on waste material.

Actions to remove and stabilise deposited waste material has further impacts – increasing dust, work sites and access roads.

Scientific research on the impacts of the collapse of the Fundão Dam on the Rio Doce began only three years after the collapse of the dam and results have not yet been published. Accessing finance for research required negotiation with the Foundation substantially controlled by the mining companies.

We believe that the experience at Samarco and at Brumadinho will help the arguments by Earthworks and Miningwatch Canada that

“Relevant to Topic V: Emergency preparedness and response plans or emergency action plans related to catastrophic failure of mine waste facilities shall be discussed and prepared in consultation with potentially affected communities and workers, and in collaboration with first responders and relevant government agencies. *Worst-case mine waste flow scenarios* must be modelled and made public prior to permitting, and regularly updated throughout the facility lifecycles. Emergency and evacuation drills related to catastrophic failure of mine waste facilities shall be held on a regular basis. The operating company shall report to stakeholders on mine waste facility management actions, monitoring and surveillance results, independent reviews and the effectiveness of management strategies. (Sources: [IRMA Standard](#) 2018, chapter 4.1 and [APELL 2001](#)). “

Topic VI – Public disclosure and access to information

Information on tailings dams is only now becoming available and comprehensive information about risks is not yet available.

Information on impacts of dam collapses, clean-up activities and compensation programmes in company reports and at AGMs is not independently audited.

Information on clean-up activities and compensation programmes for the Rio Doce is unclear and unsystematic.

We wish to confirm our support for the specific recommendations by Earthworks and Miningwatch Canada on the significance of an independent grievance mechanism [recommendation 3.4], and on the following three comments:

10. Ensure the independence of reviewers in Independent Tailings Review Boards and audits

The independence of those performing reviews is essential for safety. A reviewer, as an individual or an organization, should not have a financial conflict with the mine being reviewed. For example, a financial conflict would occur if a reviewer has been contracted to review more than 5 mines at any one time for any one operating company. A requirement must be added to prevent a scenario in which a company turns to the same audit firm to review all or most of its mines. The definition for the ‘Independent Tailings Review Board’ (ITRB) should specify qualifications, composition, role and process for appointing the ITRB. We support requirements 7.8 and 11.4 stating that Independent senior technical reviewers:

(i) “shall carry out a full review of the ESMS (*Environmental and Social Management System*) and monitoring results every 3 years, with annual summary reports provided to relevant stakeholders; and (ii) “conduct an independent DSR (*Dam Safety Review*) periodically.” DSR should be conducted yearly, unless justified otherwise. The DSR contractor cannot conduct a subsequent DSR on the same facility.

11. Conduct independent risk assessments and make reviews publicly available in a transparent, independent Global Tailings Database

It is urgent that a transparent, independent risk assessment of the thousands of tailings dams be conducted worldwide and make the results publicly available into a Global Tailings Database. Ecosystems, livelihoods, and human lives are at stake. An independent international agency, such as a UN-based agency, in collaboration with responsible States, operators, and civil society, must drive this process, collect the information, and share it with affected communities in order to de-risk these sites and put in place proper emergency action plans in case of catastrophic failures, particularly for the most at-risk mines. This global inventory should also collect information about mine waste dams failures and their consequences. It is essential to better understand what, how, why each failure occurs to prevent them in the future. At the present time, no entity in the world possesses this information and communities at risk remain in the dark (the closest, yet incomplete, being the [World Tailings Failure Database](#) run by volunteered experts and individuals).

We support Requirement 17.1 to “Publicly disclose relevant data and information about the tailings facility and its consequence classification in order to fairly inform interested stakeholders.” This Requirement should explicitly include dam safety reviews (DSRs) and reports that are required by and filed with governmental agencies. But this requirement alone is not sufficient. The Global Tailings Standard must require States and corporations to collaborate for the establishment of a detailed, centralized, and transparent global database, accessible to the public and affected communities, with a risk profile for each mine waste dam.

12. Global tailings standards development and implementation must be overseen by a transparent, independent international agency that is capable to effect change worldwide and that is accountable to the public and affected communities

It is crucial that UN agencies and international partners, including States, industry, civil society organizations, and independent experts, establish a credible, transparent, and independent international agency capable to ensure safe tailings worldwide. Even the best standards remain useless if they are not implemented, or if implemented in only a limited number of operations. Worldwide, there are many thousands of tailings storage facilities and dams, some under the responsibility of private corporations, others under the responsibility of States. The challenge to effect change at this scale should not be underestimated, nor the importance of establishing a well-resourced agency capable to efficiently update the standards and ensure their implementation.

We recommend that an independent study be conducted about which governance model would be more appropriate for this task. This study should look at the [International Civil Aviation Organization](#) (ICAO) as a potential model. ICAO is a UN specialized agency and as proven being effective at improving the safety of the aviation industry for decades by working with the 193 Member States and industry groups, with the collaboration of the public and independent experts, to reach consensus on international civil aviation standards, which are then used by ICAO Member States to ensure that their local industry, authorities and regulations conform to global norms. ICAO also coordinates assistance and capacity

building for States in support of the industry's safety; monitors and reports on performance metrics; and audits States' industry oversight capabilities in the areas of safety and security. The [International Cyanide Management Code](#) (ICMC) model differs from the ICAO in the following ways: 1) its standards remain implemented in a relatively limited number of operating mines (about 100 mines according to the last ICMC census, which corresponds to about 10% of the 1044 active and operating gold mines worldwide) and 2). Also, ICMC is governed by a relatively small Board of Directors, composed of eight members, primarily with industry experience and appointed by their peers, without broad State or civil society engagement.

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