

# TAILINGS MANAGEMENT

Currently, our Mining Division manages tailings dams at different stages: Engineering design, Construction, Operations, Closure and Post-closure. Tailings storing facilities in all mining units meet or exceed regulatory requirements, and we continuously improve our tailings management by developing and incorporating the best practices. In 2020, Minsur continued playing an active role in the promotion of global standards for the management of tailings facilities, both in our own operations as well as in the mining industry through our work with the ICMM.

The commitments made by Minsur to the ICMM, are aligned with our Sustainability model and the policies established at Minsur’s corporate level. The Policy for the Management of Critical Geotechnical Structures (2019) stands out, which establishes the company’s commitments to prevent catastrophic events and the guidelines to develop internal standards.

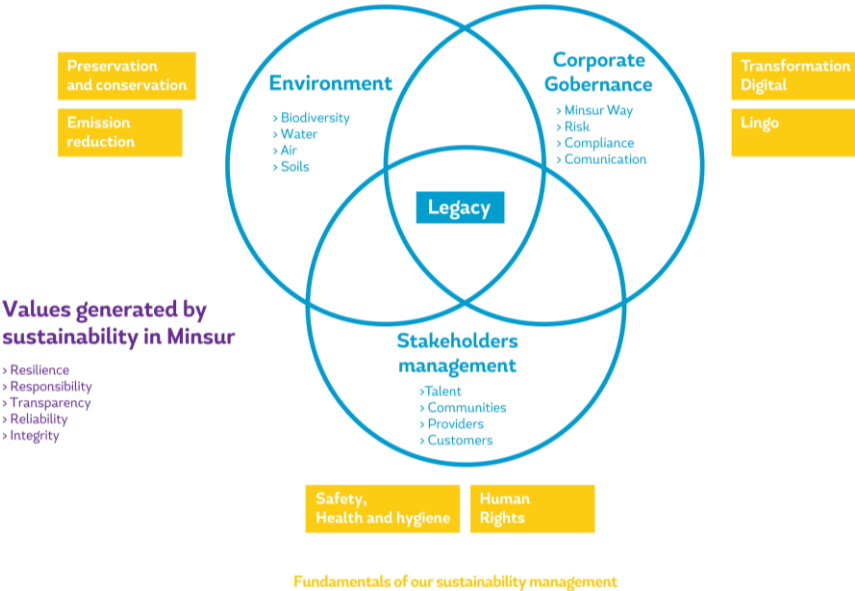


Chart 1. Pillars of our sustainability model

In 2020, our Infrastructure Management Standard (IMS) was prepared and implemented in Minsur’s production units. This standard gathers the best practices of our industry, based on the guidelines of the Mining Association of Canada (MAC) and the know-how acquired in our Mining Units.

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The Infrastructure Management Standard is supported by four foundations, and it is incorporated into the existing management systems of all mining units where it is being implemented.

- Risk management
- Governance Structure
- Desing Standard
- Performance and know-how management

The IMS proposes a risk management plan for tailings dams that is based on Minsur's risk management system, which is supported by three pillars: the company's culture, strategic objectives, and governance. In this regard, risks are reported in an orbital way, i.e. to reach all levels of the company, aiming at managing risks at both an operational and a strategical levels.

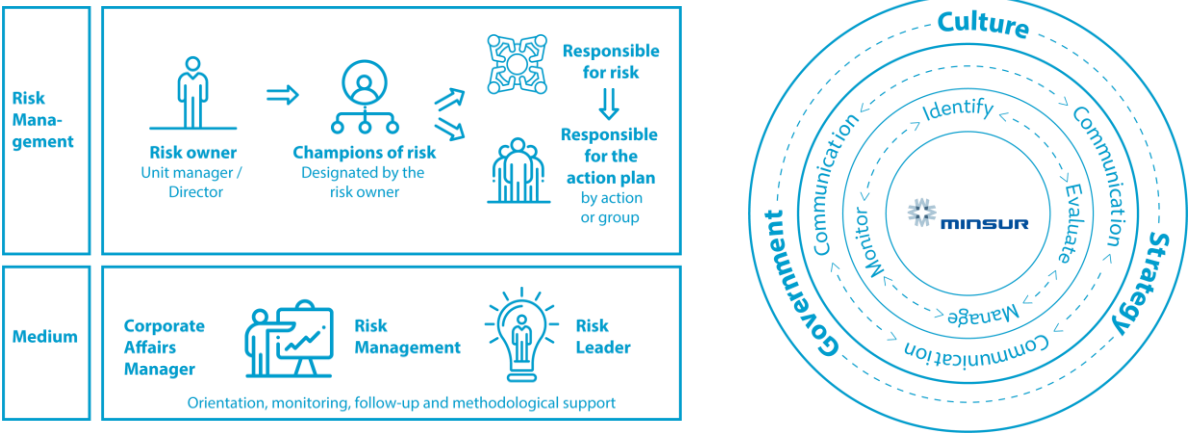


Chart 2. Risk management

Minsur's governance model presents an appropriate structure that promotes interaction among different management systems within the organization. The Infrastructure Management Standard is being implemented with the participation of all levels of the organization.

The organizational levels and the governance model work as layers that gradually reduce the vulnerability of tailings dams. In addition, these layers are under the sustainability model's umbrella. These layers work well, because roles and responsibilities are properly assigned, and levels of review

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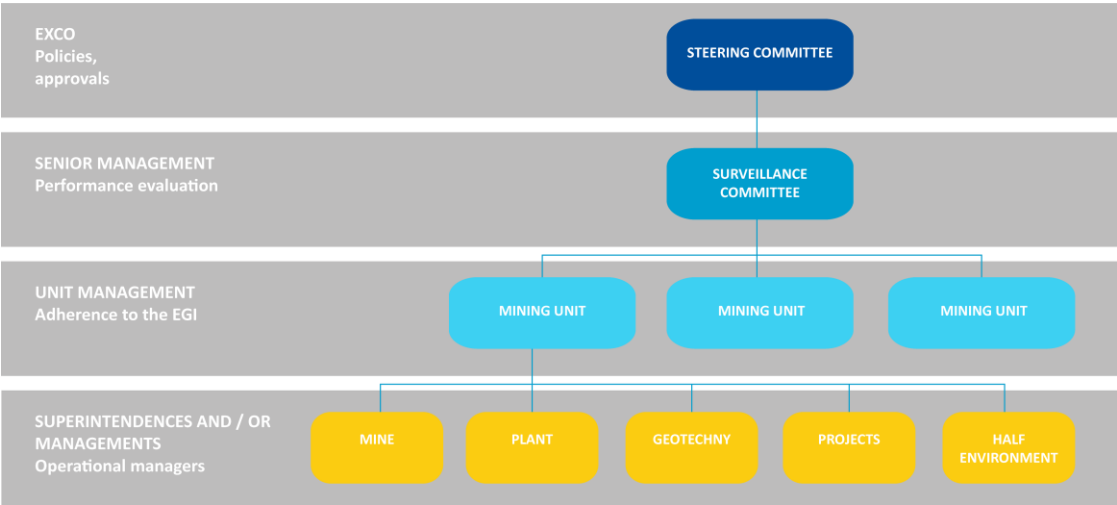


Chart 3. Governance model

Performance management is linked to design criteria, monitoring of key assumptions at the design stage, and monitoring of tailing dams’ operating philosophy criteria. In this regard, there is a close relationship between understanding the hazards, failure modes and mechanisms, as well as critical controls associated to critical risks of tailings dams.

Monitoring of critical controls is conducted through the records obtained from geotechnical tools installed at the tailings dams, operational parameters and on-field inspections, as well as drone flights.

Critical controls may be subject to operational adjustments to prevent undesirable events. Similarly, records of geotechnical tool measurements are analyzed against triggered action response plans (TARP).



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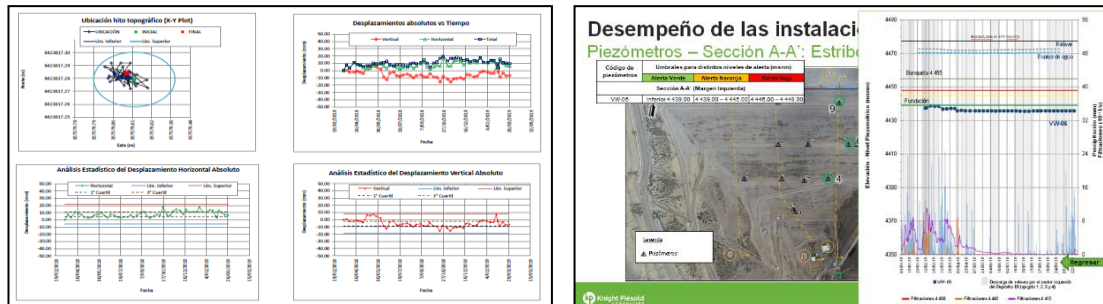
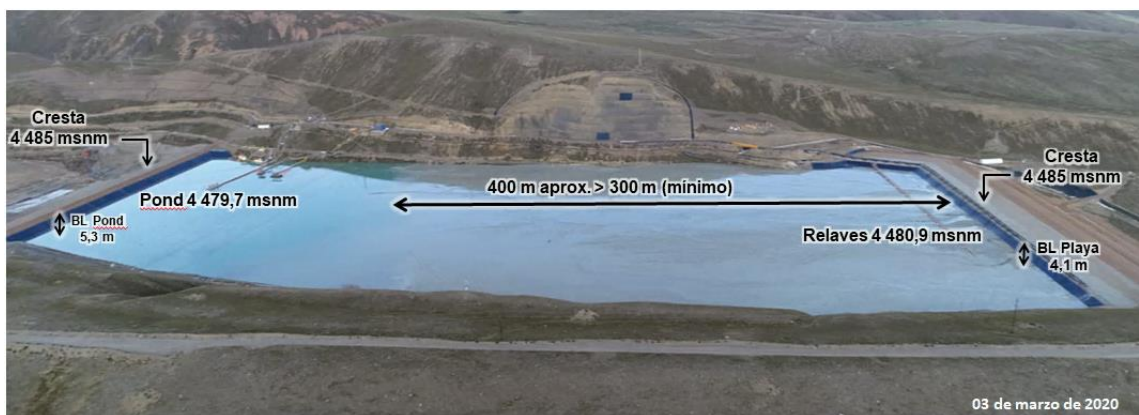


Chart 4. Implementation of the geotechnical monitoring and surveillance program

The knowledge acquired by those involved in the operation is one of the main assets for tailings management, and it goes beyond the dam's operators. This know-how is generated by all areas interacting with tailings dams, and they document any changes and update risks based on the tools provided by the Operations, Maintenance and Surveillance Manual (OMS Manual).

The OMS Manual is the document that materializes risk and change management, implementing the strategy in the operational field. Furthermore, it establishes; among others, the TARPs for operational criteria, such as the dry beach length, whose length decrease is associated with an increase in pore pressure in the main dam body and with a fall in the dam's performance when dealing with extreme storm events.

On the other hand, monitoring the free edge of the tailings beach and its corresponding rate is directly associated to variations in the production of dry tailings metric tons, and it directly affects the available capacity for tailings disposal according to the permits issued by the competent authority.



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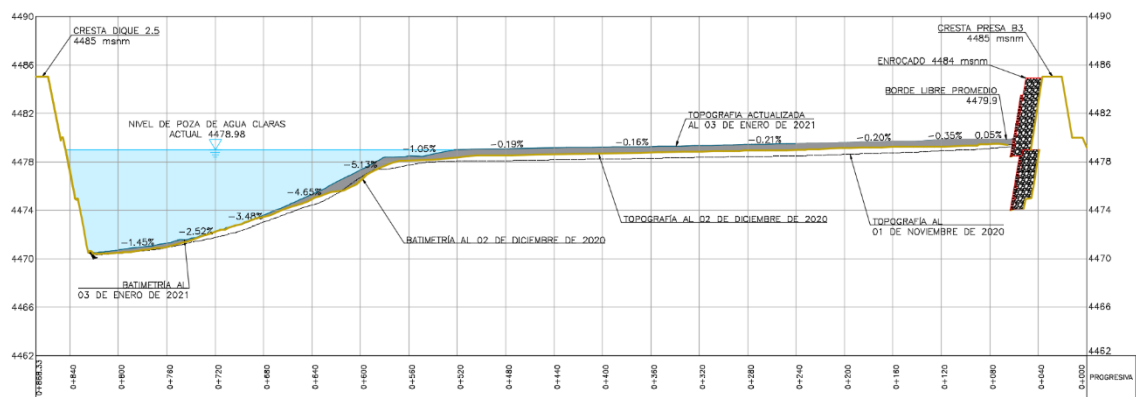


Chart 5. Operational controls in tailings deposits

Activities of tailings deposits meet domestic legal requirements, as well as international standards, to which Minsur has voluntarily subscribed. This voluntary nature shows a strong commitment with Minsur’s sustainability model and our industry requirements.

In this sense, Minsur has been making efforts in line with world-class mining operations. Within our governance model, we have considered actors such as the Engineer of Records (EoR) who provides technical guidance on behalf of Minsur, and monitors the tailings dam design, construction, operation, and closure planning stages, meeting applicable legal requirements, objectives, and performance indicators, as well as applicable standards.

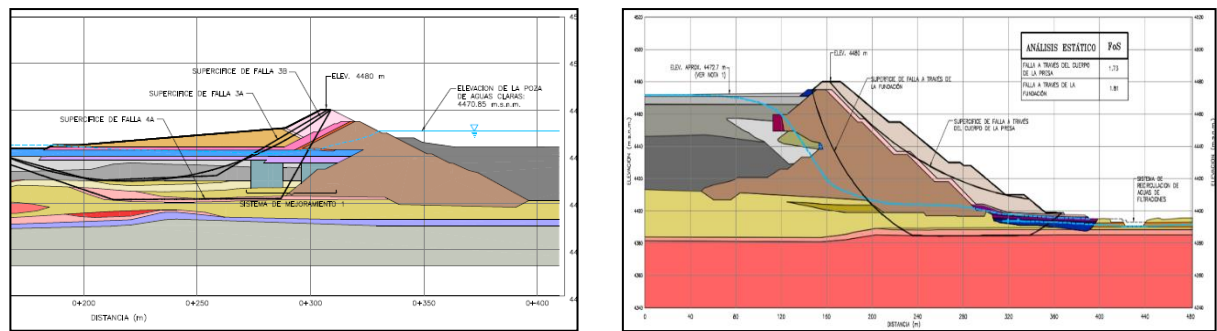


Chart 6. Annual verification of stability by the EoR



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On the other hand, as part of our independent review efforts, we have a panel of senior external auditors (IGTRB) comprised by experts from different fields of an internationally-renowned experience. This Panel provides support and backs corporate-level decisions, thus providing an additional level of assurance on technical aspects.

The recommendations of the EoR and IGTRB are compiled and tabulated to prepare an action plan for each one of them, and they are quarterly reviewed in each Surveillance Committee. The implementation of the Eor's and IGTRB's recommendations are part of the continuous improvement of our Tailings Management System.

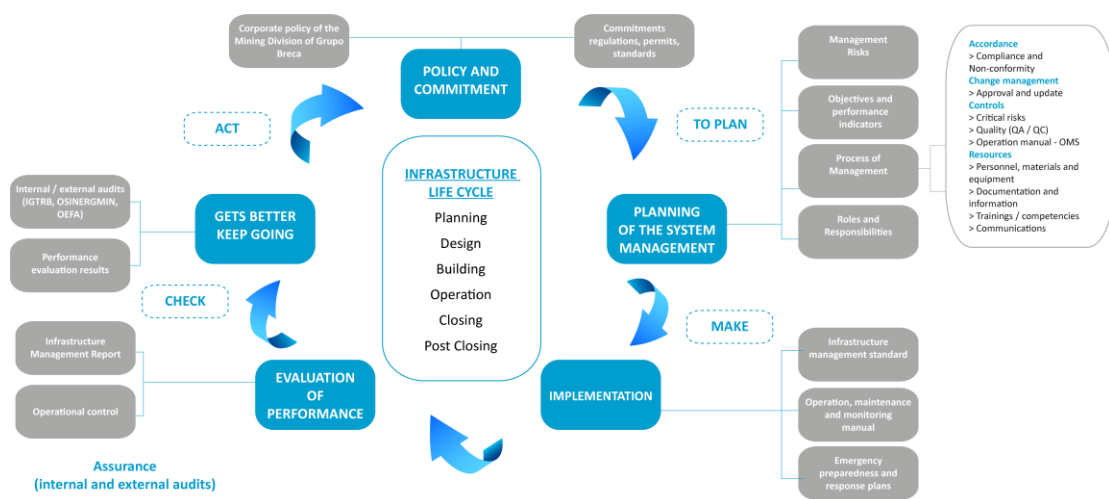


Chart 7. Infrastructure management continuous improvement cycle

In August 2020, the ICMM published the Global Industry Standard on Tailings Management (GISTM). It should be noted that Minsur, as a member of ICMM, participated in the review of the standard and documents for its application. This document consists of 06 topics, 15 principles and 77 requirements that shall be applied by existing and new tailings dams.

The GISTM aims at preventing extreme consequences for people and the environment as a result of catastrophic failures. For that purpose, Minsur has assessed the main gaps and has prepared an Implementation Plan for adherence to the ICMM Global Industry Standard on Tailings Management, pursuant to the ICMM guidelines and protocols.

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Minsur expects to be categorized as compliant with the GISTM requirements by 2023 and 2025, according to the classification of consequences of each tailings dam. It is understood that adherence to the ICMM standard is a cross-cutting effort that involves the participation of different areas and levels of our company. It is the result of the visible leadership of our Infrastructure Steering Committee, the highest body in our tailings management structure.

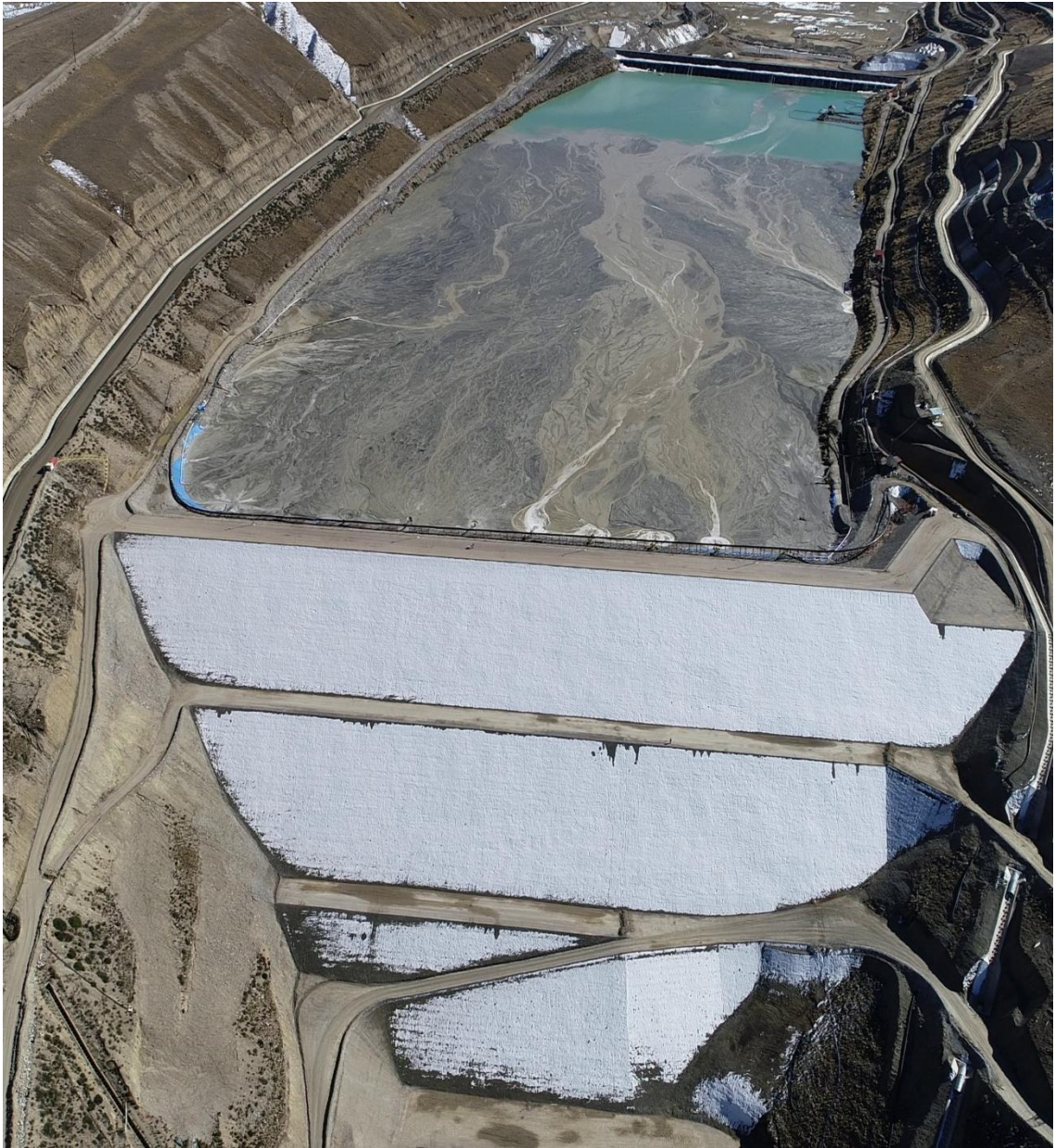


Chart 8. Inspection of operational parameters with drones