



Briefing Document

Tailings Management in the Extractives & Minerals Processing Sector

Standard-Setting Project

March 12, 2020

Executive summary

In recent months, investor interest and corporate disclosure quality related to the management of tailings storage facilities (TSFs) have significantly evolved. In light of these developments, the Sustainability Accounting Standards Board (SASB) has initiated a standard-setting project to re-evaluate related topics in the Metals & Mining and Coal Operations industries within the Extractives & Minerals Processing sector. The project will explore potential revisions to these industry standards to ensure the relevant set of disclosures fully captures the risks associated with company management of TSFs. The project will also aim to improve global applicability of the standards.

SASB is currently engaged in stakeholder consultation and wishes to invite investors and mining companies to assess the usefulness of its existing disclosure topics and metrics associated with mining waste as well as gather perspectives on how the standards might be revised to more effectively address investors' information needs related to tailings management risks.

Introduction

Project summary:

Since SASB standards were codified in November 2018, there has been a significant evolution in investor interest and corporate disclosure related to TSF management. These developments are due in large part to high-profile events, such as the catastrophic dam collapse in Brumadinho, Brazil, in January of 2019 that killed nearly 300 people. Following the collapse, the Investor Mining & Tailings Safety Initiative (currently representing more than \$13 trillion in assets under management) wrote to 700+ extractive companies seeking enhanced disclosure on the management of TSFs. The engagement was aimed at providing institutional investors with information for assessing the risks associated with holdings in mining companies.

In response, the International Council on Mining and Minerals (ICMM), which is made up of 26 of the world's leading mining and metals companies and 35 associations, began working with the United Nations Environment Programme (UNEP) and the Principles for Responsible Investment (PRI) on adoption of global best practices for TSF management. They have co-convened the Global Tailings Review (GTR) to establish an international standard that aims to prevent catastrophic failures by creating a step change for the industry in the safety and security of TSFs. A first draft of the GTR's Global Tailings Standard was published on November 16, 2019, and a working group is currently incorporating public comments into the next revision, which is set to be finalized by the end of Q1 2020.

Given these recent global developments, SASB has initiated a standard-setting project to re-evaluate its relevant standards to ensure they fulfill their intent to provide complete, decision-useful information to investors while being cost-effective for reporting companies. The project will also aim to improve global applicability of the standards.

Objectives:

By way of this briefing document, we intend to communicate important background information and outline major project steps to a wide range of corporate professionals and providers of financial capital to solicit input on potential revisions to SASB standards. At this time, SASB seeks to assess the effectiveness of how it has defined the scope of relevant disclosure topics and the usefulness of associated metrics. SASB also aims to gather perspectives from market participants across geographies and economies on the most decision-useful and cost-effective measurement(s) of risks associated with TSF management.

Preliminary Analysis

Summary of existing disclosure:

Per the Investor Mining & Tailings Safety Initiative, as of February 26, 2020, 45 of the world's 50 largest mining companies by market capitalization have made disclosures, which has resulted in information about thousands of individual tailings dams/facilities being made public on company websites. (See Tables 1-3.) Over 83 percent of the mining industry by market capitalization has responded, and all 23 of 23 publicly owned companies that are members of the ICMM responded and fully disclosed information regarding tailings dams/facilities. Below are the statistics the Initiative has shared.

Of the 727 companies contacted the breakdown of responders were:

- 339 responded (representing 47 percent of the companies contacted).
- 187 confirmed they did not have tailings facilities (representing 26 percent).
- 152 confirmed they did have tailings facilities.
- 45 companies have not yet published their disclosure on a website or have asked for extra time to complete their disclosure.

- 388 did not respond (representing 53 percent).

Breaking these figures down further for the mining sector only, preliminary analysis indicates:

- 45 out of the top 50 largest mining companies in the world responded.
- 83 percent of the industry by market capitalization responded.
- 60 percent of the industry by market capitalization fully and publicly disclosed.
- 23 out of 23 publicly listed members of the ICMM responded and publicly disclosed.

Table 1. Total Number of Tailings Dams

Total number of tailings dams submitted (not including India)	1805
Total number minus duplicates (companies reported the same tailings storage facility)	1635
Number active dams	667
Number of operating companies	289
Total volume of tailings in storage facilities (billion m3)	45

Source: Investor Mining & Tailings Safety Initiative (as of Oct. 31, 2019)

Table 2. Dam Raising Types

Number of downstream construction	525
Number of upstream construction	635
Number of centerline construction	121
Number of dry stacking storage	66
Number of in pit storage	53
Maximum dam height reported, m (Peru)	265
Number reported to have stability issue during lifetime	166

Source: Investor Mining & Tailings Safety Initiative (as of Oct. 31, 2019)

Table 3. Number of Tailings Dams by Continent

Australia/ Oceania	272
Asia	266
Africa	226
North America	498
South America	279
Europe (Transcontinental Euro/Asian countries were counted as Europe)	91

Source: Investor Mining & Tailings Safety Initiative (as of Oct. 31, 2019)

Additionally, in January, 2020, the [Global Tailings Data Portal](#), containing information about more than 1,900 TSFs, was launched.

A common theme noted by the Investor Initiative was the non-standardized nature of responses, mostly due to different interpretations of questions that investors had asked. Even though a template for disclosure was provided, a lack of explanation of what the questions were intended to achieve led

responses to vary from company to company. Such responses made peer-to-peer analysis challenging. Standardization along with precise technical protocols, such as those SASB standards strive to provide, could be useful in this regard.

The following quotes provide a representative sample of the perspectives of Initiative leaders:

“... Following the investors’ disclosure request, we can now see that 10 percent of tailings dams have had some level of issue related to the stability of the dam. ... We note that many companies already operate to a very high standard as evidenced by some of the disclosures, but this is not universal across the sector and dams are continuing to fail, putting lives and the environment at risk.”

- **Adam Matthews,**

Director of Ethics for the Church of England Pensions Board
and Co-Chair of the Investor Mining & Tailings Safety Initiative

“Even with these disclosures we still do not have the full picture ... There is simply no excuse to not disclose on a material risk that, as owners of these companies, we need to urgently understand.”

- **John Howchin,**

Secretary General of the Council on Ethics of the Swedish National Pension Funds
and Co-Lead of the Investor Mining & Tailings Safety Initiative

“This is the first time that those outside of the mining industry have had access to a range of information on many of the world’s largest tailings dams—including where they are located, construction method, current storage volume, risk characterization and history of stability reporting. It is essential that investors and wider society understand the risks associated with these structures and where there have been issues related to their stability.”

- **Professor Elaine Baker,**
advisor to the GTR,

and UNESCO Chair in Marine Science, University of Sydney

Most notably, one response that is currently challenging to standardize on a global scale is related to hazard potential, mostly due to the use of different classification systems in the various geographic regions and local jurisdictions in which TSFs are located (as seen in Table 3). The most commonly cited classification systems were CDA (Canadian Dam Association) and ANCOLD (The Australian National Committee on Large Dams), among many others, such as SANS (South African National Standards), Russian state categorization of hydrotechnical facilities, Brazilian Law Portaria 70.389 from the Brazilian National Mining Agency, and Sernageomin DS and DGA Decreto in Chile. It is worth noting that when the hazard potential for consequences of a TFS failure is classified as high, it does not necessarily imply that the risks associated with the TSF are also high. The quality of governance (both at the site and

organizationally at the board level), frequency of inspection, and other industry best practices all play a role in determining the level of risk. Information that helps investors better understand not just hazard potential but also the degree of TSF-related risk to which they are exposed is likely to be material and decision-useful for many providers of financial capital to the Metals & Mining and Coal Operations industries.

Global Tailings Standard:

The GTR’s Global Tailings Standard has six topics areas, 17 principles, and 78 specific requirements, along with sections on the role of the state, the role of other stakeholders (including communities and investors), and on implementation. The standard’s 17th principle provides basic requirements for public disclosure on tailings facility decisions, risks and impacts, management and mitigation plans, and performance monitoring. However, the standard was primarily developed to define and motivate the adoption of best practices and technical protocols for TSF management. Many of the topics covered—such as governance and oversight—will be familiar to investors. The GTR’s standard also suggests a new, universal hazard potential classification system, on which SASB seeks company feedback, including whether they would consider reporting to this new classification system to be cost-effective.

Overall, the document and the comprehensive disclosure it would warrant requires investors to have a certain level of in-depth knowledge of the industry and technical aspects of TSF management, construction, design, and maintenance, which may present challenges for some investors who may not have the expertise required or the resources or access to engage engineering professionals to analyze such data for them.

SASB’s approach to standard setting aims to identify a cost-effective set of disclosures. As noted above, less than a half of companies responded to the Investor Initiative. Nevertheless, they represent 83 percent of the market capitalization for the industry. The remaining 17 percent is largely made up of small- and medium-sized enterprises, which may find it challenging to produce a comprehensive disclosure fully aligned with GTR standard due to lack of resources, leaving investors without a clear understanding of the risks associated with holdings in those companies. Therefore, SASB would like to consult with all market participants to identify a market-driven solution for cost-effective and decision-useful disclosure that is aligned with global initiatives.

Key Questions for Consultation

The table below outlines some of the questions on which SASB seeks input from industry participants as well as those in the investor community.

Corporate Professionals	Investors
<ul style="list-style-type: none"> What was your experience responding to the Investor initiative on Mining and Tailings Safety? What are your views on 	<ul style="list-style-type: none"> What were the common themes in responses to the Investor Initiative or to your personal engagement with companies within mining

<p>questions the initiative asked? Was the data already available or required extra work to collect and disclose?</p> <ul style="list-style-type: none"> • What in your opinion is a fair and representative set of information that would provide a complete understanding of risks associated with tailings management in your company? • What are the processes in your company for waste management and tailings storage facilities governance? Are those handled by the same function within your company? Do you have external controls? • Is tailings management an environmental, social, or governance issue in your view? • What in your opinion are the strengths of the GTR standard’s hazard potential classification system? 	<p>sector? Are some companies within certain geographical regions more responsive? Are there certain KPIs that receive more response than others?</p> <ul style="list-style-type: none"> • What questions asked by the initiative provided decision-useful information to evaluate risks associated with tailings management? What in your opinion is a fair and representative set of information that would provide a complete understanding of risks associated with tailings management? • How would you use that information in your investment decisions? • Is tailings management an environmental, social, or governance issue in your view? Would information on tailings management be used differently if it was categorized as an environmental issue vs. a governance issue? • What in your opinion are the strengths of the GTR standard’s hazard potential classification system?
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Outcomes

As part of this project, SASB seeks to engage with Metals & Mining and Coal Operations industry professionals, NGOs, and industry association members, who have an understanding of measuring risks related to TFS management at the entity level, as well as individuals involved in asset management and asset ownership, especially in European and Asian markets, who have direct experience with assessing and integrating risks associated with tailings management into their investment decisions. If you would like to provide input on how these qualitative risks should be quantified and standardized, understanding that no tailings facility is alike, please contact Ekaterina Hardin, SASB’s sector lead for Extractives & Minerals Processing, at ekaterina.hardin@sasb.org.

At the end of this initial consultation period, SASB will publish a summary of comments received from stakeholders, without attribution to individuals or their affiliated organizations. This update will be available to the public in May 2020, ahead of the Q2 Standards Board meeting (June 22-23). SASB will provide an update at this time regarding next steps, which may include the development of an exposure draft with proposed changes to the standard and an associated public comment period.

Appendix

The Sustainability Accounting Standards Board (SASB) is an independent, nonprofit standard-setting organization that develops and maintains robust reporting standards that enable businesses around the world to identify, manage, and communicate financially material sustainability information to investors. SASB standards are evidence based, developed with broad market participation, and are designed to be cost-effective for companies and decision-useful for investors. SASB's 77 industry-specific standards include, on average, six disclosure topics and 13 associated metrics.

SASB standards are globally applicable and can be used in core communications with investors such as annual reports, sustainability reports, standalone reports, corporate websites, and elsewhere. SASB enjoys broad market support, including from its Investor Advisory Group (IAG), which comprises 49 international firms managing more than \$34 trillion in assets. Suncor Energy Inc, Hecla, Halliburton Co., and Hess are just a few of the Extractives & Minerals Processing companies that have reported using SASB standards. Barrick Gold, Newmont Goldcorp, and Teck are members of SASB's Standards Advisory Group for the sector.

SASB's due process has identified tailings management as an issue that is likely to have material impacts on the financial condition, operating performance, or cost of capital of companies in two key industries: Metals and Mining and Coal Operations. SASB's research has developed associated metrics to allow companies to transparently report on their performance, risk management efforts, and other activities associated with long-term value creation.