

QUESTIONS POSED DURING THE LAUNCH OF THE GLOBAL INDUSTRY STANDARD ON TAILINGS MANAGEMENT

This document provides a list of all the questions that were posed during the 5 August 2020 [virtual launch event](#) of the Global Industry Standard on Tailings Management. Below each question you will find the Global Tailings Review's response. There are instances where similar questions have been grouped together and a single response has been provided. All questions are presented verbatim and have been anonymised in line with data privacy rules.

Acronyms

GISTM or 'the Standard'	Global Industry Standard on Tailings Management
GTR	Global Tailings Review
ICMM	International Council on Mining and Metals
PRI	Principles for Responsible Investment
UNEA5	Fifth session of the UN Environment Assembly
UNEP	United Nations Environment Programme

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Question 1) Will the recording be available for all?

A: You can view the full recording, [here](#). The link can also be found on the Resources page on our website: <https://globaltailingsreview.org/resources/>

Question 2) Are the slides going to be available?

Question 3) Will Bruno's presentation - with the six points - be available for all too?

A: You can find the slides on the Resources page on our website, [here](#).

Question 4) Where can one find the Standard?

A: [The Standard](#) can be accessed and downloaded on our website: <https://globaltailingsreview.org/>.

Question 5) I would be interested to know how many people are attending this launch.

A: Persistent number throughout the event was 1600 people.

Question 6) I remember that this wonderful moment, the final availability of the standard, was planned for end of last year. What delayed the end of this transcendental work?

A: This question was answered during the virtual launch event. You can hear the response, [here](#), after 50:35. For more information, please visit the About section on our website, [here](#).

Question 7) Can we have the small slide show, which summarizes the project?

A: This is available on our website, [here](#)

Question 8) Why did the Global Industry Standard not decide to ban the construction of new tailings facilities immediately upstream from populated areas, as has been done in Brazil, China and Ecuador?

Question 9) The standard doesn't call for a ban on new tailings facilities immediately upstream from populated areas (as required in legislation in Brazil, China and Ecuador) it also does not call for the use of filtered tailings (as required in the expert panel report on the Mount Polley disaster) Why is that?

Question 10) Brazil has banned upstream construction and called for all existing upstream dams to be remediated within 2 years. Are the Co-Convenors tracking this?

A: This question was answered during the launch event. You can hear the response, [here](#).

In summary, [the scope of the Global Tailings Review](#) did not look to exclude certain technologies such as upstream tailings facilities from future use. However, the Standard does cover the considerations that should determine the choice of such technologies and their suitability. The co-convenors respect the rights of governments to decide on what technologies should be used in their state. The theory underpinning the Standard is that facilities which are well-designed, planned, constructed, operated, maintained and managed are safer than those for which any one of those aspects is missing or lacking.

Quote from tailings expert Professor Norbert Morgenstern - [de Mello lecture](#):

“The call to ban upstream dams, particularly where subjected to seismic loads.

This prescriptive solution has appeal because of the large number of upstream failures in the case history records and it is policy in Chile where, since 1970, the construction of upstream dams has been prohibited. This results in higher costs. Nevertheless, the policy was re-affirmed in 2007 with no exceptions. Valenzuela (2015) summarizes the successful performance of downstream tailings dams in Chile when subjected to large earthquakes hence, apparently, vindicating the policy.

However, I side with the views of Martin and McRoberts (1999) and others before them (e.g., Lenhart 1950; Vick 1992) that there is nothing wrong with upstream tailings dams provided that key principles are adhered to in the design, construction, and operation of such dams. Some 12 principles are outlined that should be recognized when upstream dams are proposed. In my practice, I advocate for purposes of preliminary design that liquefiable deposits that can liquefy be assumed to do so and that containment be provided by a buttress of non-liquefiable unsaturated tailings and/or compacted dilatant material. In addition, it is essential to continually demonstrate by monitoring that the assumed unsaturated conditions in the buttress persist if relied upon in the design and that the buttress is behaving as intended.” – Morgenstern, 2018

Question 11) What processes moving forward are in place to deal with new technologies and processes that could affect this published standard?

A: As with most standards, the Global Industry Standard on Tailings Management will likely evolve and be updated over time. As it stands, please refer to Requirements: 3.2, 5.1, 6.6. As stated at the [launch event](#), the co-convenors are exploring the potential for an international, independent entity that could oversee future development of the Standard.

Question 12) In engineering and building industries worldwide, the 3 main causes of failure are often quoted as water, water and water (e.g. Karl Sauer or Gustav Handegord). The expert panel report on Brumadinho / Feijao also claims that failure was, to some degree a function of precipitation. This begs the following very relevant question: 1) Does the Industry Standard require a minimum reporting frequency (monthly or at the very least quarterly?) of the CURRENT RISK STATUS of Tailings Facilities, based on most RECENT piezometer-, meteorological data, surface displacement data from ground and satellite radar, inclinometers, and total stations?

A: The Standard considers ongoing risk assessments of tailings facilities an essential part of tailings management. There are no specific time requirements for reporting the results of risk assessments. Monitoring is an important part of the Standard and is integrated throughout.

Question 13) Should conducting of a separate Risk and Environmental Impact Assessment study be made mandatory for deciding the site for storage of the mine tailings and mineral processing wastes such as red mud?

A: The Standard does not mandate a separate set of assessment studies for any specific discipline. Assessments can be separate or integrated, but must address the matters required in the Standard.

Please see references to risk assessments (Requirements 5.4, 7.4, 10.1, 15.1 and the definition of Tailings Management System), and impact assessments (Requirements 3.3, 15.1) in the Standard. In addition, please refer to the definition of "Impact Assessment" in the Glossary, Annex 1.

Question 14) Our research indicates that the world portfolio of 21,000 TSF's includes an unacceptably high proportion of large TSF's for which adequate stability assurance does not presently exist and on which mineral production for the next 5 years will rely for tailings deposition. In the context of the dramatic capital intensity associated with pushing to ever lower grades of ore the costs of de-risking impaired facilities may pose a significant financial burden to even the largest companies. Was this specifically acknowledged and explored in the course of development of the GTR and what conclusions were reached?

A: The co-conveners and the Expert Panel considered a broad range of issues, including the current stock of tailings facilities. For more information on this matter, please refer to Chapter VII: Lessons from Tailings Facility Data Disclosures of the accompanying report [Towards Zero Harm: A Compendium of Papers Prepared for the Global Tailings Review](#).

Question 15) Davies, Morgenstern, the late Geoff Blight and other creators of what is still regarded as best knowledge and best practice in tailings facility design and management have over the past two decades emphasized the absence of adequate geotechnical knowledge within mining companies and among their consulting engineers. To what extent was this industry wide deficiency acknowledged and solutions explored in the course of the GTR development process?

Question 16) I note the reference to "young new engineers" to be trained, which is perhaps recognition that there is currently a skills shortage. This will take time to fill, what do we do in the meantime?

Question 17) Access to skilled experts will be critical. Limiting factor. Comments?

Question 18) The standard relies on competent engineers and technologists to ensure proper design, construction and maintenance of tailings facilities. How do the co-conveners feel that this need for professionals can best be addressed and are there specific initiatives to fund education and professional development to meet these needs?

A: This issue was raised and discussed in great detail throughout the process. In addition, John Howchin of PRI touched on this issue during the launch event - you can hear the response, [here](#).

For more information, please refer to Chapter XI: Creating and Retaining Knowledge and Expertise of the accompanying [Towards Zero Harm: A Compendium of Papers Prepared for the Global Tailings Review](#). The chapter discusses this issue more closely; it is authored by Michael Davies and Robin Evans.

Finally, there are indeed a number of ongoing initiatives that are looking to address this gap, for example the [Rio Tinto, BHP and University of Western Australia-established Tailings Management Learning Platform](#).

Question 19) What's the initial feedback from the mining companies to the Global Industry Standard on Tailings Management? Did they participate in the development of the standard? Are they willing to make this Standard, their standard?

A: This question was answered during the launch event. You can hear the response, [here](#), after 59:45.

The Standard was developed through an independent process – the Global Tailings Review – chaired by Dr Bruno Oberle with the support of a multi-disciplinary Expert Panel and input from a multi-stakeholder Advisory Group. It involved extensive public consultation with affected communities, government representatives, investors, multilateral organisations and mining industry stakeholders.

Details about who was represented on these different bodies is available [on our website](#). A comprehensive consultation report is available [here](#).

Question 20) How cooperative were the operators during the consultation for development of standards?

A: Very cooperative. For more information, please visit the [consultation page on our website](#), where you can find a detailed [Consultation Report](#) explaining the consultation process and the feedback received. You can also view all public consultation submissions with consent.

Question 21) I'd be curious to hear if the final GTS includes criteria for the resettlement of communities located downstream of a TSF?

A: Please refer to Requirement 5.8 of the [Standard](#) and the reference to “international standards”; as well as the definition of “involuntary resettlement” in the Glossary, Annex 1.

Question 22) What will be the implementation strategy to ensure that the standard becomes a coercive tool?

Investors – through PRI – are developing investor expectations which will highlight stewardship approaches investors are likely to take if companies do not follow the Standard (e.g. engagement, proxy voting, shareholder resolutions, and ultimately, the potential for disinvestment). In addition, UNEP is supporting governments, upon request, to adopt or incorporate provisions of the Standard in their national and local policies, laws and regulations. It is also expected that the topic of mine tailings facilities and the role of the Standard will be covered in the report to the fifth session of the UN Environment Assembly (UNEA5) which will specifically address the implementation of UNEA4 resolution 4/19 on Mineral Resource Governance.

In addition, as discussed during the launch event, two of the co-conveners (PRI and UNEP) are advancing in their plan to establish an independent entity to oversee and assure the implementation of the Standard at global level.

Finally, the Standard contains unprecedented requirements for operators to publicly disclose information to support accountability, including evidence that the Standard has been met.

Question 23) Hi all. We know ICMM members have committed to bringing their dams in line with the standard within 3 or 5 years depending on the dam's consequence classification. But what about companies that aren't ICMM members? Do they have any reason to comply with the standard? Will there be any consequences for non-compliance?

Question 24) How to ensure that other mining companies, not members of ICMM, will implement the standard?

Question 25) How do you plan to bring non ICMM members on board with this Standard?

Question 26) It is clear that ICMM member companies and companies invested in by PRI will be required to follow the standard, but what about companies that do not fall into those two categories? How will the standard be enforced for them?

Question 27) How is the mining industry going to push for Tailing companies to adopt the standards, particularly those not members of the ICMM? And what do other investors need to do to contribute to a wide adoption by the whole industry?

A: This question was addressed during the [virtual launch](#) of the Standard. You can hear the response, [here](#), after 54:35.

Given the rationale for the Standard, its endorsement, backing and long-term ambition, the co-conveners and their respective organisations will continue to be involved during the rollout to promote broad and effective implementation.

UNEP will support governments that wish to incorporate and build upon this Standard into their national or state legislation and policies. PRI, representing USD 103.4 trillion in assets under management, will, among other interventions, be developing investor expectations to support all mining companies in implementing the Standard.

Through effective implementation of this Standard, ICMM members will help to set the bar for all mining companies to work together to make all tailings facilities safer. Given the ambitious timeline for implementation that ICMM member companies have already committed to, in order to support implementation of the Standard, and to promote good practices for tailings management, ICMM is currently working on two documents:

- A **conformance protocol** that supports the integration of the Standard into existing assurance processes for ICMM member commitments will be a working document to be used by companies or suitably qualified independent third parties to evaluate tailings facility conditions against the requirements of the Standard.
- A **Good Practice Guide for Tailings Management** for members and the wider mining and metals industry, intended to support the implementation of good governance and engineering practices for tailings management across the lifecycle, including a performance-based, risk-informed approach where appropriate. The Guide will be informed by the commitments in ICMM's Tailings Governance Framework and the requirements of the Standard, and will help companies work through how to integrate these into their own programmes.

Once this material is ready, it will be made publicly available on ICMM's website for the benefit of the wider industry.

Question 28) Topic IV: ICOLD standards are a worldwide reference; does the ICMM global standard accounts for these as reference?

A: Yes, the ICMM, UNEP and PRI-backed Global Industry Standard on Tailings Management accounts for these references. For instance, the Consequence Classification Table 1, Annex 2 has been developed by ICOLD.

Question 29) Does this replace the Canadian Dam Association Dam Safety Guidelines 2007 (Revised 2013) or does it Compliment it Is this a Legal Regulation if yes What Act is it a Regulation"

A: The Global Industry Standard on Tailings Management is a global standard and can be implemented by any mining company that has a tailings facility. As it stands, this is a voluntary Standard that has been endorsed by PRI, UNEP and ICMM. It is not part of regulation now; however, governments may wish to adopt the Standard over time. UNEP is supporting governments upon request, to adopt or incorporate provisions of the Standard in their national and local policies and regulation. It is also expected that the topic of mine tailings facilities and the role of the Standard will be covered in the report to the fifth session of the UN Environment Assembly (UNEA5) which will address the implementation of UNEA4 resolution 4/19 on Mineral Resource Governance.

Question 30) Is Ligia Noronha's contribution available as text? For me her signal was breaking up.

A: You can find Ligia Noronha's statement on the UNEP website [here](#), under further resources.

Question 31) Does the standard provide for advisory services for government officials to better determine whether or not to approve projects? Governments often have loopholes in their legislation, or do not have sufficient capacity to adequately manage this issue.

A: The Global Tailings Review does not provide advisory services in a formalised way. The Standard guides the conduct of operators and informs States about good practices for tailings facilities, providing a framework for designing and managing such facilities.

Discussions on the governance of the management of mine tailing facilities are taking place in the context of the sub-regional, regional and global consultations for the implementation of the UNEA4 Mineral Resource Governance resolution. Additional information can be found, [here](#).

Question 32) Is effective Tailings Storage Facilities insurance seen as part of the solution? A guarantee that standards are being implemented and maintained?

Question 33) Does the standard make insurance a mandatory requirement for TSF?

Question 34) I would like to know if the Standard will be requested to the Mining Companies by the Insurances in case they need to update the insurance of an Old Tailing Dam. Or it its going to be requested only to knew Tailings deposits?

A: These questions were addressed during the [launch event](#). You can hear the response, [here](#), after 1:06:17.

For more information, please refer to Requirement 10.7 of the [Standard](#); as well as Chapter XV: Insurability of Tailings-related Risk of the accompanying [Towards Zero Harm: A Compendium of Papers Prepared for the Global Tailings Review](#).

Question 35) Will the same standard apply to small-scale/artisanal miners?

A: The Standard can in principle be applied to any tailings facility and it is applicable to any operator of a tailings facility. Some smaller operators may need more time or support to apply the Standard in full.

Question 36) This Standard will be compliance obligation to all members of ICMM?

A: Correct. The Standard is a commitment of membership for member companies.

Question 37) Is there a timetable proposed by ICMM to apply for this procedure?

Question 38) Is there any recommended preliminary due date to implement the standard by the ICMM member companies?

Question 39) Question to ICMM: Could Tom clarify which TSFs with consequence classifications in Annex 2, Table 1 of the Standard will need to comply with the Standard within 3 years?

Question 40) Question to ICMM- What kind of audits ICMM will put in place for existing dams post this Global standard.

A: ICMM member companies have already committed to implementing the Standard. The Standard will be integrated into ICMM's existing member commitments, which includes robust site-level validation and third-party assessments. For more information, please see [ICMM's Assurance and Validation Procedure](#).

Given the ambitious timeline for implementation that ICMM member companies have already committed to, in order to support the Standard's integration into ICMM's [existing assurance processes](#) and good practices on tailings management, a conformance protocol and guidance are being developed.

At the point of launch, members committed to clear timelines for implementation: three years for facilities with 'Extreme' or 'Very High' potential consequences, and five years for all others. The conformance protocol will either support members to self-assess progress with implementing the requirements of the Standard, or can be used by independent third parties to assess conformance.

Additionally, the Standard itself includes numerous requirements for independent oversight as an integral part of how companies manage their tailings facilities. For example, the analysis of alternative sites for new tailings facilities, the classification of tailings storage facilities according to the consequences of failure, and the conduct of risk assessments. All of these requirements will be subject to independent external oversight.

Question 41) In recent months, we have witnessed new failures, fortunately with no reported deaths, at several tailings dams. Considering that given the health and economic effects of the COVID19 pandemic, probably certain levels by the standards declared here will be dropped down. What action will the three institutions take to accelerate the "obligation" to achieve the objectives declared by the standard?

Question 42) Is there a clear commitment of mining companies with the standard? Specially with VI, availability of information to the public? How would the standards chapter VI, be implemented and enforced in Brazil?

A: Tailings management is a priority for the three co-conveners and they will continue to be involved in the rollout of the Standard:

- UNEP will support governments that wish to incorporate and build upon this Standard into their national or state legislation and policies.
- PRI, representing USD 103.4 trillion in assets under management, will be developing investor expectations to support all mining companies in implementing the Standard.
- ICMM member companies have already made a public commitment to implement the Standard, which includes robust site-level validation and third-party assessments.

Question 43) I have three questions, if I may: what happens with the companies who won't follow the standards? What happens with the existing dams? And how much money has the Anglican Church invested in mining - and in Vale? Thank you!

A: Investors – through PRI – are developing investor expectations which will highlight stewardship approaches investors are likely to take if companies do not follow the Standard (e.g. engagement, proxy voting, shareholder resolutions, and ultimately, the potential for

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disinvestment). Currently, investors publish whether companies have disclosed tailings data in response to the 2019 investor request on the Investor Mining and Tailings Safety Initiative website, and a group of investors are collaborating to engage with non-responders to improve disclosure.

The Church of England Pensions Board is invested in many mining companies as part of a diversified pension fund with both a robust ethical/responsible investment approach and fiduciary duties towards 40,000 beneficiaries. The Church of England Pensions Board disinvested from Vale immediately after the Brumadinho disaster on ESG and ethical investment grounds.

Question 44) Companies will require help and support in implementing the standard. Many miners are not members of ICMM and may not have been involved in the process so far. Is the standard review team open to dialogue with other groups. For example, part of my role is to convene safety discussions between steel companies who operate mines, there has been a lot of interest in tailing management. would the review team be open to participating in a session with these companies?

A: We are pleased to hear of the interest in the Standard amongst steel companies who operate mines. Companies will indeed require support in implementing the Standard. In the short term, ICMM is in the process of developing a Good Practice Guide on Tailings Management for members and the wider mining and metals industry.

A conformance protocol is also being developed that will either support members to self-assess progress with implementing the requirements of the Standard, or can be used by independent third parties to assess conformance.

With regard to consultations with non ICMM mining companies – as part of the public consultation process in late 2019 the Global Tailings Review engaged with a number of mining companies beyond ICMM's membership. For further information, please refer to our [Consultation report](#).

Question 45) The summary of current status of Brumadinho is disturbing and indicates a lack of commitment to responding to the consequences of the tragedy. By extension, this could indicate a lack of commitment to responsible tailings management. Is there a plan for addressing eventual non-compliance with the standard, and especially for ICMM members such as Vale?

A: This question was addressed during the [launch event](#). You can hear the response, [here](#), after 58:05.

Question 46) How is this standard going to affect investors who will be looking at small and large mining companies?

A: Investors are likely to review the public disclosures required by the Standard as part of their due diligence, "ESG" integration, and investment decision making. We hope that all mining companies that operate tailings facilities will adopt the Standard. It has been developed in a way that can be applied by all operators, regardless of their size or geographical location. In addition, financial institutions which support smaller mining companies have been consulted in its development including the IFC which also represented on the GTR Advisory Group. For more information, please visit our website, [here](#).

Question 47) "First global standard" (Adam Matthews) - are the more than 10 Nos of ICOLD-Bulletins on Tailings since the 80-ties of the last century referred to in the Global Industry Stand on Tailings Management?

A: Yes, they are. For example, the Consequence Classification Table 1, Annex 2 has been developed by ICOLD. In addition, the Chairperson of the ICOLD Subcommittee on Tailings Dams was on the GTR Advisory Group.

Question 48) How would this process be socialized with regulators and how it is expected for them to introduce its novelties, specifically in locations where the individual criteria is assumed in determine how the performance of a TSF is?

Question 49) How receptive have regulators been to the Standard? And have concerns be raised about any aspect thereof?

A: This question was answered during the launch event. You can hear the response, [here](#), after 1:04:12.

Question 50) To all of you - Do those responsible for Global Tailings Review attest that the guidelines in the document ensure that new disasters or crimes from mining tailings dam disruptions will not happen?

A: The Standard takes as its point of departure the ambition of zero harm to people and the environment. It provides clear requirements related to engagement of appropriate design and independent review capacity commensurate with a given tailings facility. Though far from a certainty, given the nature of the failures that have occurred to date, it appears a logical conclusion that if the recommendations in the Standard on governance issues related to design, operation and review had been followed, many of the failures that occurred in the past may not have happened, or at least would have had less severe impacts. This observation is necessarily speculative and is not intended in any way to address any single incident. However, it broadly aligns with the published findings of incidents and the examples of good practices from well-governed facilities that together were used to inform the development of the Standard.

Question 51) Tom Butler, ICMM: which companies were directly represented in your experts panel e.g. Teck, Newmont, Freeport & others ICMM announced in February 2019 would shadow & inform the experts panel which drew up the standard?

A: ICMM members were involved in the development of the Standard through the public consultation process and through engagements amongst the co-conveners. Teck Resources' Senior Advisor, Tailings and Mine Waste, was also involved in an ongoing advisory capacity to the GTR through the Advisory Group.

Question 52) How will adoption of the standard be enforced across the industry? Have sanctions for non-compliance been considered by the review either at industry level or through national legislation?

Question 53) Once the standard is implemented how is it intended to police to ensure compliance?

Question 54) What will the consequences be for companies not adhering to the standard and how will this be enforced before the point in time where governments may include the standard in their legislation?

A: This question was addressed during the launch event. You can hear the response, [here](#). Determining specific sanctions for non-compliance is beyond the mandate of the Global Tailings Review. Investors supporting the Standard have written to 723 mining companies to improve disclosure on tailings storage facilities (see Chapter XVI of *Towards Zero Harm: A Compendium*), and will be incorporating the Standard in to the next iteration of their disclosure request. Results of the disclosure request are made available online through the

Investor Mining and Tailings Safety Initiative. Two of the co-conveners are pursuing the establishment of an independent entity to oversee implementation of the Standard and provide a level of assurance.

Question 55) What will be the process to propose, review, and adjudicate revisions to the Global Standard over time?

A: This question was answered during the launch event. You can hear the response, [here](#), after 1:13:15.

Question 56) How was it possible to draw guidelines without a complete and exempt diagnosis of the problems with the mining tailings dams and the true structural causes of disruptions, without the broad participation of society, who lives below these structures and who was victimized and without inserting the accountability and incorporation of the responsibilities of all agents involved in the past and in the future and also without inserting social control and governance mechanisms without the protagonism of mining companies?

A: The Standard was subject to extensive public consultation and the Global Tailings Review team engaged with a number of communities who live near or downstream from tailings facilities. During the research phase of the process, the Chair and members of the Expert Panel visited communities affected by the tragedy in Brumadinho and Mariana; as well as communities, companies and government representatives in the province of British Columbia.

For more information, please visit the [consultation page on our website](#), where you can find a detailed [Consultation Report](#) explaining the consultation and engagement process and the feedback received. You can also view all public consultation submissions with consent, as well as the findings from the in-country consultation workshops.

Question 57) My question is address to Mr. Tom Butler. I know that you informed about Teghout TSF stability issue and as I know you send a warning letter to Armenian government and mention the issue. I just interested do you received any feedback?

A: The Government of Armenia provided a formal response to ICMM laying out the steps taken to ensure that the Teghout TSF stability issue is being addressed.

Question 58) I will appreciate if the Panel can enlighten us on the roles the Stakeholders (ICMM, PRI, UN) will be playing towards implementation of this important Standard?

A: This question was answered during the launch event. You can hear the response as part of each co-conveners' opening statement, [here](#). The co-conveners have each endorsed the Standard and call for its broad and effective implementation across the industry:

- UNEP will support governments that wish to adopt and build upon this Standard into their national or state legislation and policies.
- PRI, representing USD 103.4 trillion in assets under management, will be developing investor expectations to support all mining companies in implementing the Standard.
- ICMM member companies will implement the Standard as a commitment of membership, which includes robust site-level validation and third-party assessments.

Question 59) How will compliance with the Standard be audited and/or enforced?

Question 60) Is there any certification process for a company operating a TSF facility in regard to this standard?

A: As stated at the [launch event](#), PRI and UNEP have initiated discussions about the establishment of an independent entity to oversee the Standard. Avenues these groups are

considering include auditing and conformance processes and implementation protocols which could provide detailed guidance for certification or assurance as applicable, and for equivalence with other standards.

In the immediate term, ICMM member companies will implement the Standard as a commitment of membership, which includes [robust site-level validation](#) and third-party assessments.

Question 61) When can we expect to see the Guidelines to be out?

Question 62) Do you have a list of expected guidance material to be provided to support this standard? Will all of it be available by year end?

Question 63) Could we have more information on the document in preparation regarding the risk informed approach

A: ICMM's guidance on tailings management, is expected to be published in Q1 of 2021. Dr Norbert Morgenstern, a world-leading expert in the field, who deeply understands the practicalities of preventing catastrophic tailings failures, is actively engaged in the development of this guidance. He advocates for a performance-based, risk-informed approach that builds upon current approaches to tailings management and capitalises on improvements in surveillance technology and modelling methods, providing a rigorous technical basis for decision-making that focuses on facility-specific safety. As stated at the [launch event](#), PRI and UNEP are working towards the establishment of an independent entity to oversee the Standard, support its implementation, and provide a level of assurance. (See also the response to Q60).

Question 64) Thanks for efforts and special thanks to Angelica for her courage and tenacity. What will be the monitoring and enforcement of the standards uptake? Is there a system of third-party auditing that is being subscribed by ICMM?

Question 65) Can you explain in more detail the disclosure and verification process for ICMM members? What is involved?

A: The Standard is now part of ICMM's membership commitments, which include third-party assurance and validation. To learn more about ICMM's assurance and validation procedure, please see [ICMM's Assurance and Validation Procedure](#).

Additionally, the Standard itself includes numerous requirements for independent oversight as an integral part of how companies manage their tailings facilities. For example, the analysis of alternative sites for new tailings facilities, the classification of tailings storage facilities according to the consequences of failure, and the conduct of risk assessments. All of these requirements will be subject to independent external oversight.

Question 66) What's your expectation, regarding the use of technology associated to data / information disclosure?

A: As stated in the preambular text, the Standard provides a framework for safe management of tailings facilities while affording operators flexibility as to how best to achieve this goal. As such, the Standard does not recommend any specific technology for managing data and information disclosure.

Question 67) How does the standard address potential failure in the post-relinquishment phase?

A: With regard to closure and post-closure, the Standard requires assurance that a tailings facility is in a state of "safe closure" as defined in the Glossary, Annex 1.

Question 68) Is there a plan to review the implementation of this standard over time, and allow for updates to it?

Question 69) What provisions are there in the standard for evolving best practices in the future?

A: This question was answered during the launch event. You can hear the response, [here](#), after 1:13:24.

Question 70) When will a roadmap for implementation be made available?

A: The Standard, in seven languages, is now available for implementation to all operators globally.

Question 71) Permanent geoelectric monitoring of tailing dams' structural integrity (<http://www.lsi-lastem.com/en/applications/hydrology-and-hydrogeology/permanent-geoelectric-monitoring-systems>) seems, at the moment, the most promising answer to prevent tailing dams accidents like the one occurred in Brumadinho. What do you think about this technology?

Question 72) Are there minimum monitoring requirements for tailings in terms of technology?

Question 73) Permanent geoelectric monitoring of tailing dams' structural integrity is probably the most promising answer to prevent tailing dams accidents like the one occurred in Brumadinho. What do you think about this technology?

A: As stated in the preambular text, the Standard provides a framework for safe management of tailings facilities while affording operators flexibility as to how best to achieve this goal. As such, the Standard does not recommend any specific monitoring system or technology. For more information, please refer to the Standard, and in particular “Principle 7: Design, implement and operate monitoring systems to manage risk at all phases of the facility lifecycle, including closure”.

Question 74) Will the new standard be applicable to any country, regardless of the current in-country law and regulation? Or how will the standard be able to adapt to any country specific needs?

Question 75) What about the national standards of countries?

Question 76) How will conflicts between this standard and various national standards be managed?

Question 77) Is this standard will be applied in every country or still local statutory bodies will govern over these standards?

Question 78) When there is difference or conflict between standards, should Operators refer to GTR one?

A: The Global Industry Standard on Tailings Management is a voluntary standard informed by existing good practices and findings from past tailings facility failures. It can be applied to existing and future tailings facilities, wherever they are in the world and whoever operates them.

As stated in the preambular text, conformance with the Standard does not displace the requirements of any specific national, state or local governmental statutes, laws, regulations, ordinances, or other government directives. Operators are expected to conform with the Requirements of the Standard not in conflict with other provisions of law.

Question 79) Will the standard incorporate the legislative issues related to the failure of tailings?

Question 80) What happens to local standards that are short of the new standards?

A: As stated in the preambular text, conformance with the Standard does not displace the requirements of any specific national, state or local governmental statutes, laws, regulations, ordinances, or other government directives. Operators are expected to conform with the Requirements of the Standard not in conflict with other provisions of law.

The Standard is informed by existing good practices in the management and governance of tailings, findings from past tailings facility failures and relevant existing legal and policy frameworks. According to a [White & Case legislative review of key mining jurisdictions](#), the ambitions of the Standard when compared to domestic law, set a higher threshold for achieving the degree of integrity, safety and community protection necessary for the development and management of tailings facilities. For more information, please refer to Chapter XIII: Comparative Analysis of Tailings-related Legislation in Key Mining Jurisdictions of the accompanying [Towards Zero Harm: A Compendium of Papers Prepared for the Global Tailings Review](#).

Question 81) Does the standard recommend dry disposal of tailings whenever it is possible?

Question 82) Does the Standard support dewatering of tailings prior to disposal as it is safer than storing wet tailings in dams?

Question 83) There is no need to continue to use dams, no matter how safe they are supposed to be... There is a number of technologies for dry disposal and even Vale already use this in certain facilities in Brazil. Why not to recommend this, once they are clearly safer, uses less water (neither impacting local agriculture nor the population use of water), which is appropriate to a scenario of climate change and the current increase of droughts?

A: The Standard requires that the most appropriate technology be adopted for each and every aspect of the design, construction, operation and closure of a tailings facility. This is done by undertaking a multi-criteria alternatives analysis of all feasible sites, technologies and strategies for tailings management. Dry disposal or filtered tailings are the best technology for some sites but inappropriate for others. The Standard requires that the design is done using quality data from an updated and integrated knowledge base, by qualified professionals, using the best design, technology, parameters and criteria for that particular site and properly documented, reviewed and implemented to manage risk.

Dry-stack tailings facilities are certainly a good alternative but only in dry climates with appropriate geology, and they are still not economic where large volumes of tailings are being generated. For example, a dry-stack facility in a place with a lot of rainfall is not going to stay dry over time. A dry-stack facility subjected to heavy rainfall could end up liquefying at the bottom and therefore increasing the risk of failure. Such considerations are even more critical in the context of climate change. A well-designed, planned, constructed, operated, maintained and managed tailings facility is safer than those for which any one of those aspects is missing or lacking.

Question 84) Can you please elaborate in the list of stakeholders that are included as parties in the "2nd point Integrated knowledge base" and also in the "3rd point: Design construction, operation & monitoring"?

A: Please refer to the [Standard](#), particularly Annex 3: Summary Tables.

Question 85) A cynic might say there is nothing new here, the recommendations following Mt Polley and Samarco have been very much repeated. So, how can we guarantee that the uptake will be widespread this time around?

A: The Global Industry Standard on Tailings Management is a global standard, endorsed by PRI, UNEP and ICMM. It was developed through an independent process with the support of a multi-disciplinary Expert Panel and input from a global and diverse multi-stakeholder Advisory Group. It involved extensive public consultation with affected communities, government representatives, investors, multilateral organisations and mining industry stakeholders and is informed by existing good practices and findings from past tailings facility failures.

All three organisations will continue to work towards broad uptake and call for effective implementation across the industry. For more information, please read our press release, [here](#).

Question 86) As is the case, all mines are custom as in type of metals mined, soil type and geographical location. Will all of this be taken into account with the overall standard?

A: The Global Industry Standard on Tailings Management is a voluntary standard that has been developed in a way that can be applied to existing and future tailings facilities, wherever they are and whoever operates them. Given the considerations listed above (e.g. unique characteristics, geographies, soil, type of metals mined), and as stated in the preambular text, the Standard provides a framework for safe management of tailings facilities while affording operators flexibility as to how best to achieve this goal.

Question 87) Given the potential number of existing storage facilities that may no longer be used in active production, might there be expansion or introduction of initiatives to permanently close and de-risk these legacy facilities?

Question 88) Tailings dams will last forever. The ownership and responsibility for them will shift over time. How can we as society ensure they will still be safe and monitored as their ownership changes or if they are abandoned?

A: This question was addressed during the launch event. You can hear the response, [here](#), after 1:07:50.

In addition, please refer to the second paragraph of the [Standard](#)'s Preamble:

"Issues have arisen in the development of the Standard that are difficult to translate into an auditable industry Standard for Operators. These issues are more appropriately addressed through national and/or state level regulatory authorities, or through multilateral agencies working with the industry. For example, it is recognised that more work needs to be done by national and/or state level regulators to develop mechanisms that enable the identification, maintenance and/or restoration of abandoned or 'orphaned' facilities."

Question 89) Is the global standard organization going to implement a follow up process to assess how the global standard is being implemented in different locations around the world?

A: The Global Tailings Review has now finished. The co-conveners have called for its broad and effective implementation across the industry:

- UNEP will support governments that wish to incorporate and build upon this Standard into their national or state legislation and policies.
- PRI, representing USD 103.4 trillion in assets under management, will, among other interventions, be developing investor expectations to support all mining companies in implementing the Standard.

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- ICMM member companies will implement the Standard as a commitment of membership, which includes robust site-level validation and third-party assessments.

Over the course of the coming months, the co-conveners will be releasing further information about the implementation phase.

Question 90) As the Standard is affected communities centred, does the Standard require tailings owners repair PREVIOUS social and environmental damage?

A: Please refer to the requirements contained under Topic V: Emergency Response & Long-Term Recovery.

Question 91) How to enforce this standard to be adopted by the government or regulatory body in different countries?

A: UNEP will support governments that wish to incorporate and build upon this Standard into their national or state legislation and policies.

In addition, as per [Ligja Noronha's statement at the launch event](#), member states have asked UNEP to have the Standard reflected in the Report on the implementation of the UNEA4 resolution on Mineral Resource Governance to the Fifth session of the UN Environment Assembly (UNEA5) in February 2021 but also to align the industry standard with national standards.

Question 92) I was impressed that the team visited a few African. There are a lot mines in Africa. However, the current discussion we are having for example has no representative input from Africa. My question, what are we doing to organically bring Africa to the table for a seamlessly appreciation of the new standards.

A: The Global Industry Standard on Tailings Management is a voluntary standard that can be applied to existing and future tailings facilities, wherever they are in the world and whoever operates them. The co-conveners will continue to provide visibility and discuss the uptake of the Standard with countries across different regions, including with countries in Africa.

Question 93) The GTS will focus in some countries initially? This engagement is going to be via government or private companies?

Question 94) Is there a target date for the distribution of the report to all mines in Africa?

A: The Standard, in seven languages, is now available for implementation to all operators globally.

Question 95) Do you expect to encounter different type or level of uptake in different jurisdictions? Do you expect to have over-lapping jurisdiction?

A: It is important to note that the Standard applies to individual tailings facilities, and as such, companies operating in multiple jurisdictions may decide to prioritise certain facilities over other, based on, for example, the consequence classification.

Question 96) How to become ICMM member company?

A: For the ICMM member admission process, please visit the ICMM website, [here](#).

Question 97) Can a government request companies to abide by these standards of mining companies are not members of ICMM?

A: Yes, they can. This is aligned with the long-term ambition of the Standard.

Question 98) How am I going to be able to adhere to the standard when the laws of my jurisdiction directly contradict the technical requirements of world best practice that this standard calls for? I want to but the laws here have a long way to go.

A: It would be helpful to clarify the jurisdiction in question. Please refer to the preambular text of the Standard: “Conformance with the Standard does not displace the requirements of any specific national, state or local governmental statutes, laws, regulations, ordinances, or other government directives. Operators are expected to conform with the Requirements of the Standard not in conflict with other provisions of law.”

Question 99) If [ICMM] members do not comply, what are the consequences?

Question 100) Today’s presentation would indicate that Vale are not following the principles in Topic 5 (Emergency Response & Long-Term Recovery) by not doing all they should to address the Bruminadho disaster. Vale is a member of ICMM. What leverage, if any, does ICMM have to influence members actions?

A: This question was answered during the launch event. You can hear the response, [here](#), after 58:03.

Question 101) Chemical stability is the one reason to build dams. However, chemical stability has mostly been ignored. How would mining companies ensure chemical stability?

A: The Standard requires the development of an integrated knowledge base that includes the properties of the tailings, and the development of a robust design that handles the integrity of the facility, minimizes risk and the appropriate environmental outcomes.

Question 102) It is the intention of this standard to compile all other existing standards such as CDA or ANCOLD?

Question 103) How do expect the Standard to be integrated with existing best practice documents, such as produced by CDA, ICOLD, ANCOLD, etc?

Question 104) About the implementation of the global tailings standard, is ICCM planning to have the implementation strategy align (where appropriate) with other existing implementation protocols such as MAC’s TSM protocols and Cyanide code?

Question 105) How does this Standard consider, include and leverage existing standards - IRMA for example, Mining Assoc of Canada-Towards Sustainable Mining?

Question 106) Will there be an effort to harmonize/cross-reference this with existing initiatives? There is a proliferation of these standards and there is the danger of reporting fatigue

Question 107) Are there other standards/guidelines for tailings being applied that could come into conflict or compete with the Global Standard?

Question 108) Is the intention of this standard to replace others references (ICMM, CDA, etc.)?

A: The Standard is based on: existing guidelines and practices, including CDA’s TSM, ICOLD, ANCOLD, IRMA; findings from past failures; and the expertise of a number of geotechnical, legal, environmental and social performance experts from across the world. Representatives from all of the abovementioned standards (CDA, IRMA, ICOLD and ANCOLD amongst others) were consulted on a number of occasions throughout the process. They also provided feedback on the draft Standard as part of the public consultation process

in late 2019. For more information and to view their submissions, please visit [the consultation page on our website](#).

In addition, as mentioned at the [launch event](#), PRI and UNEP are working to establish an independent entity to oversee the Standard. Once established, this entity will support, maintain, and develop the Standard, including development in relation to auditing and conformance processes and protocols, recognising equivalence with other standards.

The Standard is not intended to replace existing standards. A careful consideration of 'equivalency' and alignment with existing voluntary schemes and standards will be required – where operators seeking certification are relieved of having to demonstrate conformance if this has been demonstrated under a cognate scheme.

Question 109) No mention has been made of government standards. In regard to large dams the non-government organisation ICOLD has membership from various country Large Dam committees which in most countries have led to legislation concerning the design and management of large dams. Is ICMM considering approaching governments to implement these standards?

A: The Standard is informed by all available existing standards and guidelines, including existing government legislation. For example, the Consequence Classification Table 1, Annex 2 has been developed by ICOLD. Please be advised the Chairperson of the ICOLD Subcommittee on Tailings Dams was on the GTR multi-stakeholder Advisory Group. In addition, according to a [White & Case legislative review of key mining jurisdictions](#), the ambitions of the Standard when compared to domestic law, set a higher threshold for achieving the degree of integrity, safety and community protection necessary for the development and management of tailings facilities. For more information, please refer to Chapter XIII: Comparative Analysis of Tailings-related Legislation in Key Mining Jurisdictions of the accompanying [Towards Zero Harm: A Compendium of Papers Prepared for the Global Tailings Review](#).

Question 110) For non ICMM members are they able to refer to the Standards if they are adopting them? Is there an audit or assurance process or is it only self-declarations?

A: Any company may refer to the Standard. Indeed it is encouraged.

Question 111) About the item in Area IV Support long term etc. Is it acceptable to have a forecast of a catastrophic failure? This is not like accepting human losses in security. From my point of view it is unacceptable to have a standard of Construction, Monitoring and Control that may ultimately have a catastrophic failure. Precisely all this is to eliminate the possibility.

A: Topic V of the Standard, entitled: Emergency Response and Long Term Recovery requires operators to consider their own capacity, in conjunction with that of other parties, and to plan ahead, build capacity and work collaboratively with other parties, in particular communities, to prepare for the unlikely event of a failure. These Requirements also outline the fundamental obligations of the operator in the long-term recovery of affected communities and the environment in the unlikely event of a catastrophic failure, and/or where a failure has already occurred, and the long-term recovery is underway.

Question 112) What should be the interval of 3rd party TSF inspection?

A: It depends on the consequence classification. For more information, please refer [to the Standard](#); there is also a summary table of levels of review mentioned in the Standard in Annex 3: Summary Tables.

Question 113) How can I offer some young engineers to the assessment group?

A: Please contact the co-conveners at: info@icmm.com; inquiry@unep.org; info@unpri.org.

Question 114) Are the investors pressing to have transparent monitoring systems implemented at the tailings facilities? During rehabilitation of the facility if needed but more so for the one in operation and the ones closed?

A: Yes. Both monitoring and transparency are critical aspects of the Standard. Details of an initial investor disclosure request made to mining companies are available in Chapter XVI of [Towards Zero Harm: A Compendium of Papers Prepared for the Global Tailings Review](#).

Question 115) Does anyone know how far from achieving the standard Vale is?

A: Please contact Vale directly.

Question 116) It is essential that the world of finance, through socially responsible funds, actively supports the activities and values of the ICMM, to make this cultural transition, towards greater sustainability and security in the management of mining tailings, happen. How big is the critical mass of funds that focus today on this mission?

A: One of the co-conveners of the Global Tailings Review is the [Principles for Responsible Investment](#) (PRI) who, as of 2019, globally represent USD 103.4 trillion in assets under management. For more information on investors' involvement, please see Chapter XVI of [Towards Zero Harm: A Compendium of Papers Prepared for the Global Tailings Review](#).

Question 117) Which measures and programs are planned to ensure the qualification and independence of the external auditors?

A: At this stage, the Standard has a number of instruments to tackle this issue, including the prohibition of the use of the same independent contractor to conduct consecutive Dam Safety Reviews (DSR) on the same tailings facility. A more comprehensive answer to this question may be possible once an independent entity has been established.

Question 118) There are potential conflicts of interest with consultants who have the necessary skills having gained them through working for the mining companies. How can we be assured of independence audits and also independent "engineers of record"?

Question 119) Were the principles concerned with eliminating conflicts of interest between the certifier and the entrepreneur? How to guarantee reliable and independent information about structures and projects?

A: This question was answered during the launch event. You can hear the response, [here](#), after 1:23:16.

Question 120) What safeguards and funding do the global standards provide for protecting whistleblowers and citizens who are critical of mining companies? Global Witness reported again in 2019 the activists protesting against development in the mining sector were the most at risk of violence and murder.

A: The Standard has a designated Principle that focuses wholly on whistle-blower protections – please refer to Principle 12 and its respective Requirements: 12.1 and 12.2. In addition, the Standard requires the development of an organisational culture that promotes early problem recognition.

Question 121) What measures will in place to make sure that the standard implementation won't become just a pile of paperwork? as it is today in most countries.

A: Given the rationale for the Standard, and its endorsement, backing and long-term ambition, the co-conveners will continue to be involved during the rollout to ensure broad and effective implementation. In addition, UNEP and PRI are advancing in their plan to establish an independent entity to support, oversee, and provide a level of assurance around the implementation of the Standard at the global level.

Question 122) Static liquefaction of tailings is one of the key issues. Will the standards provide any guidance on tailings characterisation with respect to static liquefaction?

A: The Standard focuses on general outcomes. In the short term, technical details will be found in the ICMM guidance on tailings management which is expected to be published in Q1 of 2021.

Question 123) Which concrete plans for ensuring the implementation of the standard exist? Will there be one central agency/body monitoring or certifying compliance with the standard? How will partners be involved in these plans?

Question 124) Thank you for today's presentations. Can we hear some more from the co-conveners about the independent entity/institute that might shepherd the Standard into the future?

A: Please contact the co-conveners.

Question 125) Since implementation is within 3 years if I heard right, would a company registered with the ICMM be held accountable should there be a failure in any of their dams within the 3 years?

A: With the launch of the Standard, ICMM members have committed that all tailings facilities with 'Extreme' or 'Very high' potential consequences will be in conformance with the Standard within three years of the launch date (5 August 2020), and all other facilities within five years. For more information, please refer to the virtual launch event, [here](#), or the press release, [here](#).

Question 126) Do the co-conveners see a need for ratification of the Standard by other stakeholder groups, such as governmental or regulatory bodies, trade associations other than ICMM, technical organizations, and others in order to gain the widespread acceptance you seek?

A: Yes. The co-conveners have called for broad and effective implementation across the entire mining industry. The Chair of the Global Tailings Review and each co-convener has been engaging with other stakeholder groups throughout the process and will continue to do so. Stakeholder groups engaged to date include: communities, civil society, NGOs, multilateral organisations, industry associations, government representatives and regulatory bodies, consultancies mining companies, insurance, financial and asset management companies amongst others.

Question 127) Being currently driven by investment; What are the current endorsements across the well-known tailings peer group organizations - technical and professional.

A: It is unclear which tailings peer group organisations this question is referring to. Representatives from the following organisations and institutions have been involved in the Global Tailings Review in various capacities: University of British Columbia, University of Western Australia, Australian National University, Sustainable Minerals Institute, University of

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Queensland, University of Sydney, ANCOLD, ICOLD and Mining Association of Canada amongst many others.

For more information on the organisations consulted, please visit the [consultation page on our website](#), where you can find a detailed [Consultation Report](#) explaining the consultation process and the feedback received. You can also view all public consultation submissions with consent.

Question 128) Hi all, how much will it cost miners to adopt the standard?

Question 129) Question for Bruno and Tom - how much will it cost to implement the Standard?

A: It really depends on the current practices of the mining company, on the tailings facility in question and the prevailing context.

Question 130) Will the standard include monitoring standards?

A: Monitoring is a key component of the Standard. The majority of the Requirements that deal with monitoring are found in “Topic III: Design, Construction, Operator and Monitoring of the Tailings Facility”.

Question 131) How much patience will the investors have with mining companies? At what point will you divest from a company who has not disclosed information on its tailings or implemented the standard?

A: This question was answered during the launch event. You can hear the response, [here](#), after 1:21:30.

Question 132) Angelica highlighted that Vale have started to back-peddle on their earlier commitments and transparency. What can be done through the Standard and Co-Convenors to correct this?

A: Through its membership of ICMM, Vale have committed to implement the Standard.

Question 133) Adam mentioned setting up an independent organization to ensure implementation of the standard. This sounds similar to the International Cyanide Management Institute and the Cyanide Code. Is the intention to set up a similar body with certification for the tailings standard?

A: Yes. As stated at the [launch event](#), PRI and UNEP are working towards the establishment of an independent entity to oversee the Standard. Avenues these groups are considering include auditing and conformance processes and protocols to support certification or assurance as applicable, and to recognise equivalence with other standards.

In the immediate term, ICMM member companies will implement the Standard as a commitment of membership, which includes [robust site-level validation](#) and third-party assessments.

Question 134) Will external consultants have new and increased roles and responsibilities due to the new guidelines?

A: Implementation of the Standard will require a lot of human resources. Given the multitude and various levels of review required in the Standard, we do expect independent consultants to have new and increased roles as part of implementation.

Question 135) Will there be a roll out of this standard to interested mining companies which are willing to adapt this standard?

A: The 5 August launch of the Standard marks the beginning of the roll out. Interested mining companies are now able to take the Standard and implement it.

Question 136) Legacy tailings facilities were mentioned, existing operational TSFs as well as new facilities can be designed and managed according to the new standard, does the standard provide guidance on legacy sites? and also address post closure concerns? i.e. stability and environmental/final closure standards?

A: The Standard covers the entire tailings facility lifecycle, including closure and post closure. There are also concrete requirements for existing tailings facilities and how they should be managed.

Question 137) Vale has many dams which are considered unstable in Brazil. Would it be allowed to be certified under these conditions?

A: Conformance will be determined by third-party independent assessors in the short term; and certified auditors in the medium to long term.

Question 138) Is there, so far, any governments involvement to make Mining companies to comply to ICMM standards in their respective countries?

A: As part of the development of and consultation on the Standard, the Global Tailings Review team has engaged with a number of government representatives, including at Ministerial level. In addition, UNEP is supporting governments that wish to incorporate and build upon this Standard into their national or state legislation and policies. As per [Ligia Noronha's statement at the launch event](#), member states have asked UNEP to have the Standard reflected in the Report on the implementation of the UNEA4 resolution on Mineral Resource Governance which will be presented to the fifth session of the UN Environment Assembly (UNEA5) in February 2021 but also to align the industry standard with national standards; to reflect on approaches by which the standard can be part of, and enhanced through national legislation, but also to seek opportunities for green investment as, for example, alternative productive uses of tailings waste.

Question 139) What are the investors' sentiments regarding the review?

A: This question was answered during the launch event. You can hear the response, [here](#), as part of PRI's statements after 39:30.

Question 140) In some jurisdictions like in PNG deep sea tailings placements are opted for by industry instead of tailings dam on land, what is your view on that?

A: Riverine, deep sea and non-tailings related storage of materials was not included in the [scope of the Review](#).

Question 141) What role do you feel innovation and technologies play in addressing the "tailings challenge"?

A: Technology and innovation without doubt play a key role in the tailings challenge. This question was addressed during the [virtual launch event](#). You can hear the response, [here](#), after 1:10:20. For further insights on this issue, please read Chapter VI: The Role of Technology and Innovation in Improving Tailings Management of the accompanying [Towards Zero Harm: A Compendium of Papers Prepared for the Global Tailings Review](#).

Question 142) When do ICMM think to submit the next version of this standard?

A: The Global Tailings Review in charge of developing a new Global Industry Standard on Tailings Management was an independent process, co-convened by UNEP, PRI and ICMM. A draft Standard was released for public consultation at the end of 2019. The final Standard was launched on 5 August 2020.

Question 143) Is there a procedure for tailings after bankruptcy?

A: The Standard addresses the matter of merger, acquisition or change in ownership in “Requirement 10.7: Subject to the provisions of local or national regulations on this matter, Operators shall use best efforts to assess and take into account the capability of an acquirer of any of its assets involving a tailings facility (through merger, acquisition, or other change in ownership) to maintain this Standard for the tailings facility lifecycle.”

Otherwise, this issue falls in the realm of “legacy” and “abandoned” sites, which was discussed during the [virtual launch event](#), after 1:07:50.

Question 144) ¿The standard includes indications to reuse tailings in other applications such as construction, agriculture or others? Of course, if the characteristics allow it.

A: The Standard does not include specific indicators to reuse tailings. However, for new tailings facilities, the Standard requires the exhaustion of all alternatives using a multi-criteria alternatives analysis. For more information, please refer to Requirement 3.2 of the Standard.

Question 145) Where is the number of experienced and appropriately qualified engineers to participate as ITRP or as auditors coming from? one problem with tailings dams is the multi-disciplinary understanding required to address all areas of risk.

A: Agreed. It is for this reason that the Standard was developed by a multi-disciplinary Expert Panel, and all disciplines are reflected in the final output.

Question 146) How will the human rights due diligence and stakeholder engagement outlined here ensure vulnerable groups such as women and children are fully considered and consulted?

A: The Standard requires companies to undertake comprehensive and ongoing human rights due diligence in accordance with the UN Guiding Principles on Business and Human Rights (UNGPs). The UNGPs are premised on international law and fundamental rights for all – including for vulnerable groups such as indigenous peoples, women, youth and children. The UNGPs require companies to respect the human rights of individuals belonging to specific groups or populations that require particular attention. In line with this, the Standard supports the need for companies to give special attention to the unique experiences of women and the structural discrimination or barriers that they face.

In addition, the Standard’s definition of meaningful engagement states: “...involves measures to overcome structural and practical barriers to the participation of diverse and vulnerable groups of people. Strategies for addressing barriers must be appropriate to the context and the stakeholders involved.” thus enabling and encouraging the involvement of women, youth and children.

Question 147) Have the Equator Principle Banks and/or the World Bank/IFC expressed interest in adopting these new tailings standards?

A: Representatives from both the IFC and the World Bank were part of the GTR multi-stakeholder Advisory Group. We have also engaged with the European Bank for

Reconstruction and Development (EBRD) amongst others, who partook in the public consultation process.

Question 148) About the implementation of public disclosure and access to information, what's the proposal of this standard? Would will generate a social issues if not consider a good plan.

A: Please refer to [Standard](#), Principle 15: Publicly disclose and provide access to information about the tailings facility to support public accountability.

Question 149) What would be the approach to old sites that were built with sub standard conditions?

Question 150) I understand that all facilities need to be brought up to standard with near zero risk. How will we be applying these standards retroactively?

A: The Standard applies to both existing and future tailings facilities. As such, it makes it explicitly clear as to which Requirements apply to existing facilities. The retroactive application was considered very carefully throughout the development of the Standard.

Question 151) Will there be permanent information disclosure as well as independent monitoring?

A: Yes. Please refer to “Topics III: Design, Construction, Operation and Monitoring of the Tailings Facility”; and “Topic VI: Public Disclosure and Access to Information”.

Question 152) I would like to ask, is this standard only applicable to ICMM members? As we all know, China has over 7000 tailings ponds, and China also had a tailings dam failure accident in 2008. This standard does not take into account many best practices in China, so I think it is more of a regional standard than a global standard.

A: The Global Industry Standard on Tailings Management is a global voluntary standard and can be applied by any mining company to any existing and future tailings facility, wherever it is and whoever operates it. Please be advised that as part of the public consultation process, the Chair of the Global Tailings Review visited China and consulted the draft Standard with members of the Global Mining Association of China, as well as the Ministry of Natural Resources. In addition, the Standard is also available in Chinese Mandarin on our website.

Question 153) If a disaster occurs again the consequences will fall on the group of engineers in charge (managers) or on the owners of the mining company?

A: The Standard clearly lays out roles, responsibilities and accountabilities. Please refer to Topic IV: Management and Governance, and in particular, “Principle 8: Establish policies, systems and accountabilities to support the safety and integrity of the tailings facility”.

Question 154) Thank you to the co-conveners for the discussion. Is there a plan to socialise the new Standard in communities where "Extreme" or "Very High" potential consequence tailings facilities are located?

A: The Standard requires operators to provide opportunities for meaningful engagement of project-affected people in decisions that may have a bearing on public safety and the integrity of the tailings facility.

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Question 155) How many mining company CEOs are listening?

Question 156) Could you disclose how many investors and who has divested their investment in mining company in the last 5 years?

A: We do not have the answer to these questions.

Question 157) Thanks for taking this important step towards better TSFs management and safety. This question is for GRID-ARENDAL (UNEP). After reviewing the data released on the Tailings portal I've noticed there are some countries that are known to have hundreds of TSFs, mostly inactive or under rehabilitation/closure, but the database of the consultation only present few a TSFs and mostly active for these countries (e.g China, Chile). This database is still far from being complete and I was wondering if you have any specific plans or initiatives to keep working closely with local governments and mining authorities to update this database and address the remanent environmental and social risks related with this type of TSFs?

A: on behalf of GRID-ARENDAL (the organisation that manages the Global Tailings Portal): The data currently only includes the responses from publicly listed companies that the Investor Mining and Tailings Safety Initiative contacted. The database currently does not include closed, abandoned or many state and privately owned mines. The ambition of the Initiative is to include these and they are working with a number of satellite companies and governments to progress this work.

A group of investors are engaging with companies that have not responded to the original investor request (see also Chapter XVI of [Towards Zero Harm: A Compendium of Papers Prepared for the Global Tailings Review](#)). [In addition, investors have recently seen an increase in](#) disclosure from State owned mining companies.

Question 158) To ICMM: Will ICMM seek to involve the national mining associations that are members of ICMM, and promote that they adopt these new tailings standards?

A: ICMM company members will implement the Standard as a commitment of membership, which includes robust site-level validation and third-party assessments. National mining associations are encouraged to promote the adoption of the Standard amongst their own membership.

Question 159) Can you comment on using the seismic design criteria for a 1 in 10,000 in passive closure for all classification of tailings dams low to extreme. 199 similar for flood design criteria

A: During closure, the facility is meant to be there for a long time, likely in perpetuity. During this time, the classification can and likely will change, so passive closure needs to follow appropriate design criteria for the life of the facility.

Question 160) Tailings and the foundation behaviour is complex in nature. How the guideline defines the required level of confidence in data and understanding the behaviour of tailings facilities for design and monitoring?

A: The Standard uses several instruments to address this challenge. For more information, please refer to the Standard, Annex 1: Glossary, definitions of “senior independent technical reviewer” and “senior technical reviewer”.

Question 161) On water Management in and out TSFs, are you advising to construct beside a return water dam? or a water treatment plant and release water in Environment. Because in some cases we are managing both volume and quality water.

A: This requires case by case evaluation as the amount of water to potentially treat depends on site climate and tailings management option. Treatment requirements will also be on site by site basis depending on the mine ore geochemistry, processing reagents and local regulatory requirements.

Question 162) What is your advice on the recirculating ratio of water between the plant and the TFSs when quality and volume of water is a challenge?

A: This needs to be defined on a case by case basis.

Question 163) Question is whether the panel recognise the Safety First report published by Earthworks that sees that the GTR has not gone far enough in setting standards . Does the panel recognise additional standards and concerns outlined in the Safety First document and how will it adjust the standards over time to ensure measures that are not yet included in the GTR?

A: This question was partially answered during the launch event. You can hear the response, [here](#), after 1:13:24.

The Global Tailings Review is not in a position to comment on the Earthworks and Mining Watch Canada developed Safety First Report. It is however worth noting that the Global Tailings Review was developed transparently and through an extensive, year and a half long multi-stakeholder process, which included consultations and input from civil society and affected communities, academics, government representatives, investors, mining industry professionals, mining companies and multi-lateral organisations amongst others.

Question 164) Does the standard account for instances when a facility becomes a deposit or a resource as the contents are newly economically viable to recover? Do all of the requirements of the standard still apply to a resource or reserve?

A: The Standard can be applied to any “tailings facility”, as defined in the Glossary, Annex 1.

Question 165) Sorry Me question it is not was clear. I think in when the standards will be submit in a final version. today is only a draft.

A: Launched on 5 August 2020, the Global Industry Standard on Tailings Management is the final version and is available for use and implementation by any mining company.

Question 166) Financing of mining projects often requires the use of mining consultants to undertake due diligence for the potential lenders. Are there any plans to ensure that they are aware, understand and can opine against these standards?

A: The PRI is the world’s leading proponent of responsible investment. It works: to understand the investment implications of environmental, social and governance (ESG) factors; and to support its international network of investor signatories in incorporating these factors into their investment and ownership decisions. Having PRI as one of the three co-conveners of the Global Tailings Review ensures continued effort in raising awareness amongst investors with the ambition of having implementation of the Standard as a prerequisite for lending, through the Investor Expectations currently being developed.

Question 167) Ensuring the Standard is well understood, adopted and used will require continuing resources for training, monitoring and proper implementation. Beyond near-term implementation, has or will a fund be developed to ensure the intentions of the Standard, including its social, technical, commercial and ethical obligations and opportunities, becomes an embedded practice in industry as well with regulators? Likewise, as technologies evolve, how will the Standard be maintained over 20, 50 and 100 years for example?

A: This question was addressed during the launch event. You can hear the response, [here](#), after 1:13:24.