Consultation response

Part 1: Your details

Original language of response: English

Name: Luis E. Sánchez

Country of residence: Brazil

Are you willing to let us publish your response publicly on the Global Tailings Review website? Yes

Please select which stakeholder group you are representing: Academic (universities and other research institutes)

If 'Other', please specify below:

Are you responding on behalf of an organization? No

Please give the name of the organization:

Your level within the organisation:

Part 2: Your views on each of the Principles and Requirements in the Standard

Topic I: Knowledge Base

Principle 1

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 1 do your comments relate to?

Your comments on Principle 1

Principle 2

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 2 do your comments relate to?
Requirement 2.1,Requirement 2.5

Your comments on Principle 2
I will provide my comments as an attached file.

Topic II: Affected Communities

Principle 3

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 3 do your comments relate to?

Your comments on Principle 3

Topic III: Design, Construction, Operation and Monitoring of the Tailings Facility

Principle 4

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 4 do your comments relate to?
Comments on the Principle itself,Requirement 4.1

Your comments on Principle 4
I will provide my comments as an attached file.

Principle 5

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 5 do your comments relate to?

Your comments on Principle 5

Principle 6

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 6 do your comments relate to?

Your comments on Principle 6:

Principle 7

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 7 do your comments relate to?

Your comments on Principle 7

Principle 8

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 8 do your comments relate to?

Your comments on Principle 8

Topic IV: Management and Governance

Principle 9

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 9 do your comments relate to?

Your comments on Principle 9

Principle 10

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 10 do your comments relate to?

Your comments on Principle 10:

Principle 11

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 11 do your comments relate to?

Your comments on Principle 11:

Principle 12

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 12 do your comments relate to?

Your comments on Principle 12:

Principle 13

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Partially

Which aspects of Principle 13 do your comments relate to?
Yes

Your comments on Principle 13:
An attachment is provided at the end of this form.

Principle 14

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 14 do your comments relate to?

Your comments on Principle 14:

Topic V: Emergency Response and Long-Term Recovery

Principle 15

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 15 do your comments relate to?

Your comments on Principle 15:

Principle 16

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 16 do your comments relate to?
Comments on the Principle itself,Requirement 16.2,Requirement 16.3

Your comments on Principle 16:
An attachment is provided at the end of this form.

Topic VI: Public Disclosure and Access to Information

Principle 17

In your view, will compliance with this Principle and its Requirements contribute to the prevention of catastrophic failure of tailings facilities?
Yes

Which aspects of Principle 17 do your comments relate to?

Your comments on Principle 17:

Part 3: Your views on the Standard

Your view as to whether the content of the Standard meets your expectations

Your view as to whether the content of the Standard meets your expectations (closed question):
3: Meets my expectations

Please summarize why you chose this option:

Your view on whether the Standard will create a step change for the industry in the safety and security of tailings facilities

Your view on whether the Standard will create a step change for the industry in the safety and

security of tailings facilities (closed question):
4: Will deliver improvements across all aspects of the safety and security of tailings facilities

Please summarize why you chose this option:
I believe that many companies will choose to ignore the standard because it raises the bar.

Does the content of the Standard address all aspects of tailings facility management adequately?

Does the content of the Standard address all aspects of tailings facility management adequately (closed question)?
No

Please explain why and/or what is missing:
It does not address chronic risks associated with TSFs. Please see my comments in the attachment.

Part 4: Suggestions for topics to be included in the accompanying Recommendations Report

On which topics would you expect to have further clarification or guidance in this document?
- on the assessment of impacts of a tailings facility and its potential failure (Recommendation 2.3) - on closure of TSFs

Other information

Non-fitting response text (text submitted which did was not in response to one of the questions above)

Global Tailings Review

The Global Tailings Review (GlobalTailingsReview.org) is a welcome initiative and I congratulate the Expert Panel and Dr. Bruno Oberle for having prepared the current draft for public consultation on such a short time period after the initiative was established.

Having participated in the Brisbane consultation session on December 13, 2019 and thus listened to the explanations, my contribution is limited to three major points and a few minor suggestions.

A. Suggestions for major amendments

1. Stress the message that tailings storage structures remain in the landscape after a mine is closed

The draft makes several mentions to managing Tailing Storage Facilities (TSF) throughout their life cycle, thus including closure and post-closure. Closure is cited several times in the 'Overview of the Standard' and in the Standard itself, examples are Principles 1 and 5, and Requirements 2.1 and 4.1). However, closure does not receive attention commensurate to the other phases of a TSF life cycle. I present two suggestions to raise the profile of consideration of end-of-life risks in the Standard: (i) that Topic III be renamed to include closure ("Design, construction, operation, closure and monitoring of tailings facilities"); (ii) requirements under Principle 5 could be reviewed to accommodate more attention to closure, and a possible "design for closure" or "design for post-closure" requirement would highlight the importance of considering the final stages of a TSF and its relinquishment to post-mining land uses.

International guidance on mine closure could be referred to here, in particular the most recent ICMM guide. As an example, the Brazilian Mining Association Guide on Mine Closure Planning (search for "IBRAM guide on mine closure planning" in Google) lists several good practices that could be relevant to the purpose of the Standard, such as "Consider closure planning into the company's strategic planning" and "Engage stakeholders in the post-closure monitoring stage"; they are described in that publication.

2. Post-disaster recovery requirements could be enhanced and include a warning on the environmental and social impacts of emergency and long-term recovery actions

The draft contains an important section ("topic") on Emergency Response and Long-Term Recovery. Based on my experience as member of the IUCN-led Rio Doce Panel, set up to advise on the long-term recovery after the Fundão (Samarco) dam collapse (https://www.iucn.org/rio-doce-panel), I have the following suggestions: (i) the committee could consider renaming the "Reconstruction and Recovery Plan" (Requirement 16.3) to better reflect the goals of such recovery, e.g. to restore ecosystems and livelihoods of affected communities; this requirement could be further amended by mentioning that such a plan for such recovery (or restoration) should be based on the disaster impact assessment referred to in Requirement 16.2; (ii) the rationale of Requirement 16.2 to assess environmental, social and economic impacts in the event of a disaster could be reinforced if it is made clear that such an assessment should be used to inform the Restoration Plan and to support appropriate planning of remediation, reclamation and compensation measures; (iii) it is important to remind that post-failure response strategies should consider social and environmental impacts of restoration itself because when planning for recovery, the environmental and social impacts of remediation should be accounted for (Rio Doce Panel Thematic Report 1 - Impacts of the Fundão dam failure: A pathway to sustainable and resilient mitigation contains an analytical framework that could be useful for this purpose); as such, a warning on the importance of assessing the impacts of recovery actions would be welcome, maybe as a new requirement.

3. Clearly state whether or not chronic risks associated with TSFs are in the scope of the Standard

The Standard appropriately addresses TSF safety and the risks of collapse, but TSFs can also represent chronic risks to water quality and human health. It would be advisable to define "failure" in the context of a TSF: is failure to protect surface and underground water also under the scope of the Standard? Is the Standard addressing structural collapse only or other situations such as the failure of a TSF to protect downstream water quality? If chronic risks are out of scope, this should be clearly informed, in a similar way that it is stated that no particular type of technology is recommended or ruled out. On the other hand, if the Standard also addresses chronic risks, possibly new requirements should be added to principles 5, 6,7 and 8.

B. A number of other small amendments could be made in order to strengthen the standard.

Principle 2: One strong point of the draft is the call for integrating tools for selecting sites and technologies to minimize risks. The requirement of updating the assessment (2.4) is welcome. I have the following suggestions:

- Requirement 2.1 Add "impact assessments" to the list of applications: "Use the knowledge base to inform this analysis and to develop facility designs, inundation studies, impact assessments, a monitoring program (…)".

- Requirement 2.5 An explanation of financial assurance would be welcome, at least as a footnote that could explain that it is good practice for mining companies, either by internally provisioning or by providing financial assurance, to ensure that there will be enough funds to cover all mine closure and post-closure costs and that companies should use all practical means to ensure that such assurance fully cover the costs related to closing a TSF.

Principle 4. In addition to possibly addressing the comments in part A above, a welcome contribution of the Standard would be in defining what a "permanent non-credible flow failure state" is (Requirement 4.1), as such a situation would guide relinquishment to a third party for post-closure use.

The importance of maintaining the organizational memory as a mine undergoes different changes in management or ownership was raised at the consultation and I agree that this important issue could be strengthened in the Standard. Although I do not have a specific recommendation, a new requirement could be considered under Principle 13. In the abovementioned Guide on Mine Closure Planning, we can read (pg 93): "Information management and knowledge management are embedded in several Best Practices recommended in this Guide. These are activities that are germane to many functions in a company and of utmost importance for closure planning in view of the long time periods involved, and the inevitable turnover of technical staff and managers. These are some of the reasons that prompt companies to adopt knowledge management practices." Maybe some ideas

Finally, in the acronyms list, the correct name of IAIA is International Association for Impact Assessment.

Attachment 1 reference (if applicable)

ref:0000000974:Q83

Attachment 2 reference (if applicable)

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December 19 2019

Luis E. Sánchez
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