

Global Industry Standard on Tailings Management: *Overview*

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Brumadinho – a catalyst for change

Negative focus on company and wider industry

- Press reaction strongly critical of Vale.. and critical of industry's inability to readily provide information on TSFs
- Investor reaction uniformly adverse due to concerns over:
 - Potential unquantified major risk exposure in company portfolios
 - Inability of companies to easily provide relevant information and limited extent of disclosures
 - Investors' own failure to follow-up on concerns after Samarco
- Vale debt downgraded to junk by Moody's in mid-February
- A number of ethical funds divested their interests in Vale
- Important industry stakeholders such as PRI, UNEP, IUCN and IndustriALL expressed strong concerns to ICMM.

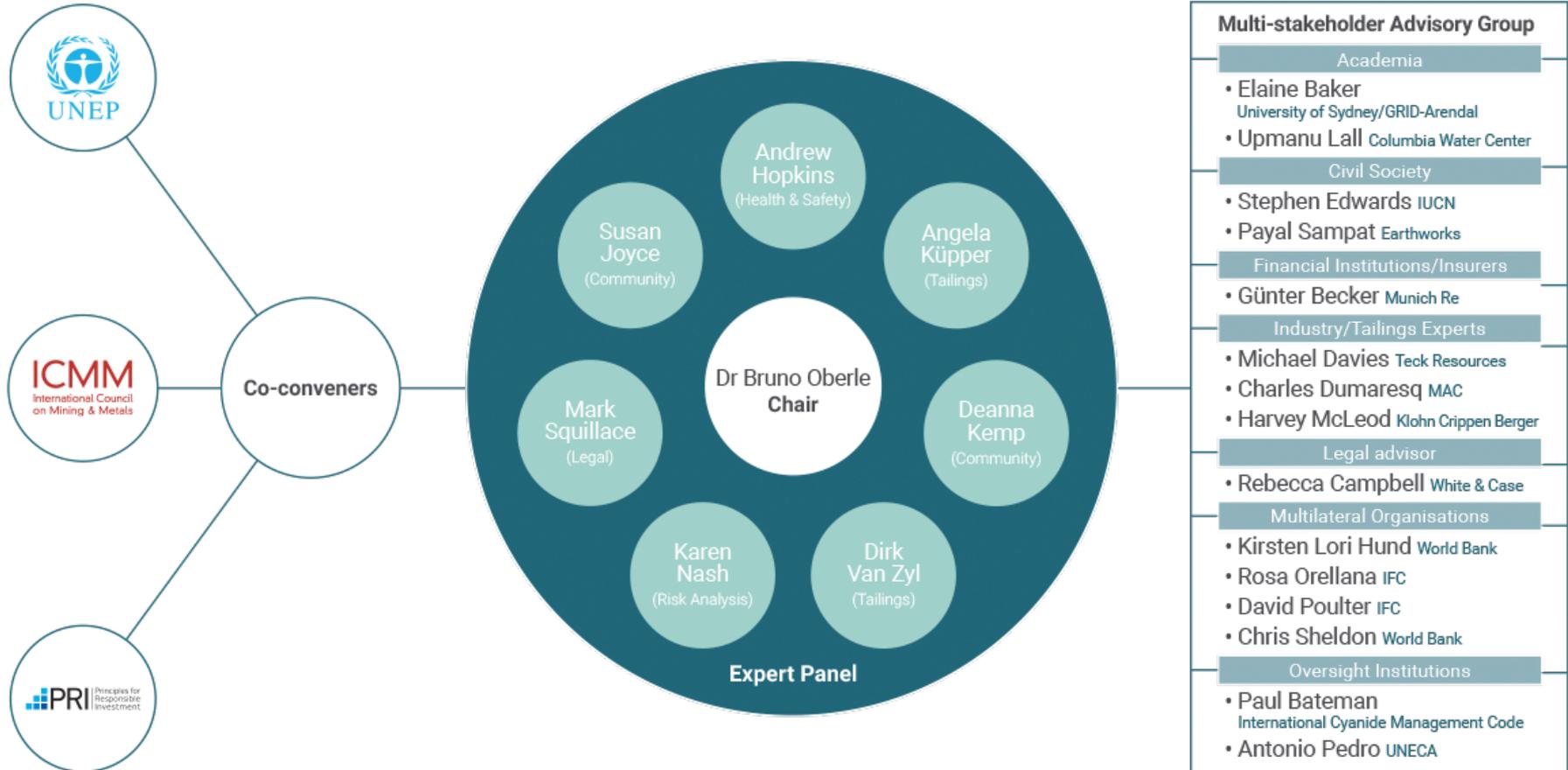


Engagement of members at most senior level

- Within one month, ICMM Council met in Miami to discuss how best to respond
- February 2019 press release committed to develop an international standard for tailings facilities through a Global Tailings Review
- Early engagement with PRI and UNEP as potential co-convenors: co-development of scope and approach paper and press release in March 2019
- Professor Bruno Oberle appointed as Chair of Global Tailings Review in April 2019



Global Tailings Review Governance



Public Consultation on the Standard

> 600 individuals and organisations participated in the public consultation

Method	
Online public consultation	Available in 7 languages for all audience groups
In-country consultations	Across mining jurisdictions in both the northern and southern hemispheres, including Kazakhstan, China, Chile, Ghana, South Africa and Australia
Webinars	Four webinars focused on ESG and technical aspects, held in English, Spanish and Portuguese



The Standard strives to achieve the ultimate goal of zero harm to people and planet

- Launched in August 2020, it is the first global tailings standard that **can be applied to existing and future tailings facilities**
- **Endorsed by all 3 co-conveners** – ICMM, the United Nations Environment Programme (UNEP) and Principles for Responsible Investment (PRI)

The banner features a dark background with white and teal text. At the top left is the 'Global Tailings Review.org' logo. To the right are the logos for ICMM, UN Environment Programme, and PRI. The main title 'LAUNCH OF THE GLOBAL INDUSTRY STANDARD ON TAILINGS MANAGEMENT' is centered in white. Below it, the date 'DATE: WEDNESDAY, 5TH AUGUST 2020' and time 'TIME: 1:00PM BST / 9:00AM BRT' are listed. A line indicates the moderator: 'MODERATED BY: Antonia Mihaylova, Global Tailings Review'. The bottom section, titled 'PANELLISTS', shows four headshots with their names and titles: Dr Bruno Oberle (Chair, Global Tailings Review), Ligia Noronha (Director Economy Division, United Nations Environment Programme), Adam Matthews (Director of Ethics & Engagement, Church of England Pensions Board), and Tom Butler (CEO, International Council on Mining and Metals). To the right, under 'GUEST SPEAKER', is a headshot of Angelica Amanda Andrade (Community Representative from Brumadinho).



Respect human rights, by conducting human rights due diligence to identify and address those rights most at risk. 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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- **PRINCIPLE 1: RESPECT THE RIGHTS OF PROJECT-AFFECTED PEOPLE AND MEANINGFULLY ENGAGE THEM ACROSS THE TAILINGS FACILITY LIFECYCLE (4)**

II. INTEGRATED KNOWLEDGE BASE



Develop and document knowledge about the social, environmental and local economic context of a proposed or existing tailings facility. This multi-disciplinary knowledge base will support informed decision-making by operators and key stakeholders throughout the tailings facility lifecycle, e.g. in alternatives analyses, impact assessments, choice of technologies, consequence classification, emergency response plans, and closure planning.



- **PRINCIPLE 2: DEVELOP AND MAINTAIN AN INTERDISCIPLINARY KNOWLEDGE BASE TO SUPPORT SAFE TAILINGS MANAGEMENT (4)**
- **PRINCIPLE 3: USE ALL ELEMENTS OF THE KNOWLEDGE BASE - SOCIAL, ENVIRONMENTAL, LOCAL ECONOMIC AND TECHNICAL - TO INFORM DECISIONS (4)**

III. DESIGN, CONSTRUCTION, OPERATION & MONITORING



Develop a robust design and establish reliable systems for construction, operation and monitoring of tailings facilities, supported by an informed knowledge base to minimise the risk of failure. As social, environmental and local economic contexts are dynamic, demonstrate the ability to upgrade the facility to a higher consequence classification or, where this is not feasible, reduce the consequences of a potential failure.

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- **PRINCIPLE 4: DEVELOP PLANS AND DESIGN CRITERIA FOR THE TAILINGS FACILITY TO MINIMISE RISK (6)**
- **PRINCIPLE 5: DEVELOP A ROBUST DESIGN THAT INTEGRATES THE KNOWLEDGE BASE AND MINIMISES THE RISK OF FAILURE TO PEOPLE AND THE ENVIRONMENT (8)**
- **PRINCIPLE 6: PLAN, BUILD AND OPERATE THE TAILINGS FACILITY TO MANAGE RISK (6)**
- **PRINCIPLE 7: DESIGN, IMPLEMENT AND OPERATE MONITORING SYSTEMS TO MANAGE RISK (5)**

IV.



Assign responsibility and accountability for key roles in the management of a tailings facility. Establish standards for critical systems and processes essential to upholding the integrity of a facility throughout its lifecycle. Support cross-functional collaboration and promote an organisational culture that welcomes the identification of problems and protects whistle-blowers.

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- **PRINCIPLE 8: ESTABLISH POLICIES, SYSTEMS AND ACCOUNTABILITIES TO SUPPORT THE SAFETY AND INTEGRITY OF THE TAILINGS FACILITY (7)**
- **PRINCIPLE 9: APPOINT AND EMPOWER AN ENGINEER OF RECORD (5)**
- **PRINCIPLE 10: ESTABLISH AND IMPLEMENT LEVELS OF REVIEW AS PART OF A STRONG QUALITY AND RISK MANAGEMENT SYSTEM (7)**
- **PRINCIPLE 11: DEVELOP AN ORGANISATIONAL CULTURE THAT PROMOTES LEARNING, COMMUNICATION AND EARLY PROBLEM RECOGNITION (5)**
- **PRINCIPLE 12: ESTABLISH A PROCESS FOR REPORTING AND ADDRESSING CONCERNS AND IMPLEMENT WHISTLEBLOWER PROTECTIONS (2)**

V. EMERGENCY RESPONSE & LONG-TERM RECOVERY

V.



Establish a community-focused emergency preparedness and response plan. Consider the adequacy of capacity both internally and externally to respond, and engage with communities and public sector and other agencies to prepare for the event of a failure. Support the long-term recovery of communities and the environment affected by a catastrophic tailings facility failure.

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- **PRINCIPLE 13: PREPARE FOR EMERGENCY RESPONSE TO TAILINGS FACILITY FAILURES (4)**
- **PRINCIPLE 14: PREPARE FOR LONG-TERM RECOVERY IN THE EVENT OF CATASTROPHIC FAILURE (5)**

VI.



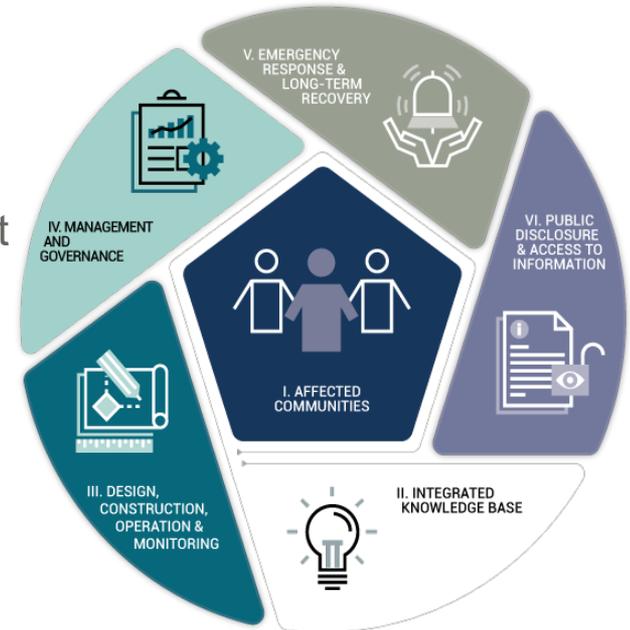
Disclose relevant information about the tailings facility to support public accountability. Commit to participate in global initiatives for the creation of standardised, independent, industry-wide and publicly accessible information about the safety and integrity of tailings facilities.



- **PRINCIPLE 15: PUBLICLY DISCLOSE AND PROVIDE ACCESS TO INFORMATION ABOUT THE TAILINGS FACILITY TO SUPPORT PUBLIC ACCOUNTABILITY (3)**

The Standard strengthens existing environmental, social and governance requirements in the mining industry

- Integrates social, environmental and technical considerations in a comprehensive manner
- Covers the entire tailings facility lifecycle – from site selection, design and construction, through management and monitoring, to closure and post-closure
- Elevates accountability to the highest organisational levels and adding new requirements for independent oversight
- Establishes clear expectations around global transparency and disclosure requirements



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