

# Consultation response

## *Part 1: Your details*

**Original language of response:** English

**Name:** Dr Stephen Edwards

**Country of residence:** United Kingdom

**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?** Yes

**Please give the name of the organization:** University College London

**Your level within the organisation:** Other

## *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?**

**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?**

**Which aspects of Principle 2 do your comments relate to?**

**Your comments on Principle 2**

### *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?**

**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?**

**Which aspects of Principle 4 do your comments relate to?**

**Your comments on Principle 4**

#### ***Principle 5***

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

**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?**

**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?**

**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?**

**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?**

**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?**

**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?**

**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?**

**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?**

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

**Your comments on Principle 13:**

### **Principle 14**

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

**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?**

**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?**

**Which aspects of Principle 16 do your comments relate to?**

**Your comments on Principle 16:**

## ***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?**

**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):**

**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):**

**Please summarize why you chose this option:**

*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)?**

**Please explain why and/or what is missing:**

#### ***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?**

#### ***Other information***

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

### **Public consultation on the draft Global Tailings Standard of the UNEP-ICMM-PRI Global Tailings Review**

Thank you for enabling me to participate in the consultation workshop on the Global Tailings Standard (GTS) held in Santiago, Chile, on 26 November 2019, as part of the Global Tailings Review (GTR). Following my comments during discussions at the workshop, I was invited to put them in writing, which I have done below. I have linked my comments to the most relevant topics in the GTS. Some of the points made were originally published in February 2019 in an invited expert blog for PreventionWeb of the United Nations Office for Disaster Risk Reduction ([www.preventionweb.net/experts/oped/view/63730](http://www.preventionweb.net/experts/oped/view/63730)).

**Topic II: affected communities.** Although community issues are considered under a number of the topics, this specific topic is somewhat weak, and yet communities exposed to the hazards of tailings live with the associated risk on a daily basis and, therefore, must become a core driver of tailings risk management. It is essential here, or elsewhere, to state that communities that could be adversely affected by tailings must be involved in the entire risk management process, which must be iterative, dynamic, transparent and fully inclusive for all stakeholders. Communities must no longer be seen simply as the potential victims of tailings disasters and largely isolated from the risk management process. Rather, they must become empowered and be

adequately supported to reduce their exposures and vulnerabilities to tailings hazards throughout the entire life of a tailings facility. Participatory citizen science programmes could be an effective way of achieving this, but participants should not have to undertake this voluntarily and should be remunerated for their engagement.

**Topic III: design, construction, operation and monitoring of the tailings facility.**

During the open discussion at the workshop, several participants commented that cost-cutting economics may compromise the site investigation, design, construction and operation phases of tailings storage facilities. Clearly this is totally unacceptable and there must be an immediate paradigm shift in the mining sector globally to put safety rather than economics first, as advocated by the United Nations Environment Programme (<http://www.grida.no/publications/383>). In this regard, the true cost of storing tailings as safely and securely as possible must be met. This raises the issue of the true cost of mining and mineral processing, and the economics behind the production and supply of minerals and metals globally. Thus, there should be a review of the true costs and benefits of the safe and secure storage of tailings, which may ultimately lead to the consumer paying more for their mineral and metal commodities. Linked to this, the global population must become educated about the risk it is contributing to through its consumption of tailings-generating commodities. For example, there is incredible naivety about the negative impacts of producing so-called greener and cleaner technologies. These points may well lie outside the remit of the GTS, but could sit within the accompanying broader recommendations of the GTR.

**Topic V: emergency response and long-term recovery.** This topic could be reframed as tailings disaster risk reduction, as this is a proactive and empowering process, whereas disaster response and recovery are reactive. It could be divided into two sections – one for existing tailings facilities and one for those of the future – as some requirements will be the same and others very different. For existing and future facilities, draw upon the best practices and early warning systems that exist for mitigating rapid-onset natural hazards where there is little time for evacuation, such as for mud and debris flows (including volcanic lahars), extreme rainfall events, flash floods, and tsunami generated near shore. For tailings facilities that will be developed in the future, there must be responsible land-use planning that ensures people and critical infrastructure have limited exposure to tailings hazards. This also applies for existing facilities, where people and critical infrastructure may need to be relocated or be protected by physical structures. Realistic disaster scenarios should be adopted for understanding and reducing potential exposures and vulnerabilities to tailings hazards. These must be integrated coherently with monitoring and early warning systems, evacuation plans and emergency response protocols. All of the supporting information must be made publicly available in formats that allow all exposed to the hazards to make rationale informed decisions without becoming unnecessarily concerned and being made to feel more vulnerable and less resilient. In this regard, responsible and effective hazard communication is paramount,

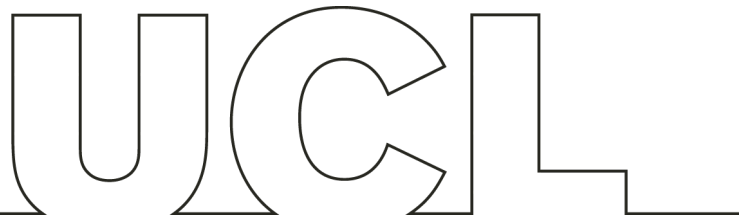
which should form a core component of Topic VI (public disclosure and access to information) and ensure that the knowledge base (Topic I) is publicly accessible.

***Attachment 1 reference (if applicable)***

ref:0000001124:Q83

***Attachment 2 reference (if applicable)***

ref:0000001124:Q84



UCL Hazard Centre  
Department of Earth Sciences  
University College London  
Gower Street  
London WC1E 6BT  
England (UK)

30 December 2019

To whom it may concern,

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of the  
UNEP-ICMM-PRI Global Tailings Review**

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I trust that these comments are constructive and will be helpful. I should be happy for them to be used and published in full or in part, along with my name and affiliation. Please do not hesitate to contact me should you require additional information or clarification.

Yours faithfully,



Dr Stephen Edwards  
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