

Earthworks' Comments on Global Tailings Review Draft Standard Dec 30, 2019

Thank you for the opportunity to comment on the draft Global Tailings Standard (“GTS” or “draft Standard”) released on November 15, 2019. Our submission is in three parts:

I) Introductory comments II) Overarching principles¹ that have been co-developed by Earthworks, along with other civil society allies, and that we strongly urge you to incorporate into the final Standard, and III) Specific comments by section that are not already covered by the overarching principles.

I) Introductory comments:

We encourage GTS to ensure its applicability to current as well as new mines. Focusing exclusively on design of new mines, while extremely important, will not mitigate the risks to ecosystems, livelihoods and human lives from existing, operating facilities that may be poised to fail. Given that the GTR originated in the desire by co-conveners to “prevent the next Brumadinho” catastrophe, this consideration must not be neglected.

We recognize that the GTS scope of work does not seek “to exclude certain technologies” or practices. But if the Standard and the process are, in fact, seeking a “step change in performance” that would ensure the safety of communities, workers and the environment from risks posed by TSFs, then technologies that have been identified by multiple jurisdictions to increase these risks must be re-evaluated and discouraged rather than replicated.

We appreciate the efforts of the Expert Panel in preparing this Standard, and would urge them to be as specific as possible with requirements, rather than leaving grey areas or including optional measures. Where safety is optional, unfortunately, it is an easier choice to opt out of it. Thus, terms like “periodically,” “consider,” “appropriate” should be replaced with concrete and measurable indicators, with provisions for exceptions in extraordinary circumstances.

Finally, we hope that the Standard will be accompanied by implementation guidelines prepared by the independent Expert Panel and overseen by a multi-stakeholder governance structure. We are concerned by the notion that implementation and audit guidelines would be prepared by an industry-led body running parallel to this process. Relatedly, we ask that the process Global Tailings Standard process be truly independent in the next phases of review, consultation and finalization of the Standard.

II) Overarching Principles:

1. Make safety the guiding principle in design, construction, operation, and closure

¹ Based on principles prepared by Earthworks, MiningWatch Canada, and mining technical experts.

The Global Tailings Standard must establish safety as the primary consideration in design, construction, maintenance and closure of tailings facilities. The preamble of the GTS begins by affirming the ultimate goal of zero harm and zero tolerance for loss of life but stops short of clarifying that safety must be the guiding principle in all decisions related to the tailings facility lifecycle. After the tailings facility failure at Mount Polley in 2014, the UNEP-GRID Arendal [special report](#) recommended, “safety attributes should be evaluated separately from economic considerations, and cost should not be the determining factor”². Operators and regulators should make an affirmative commitment to make safety the primary consideration in mine waste site and tailings dam design, construction, operation, and closure. Without this commitment, cost will continue to drive the process, putting people and the environment at risk. Earthworks recommends making this the overarching principle of the Global Tailings Standard, and integrating into Principles 2 & 4 of the draft Standard.

2. Consider any potential loss of life as an “Extreme Event” and design accordingly.

Safety measures required in the draft Global Tailings Standard currently largely hinge on a ‘Consequence Classification’ of potential harms resulting from failures (Annex 1). This Consequence Classification must be revised to align with the clearly-stated objective of the Standard: “This Standard strives towards the ultimate goal of zero harm to people and the environment and **zero tolerance for human fatality**.” (emphasis added) As currently proposed, only the loss of 100 or more lives would be classified as an ‘Extreme Event’ in the Consequence Classification. The potential loss of a single human life should be treated as an Extreme Event, thus requiring more protective measures in the design, construction, operation and closure of mine tailings dams.

There is already precedent for these precautionary measures. For example, the U.S. Federal Emergency Management Agency (FEMA) uses only three Potential Hazard Classifications: Low, Medium and High. The classification system stipulates that the probable loss of only one life is sufficient to trigger the High classification³. This recommendation would also bring the Standard into alignment with the recommendations of the U.S. governmental agencies that regulate dams ([Federal Emergency Management Agency](#), [U.S. Army Corps of Engineers](#), and [U.S. Bureau of Reclamation](#)).

Facilities must be designed to withstand Probable Maximum Flood (PMF) and Maximum Credible Earthquake (MCE) and design must account for climate change. Climate change must be more explicitly included in requirements related to water management and design of facilities. Given that climate change has increased the severity of storms and precipitation, the GTS must include guidance for the appropriate type of data to predict PMF that ensures recent information and require the Operator show predictive data that analyzes the effects of climate change.

² UNEP-GRID Arendal, 2017: p.11, citing Mount Polley Expert Panel Report, p.125

³ FEMA, 2013 https://www.fema.gov/media-library-data/1386108128706-02191a433d6a703f8dbdd68cde574a0a/Selecting_and_Accommodating_Inflow_Design_Floods_for_Dams.PDF

3. New mine tailings facilities, and the expansion or raising of existing facilities, must not occur immediately upstream from and in inhabited areas.

The most effective way to minimize risk to people is to prevent the construction of new mine waste facilities and the raising or expansion of existing mine waste facilities where there is a population living close by and downstream from the facility. Our recommendation is that no new mine waste facilities should be constructed, and existing mine waste facilities should be not expanded or elevated, where there is a population residing 25 kilometers downstream from the downstream edge of a mine waste facility or within the zone that could be reached by the mine waste within 60 minutes of failure. At the same time, this must not result in involuntary resettlement of existing populations.

The recent mining legislation passed by the Legislative Assembly of Minas Gerais, Brazil ([Law 23291, 2019](#)), introduced the concept of the “self-rescue zone,” within which a person must rescue him or herself because no rescue from the outside is possible. The law defined the “self-rescue zone” as the zone of 10 kilometers, which can be increased to 25 kilometers, at the discretion of a governmental agency in populated and sensitive areas, along the course of the valley downstream from the tailings dam or the portion of the valley that could be reached by the tailings flood within 30 minutes, whichever is greater. According to the legislation, it is prohibited to construct a new tailings dam or to elevate or expand an existing tailings dam where there is a population residing in the “self-rescue zone.”

4. Ban upstream dams at new mines

Because of the demonstrated risk associated with upstream-type dam construction, upstream dams should not be considered at any new facilities. The potential for catastrophic failures of upstream dams poses a significant risk. Seismic activity and wet climate areas with net-precipitation, as well as human and engineering errors, increase the chances of failure for upstream dams. Earthworks recommends the GTS explicitly ban the construction of upstream dams for new facilities and recommend the use of center-line and downstream dams, which have been proven more resilient and therefore safer. Construction of new upstream tailings dams has already been banned in all circumstances in [Brazil](#), [Chile](#), [Peru](#), and [Ecuador](#).

Earthworks recognizes the challenges of replacing or closing already existing upstream tailings dam facilities. The GTS should require that existing facilities undergo a transparent, independent risk assessment at each site. The results of the assessment should be made public and shared with the affected communities and state agencies. The assessment must include thorough emergency action plans in case of catastrophic failures.

5. Mandatory dry closure

The GTS must require that tailings dams are monitored until the potential for their failure is at zero. The concept of “landform” established in the GTS is not sufficient to meet this end. Earthworks recommends that tailings facilities should be reviewed, inspected, monitored, and maintained until they achieve a “permanent non-credible flow failure state,” which should be

defined as when a closed tailings facility can withstand the Probable Maximum Flood (PMF) and the Maximum Credible Earthquake (MCF) without failure, and can remain in that state indefinitely.

Achieving a permanent non-credible flow failure state as defined above requires, at a minimum, the desaturation of tailings upon closure of the facility (what we call “dry closure”). The desaturation of tailings upon closure is facilitated by the initial storage of filtered, or “dry tailings.” As such, all new tailings facilities should favor filtered tailings, unless proven unsafe or environmentally unsound. The use of dry tailings disposal methods reduces both the probability of failure and the consequences of failure through the facility lifecycle.

This could be incorporated in requirement 5.1.

The GTS must include a requirement regarding the use of liners to prevent adverse water quality effects. Covers that will limit dust production and infiltration to groundwater should be required during operation and at closure.

6. Human rights due diligence and FPIC protocols must be achieved during all stages of planning, design, and implementation.

The Global Tailings Standard should ensure that Operators not only attempt but achieve meaningful engagement, human rights due diligence and Free Prior Informed Consent (FPIC). This should be grounded in the Universal Declaration on the Rights of Indigenous Peoples (UNDRIP). Earthworks strongly supports the inclusion of these principles in the GTS but is concerned by the lack of guidance on how Operators will prove adherence and achievement. This applies to requirements 2.1, 2.3, 3.1-3.4, 7.8, 15.2, 15.3, 16.1.

While Principle 3 of the draft Standard outlines the importance of human rights due diligence and free and prior informed consent (FPIC), it does not detail how mining companies will prove those standards have been reached. Footnote 12 of Principle 3.1 says that, “demonstrating respect for Indigenous peoples rights may involve obtaining their ‘free prior and informed consent’ (FPIC)...”. FPIC should not be an optional process. The GTS should explicitly require FPIC and this guidance should be included in a substantive way in the Principle.

Furthermore, the GTS should assure a legitimate and credible process by requiring Operators to document and report all steps taken towards meaningful engagement, human rights due diligence and FPIC. Those reports should be made publicly available and filed with state agencies. The Initiative for Responsible Mining Assurance Standard chapters 1.3. on HRDD and 2.2 on FPIC could serve as guidance for the GTR in this area.⁴

We support the Standard’s inclusion of an independent grievance mechanism. In addition: 1) the operational-level grievance mechanism should be functionally independent in all of its procedures from the project’s operator; 2) complainants must have access to independent forms of support (for e.g. legal, technical or medical) in all phases of engagement with the mechanism;

⁴ Initiative for Responsible Mining Assurance Standard, 2018. https://responsiblemining.net/wp-content/uploads/2018/07/IRMA_STANDARD_v.1.0_FINAL_2018.pdf

and 3) a settlement through the operational level grievance mechanism should not require the complainant(s) to sign legal waivers prohibiting them from civil legal action at a future date.⁵

7. Mandatory financial assurance for closure and insurance for accidents

GTS must require operators to have the necessary financial assurance and insurance to guarantee that the functions of the closure plan, and/or reimbursements for economic damages suffered by non-mine entities due to catastrophic accidents, are achieved and maintained over the long term. Mine operators must purchase insurance to cover economic and environmental damages suffered by non-mine entities affected by a catastrophic tailings dam failure. Assessments of previous catastrophic tailings dam failures ([Bowker and Chambers 2015](#)) indicate that these figures can exceed US\$1 billion. Oil tankers in Canada have approximately \$1.4 billion available per accident, and the financial assurance required for large pipeline failures in British Columbia is \$1 billion ([Allan 2016](#), [FNEMC 2019](#)). The nuclear industry in the US is required by the Price-Anderson Act to carry pool insurance for \$10 billion, and there are similar requirements for Canada ([Heal and Kunreuther 2010](#)).

8. Accountability for risk assessments, minimizing consequences, preventing failure, and the consequences of failure must rest with the Board of Directors

The corporate Board of Directors, as the body that is ultimately responsible for the well being of the corporation, must bear the prime responsibility for the safety and liability of mine waste sites and tailings dams, including the consequences of dam failures and mine waste spills, and as such, face proper financial sanctions, and if warranted, criminal sanctions. A culture of safety must be upheld at the highest level within a corporation; this can only be achieved if the Board of Directors is held accountable for its operations. GTS must specify transfer of accountability in the event of takeovers, mergers or acquisitions. Such accountability cannot be shrugged off in the event of personal or corporate bankruptcy. This affects the requirements throughout Principle IV.

9. Emergency Preparedness and Response

GTS must require that emergency preparedness and response plans or emergency action plans related to catastrophic failure of mine waste facilities 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 modeled and made public prior to permitting, and regularly updated throughout the facility lifecycles. Communities and workers must be provided with proper emergency action plans in case of catastrophic failures. Emergency and evacuation drills related to catastrophic failure of mine waste facilities must be held on a regular basis. The operating company shall report to stakeholders on mine waste facility management actions, monitoring and surveillance results,

⁵ International Commission on Jurists, "[Effective Operational-Level Grievance Mechanisms](#)," November 2019; Acacia Mining, [North Mara Mine Grievance Process](#).

independent reviews and the effectiveness of management strategies. (Sources: [IRMA Standard](#) 2018, chapter 4.1 and [APELL 2001](#)). This affects requirements relevant to Topic V.

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. A financial conflict would occur if, for example, 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 accountable to 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. Worldwide, there are many thousands of tailings storage facilities and dams, some under the responsibility of private corporations, others under the responsibility of States.

Earthworks recommends an independent study to determine 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.⁶ 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). 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. (This comparison is specifically about governance models, not the content or robustness of either Standard.)

III) Specific Comments:

1.1 Accounting for climate change: move out of the footnote, incorporate in recommendations.

1.2 Site characterization requirements should be spelled out in more detail (see, for example, IRMA requirements 4.1.3.2 in this regard) and updated **throughout the mine life-cycle**.

2.1 Safety and risk minimization must be clearly stated as guiding principles in the company's policy.

2.2. The definition for the 'Independent Tailings Review Board' (ITRB) should specify qualifications, composition, role and process for appointing the ITRB. A requirement must be added to prevent a scenario in which a company turns to the same reviewer for all or most of its mines.

2.3 More specifications needed in terms of mitigation and management plans and frameworks.

⁶ International Civil Aviation Organization <https://www.icao.int/about-icao/Pages/default.aspx>

2.5 Specify how financial assurance for post-closure costs is calculated - e.g. for long-term water treatment, long-term monitoring and maintenance, disposal of hazardous materials, revegetation, inflationary considerations, and so on. (See IRMA Standard, 2.6.2.3). Financial assurance must be sufficient to guarantee that the **full cost of closure and post-closure** of the tailings facility will be covered.

2.6 Include requirement, don't leave open to interpretation: "The Operator must obtain accident insurance for tailings facility failures and other unplanned accidental events to address risks relating to the construction, operation, maintenance, and or closure of a tailings facility."

3.1. And 3.2 More detail needed to specify the steps for Human Rights Due Diligence, how meaningful engagement is defined and measured, documentation of these processes, and the removal of barriers from engagement. Obtaining Free, Prior and Informed Consent of Indigenous peoples for construction or expansion of tailings facilities must be moved from a footnote to a requirement. Reports should be made publicly available. IRMA chapters 1.3. on HRDD and 2.2 on FPIC could serve as guidance for the GTR in this area, also 4.1.

3.3 Strengthen requirement: "the Operator must minimize and mitigate those risks. Where risks remain, or if resettlement is proposed, the operating company shall facilitate access, if desired by potentially affected people and communities, to independent legal or other expert advice."

3.4 In addition: 1) the operational-level grievance mechanism should be functionally independent in all of its procedures from the project's operator; 2) complainants must have access to independent forms of support (for e.g. legal, technical or medical) in all phases of engagement with the mechanism; and 3) a settlement through the operational level grievance mechanism should not require the complainant(s) to sign legal waivers prohibiting them from civil legal action at a future date.

4.2 The decision be made by and rest solely with the *Board of Directors*, not an *Accountable Executive*. The written reasons should be filed with a governmental agency and should be publicly available.

5.1 Missing any reference to backfilling of pits with tailings and when this might be considered. Missing reference to toxicity. Current language leaves door wide open to interpretation- instead of asking an operator to "consider implementation of alternative options" GTS should require them to minimize amount and toxicity/acidity of tailings. Require filtered tailings.

5.2 Must factor in considerations of climate change on water balance and management plans

5.3 Risk assessment must be prepared at design phase and updated through mine life-cycle.

5.6 Add a requirement regarding the use of liners to prevent adverse water quality effects. Covers that will limit dust production and infiltration to groundwater should be required during operation and at closure.

Overall, **principle 5** is missing a documentation and reporting requirement.

7.4 OMS must be evaluated and updated annually

7.8 See Section II, point 10) of these comments.

General comment for Topic IV: The corporate Board of Directors, as the body that is ultimately responsible for the well being of the corporation, must bear the prime responsibility for the safety and liability of mine waste sites and tailings dams, including the consequences of dam failures and mine waste spills, and as such, face proper financial sanctions, and if warranted, criminal sanctions. GTS must specify transfer of accountability in the event of takeovers, mergers or acquisitions. Such accountability cannot be shrugged off in the event of personal or corporate bankruptcy.

In all requirements in this section (e.g. 10.2, 10.4) the line of accountability must extend to the Board of Directors and not end at the Accountable Executive. Further, it must be specified that financial incentives must be delinked from cost reductions or economizing, especially in cases of impact on safety.

For Principle 11: Reviewers should not have any financial conflict with the mine or Operator being reviewed. A financial conflict would occur if, for example, 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.

11.4 An independent DSR should be conducted annually to ensure the most accurate and up to date safety information is available to the Operator, state agencies and the affected communities.

11.5 Reporting must be to the Board of Directors.

14.2 Add “affected communities and other relevant stakeholders”

14.3 Add “If complaints are not fully resolved, or addressed in a timely manner, the company must provide written justification for it.”

15.3: Add: “Worst-case mine waste flow scenarios must be modeled and made public prior to permitting, and regularly updated throughout the facility lifecycles” to this requirement.

15.4: Add: “Emergency and evacuation drills related to catastrophic failure of mine waste facilities shall be held on a regular basis.”

Add 15.6 “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.” This requirement can reference IRMA Standard 2018, chapter 4.1 and APELL 2001 as additional guidance.⁷

16.2-16.4 Should refer to HRDD to ensure no impact on human rights

Add 16.6 Require Operators to obtain insurance to cover impacts from catastrophic failure.

17.1 We support this requirement but recommend that the GTS explicitly include dam safety reviews (DSRs) and reports that are required by and filed with governmental agencies.

17.1 Footnote 36 Change footnote to read: “This information must be made available at no charge, as soon as possible, in one or more languages as necessary, and in plain language whenever possible to afford adequate access to interested stakeholders.”

17.2 Information must be in formats and languages that are understandable to stakeholders. If requests are not met in full, or in a timely manner, the company must provide written justification for it.

Please feel free to contact us if you have any questions or require clarification.

Sincerely,

Payal Sampat
Mining Program Director
psampat@earthworks.org

⁷ UNEP. Awareness and preparedness for emergencies at local level (APELL).
<https://www.unenvironment.org/explore-topics/disasters-conflicts/what-we-do/preparedness-and-response/awareness-and-preparedness>