Acre Insights

Natural Resources

Our Most Valuable Resource isn't in the Ground.

How to attract and develop the **people** who drive responsible growth

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Introduction

At 3:30pm on November 5, 2015, a tailings dam near Mariana, Minas Gerais, Brazil began to leak. The Fundão Dam, operated by Samarco and built to store waste from the Germano iron ore mine, sat in the hills above the village of Bento Rodrigues. By 4:20pm, the leak had become a catastrophic rupture.

An estimated 43.7 million cubic metres of mine tailings surged into the Doce River. The toxic sludge engulfed Bento Rodrigues and Paracatu de Baixo, killing 19 people, displacing thousands, and contaminating hundreds of kilometres of waterways before reaching the Atlantic Ocean. It remains Brazil's worst environmental disaster. The social, environmental, and economic impacts are still being felt and will likely persist for generations.

Four years later, the Brumadinho tailings dam disaster, also in Brazil, caused by the sudden collapse of an iron ore waste dam, killed 270 people. At precisely the moment when minerals were becoming central to the global energy transition, mining found itself in the spotlight for all the wrong reasons.

Reform Under Pressure

The industry response was significant.

In 2020, the Global Industry Standard on Tailings Management (GISTM) was launched by the International Council on Mining and Metals, the United Nations Environment Programme, and the Principles for Responsible Investment. It introduced a globally recognised framework built on zero harm, board-level accountability, independent oversight, transparent disclosure, and planning for worst-case failure scenarios.

Alongside this, the Mining Association of Canada's Towards Sustainable Mining (TSM) standard has also become a widely adopted industry framework over the last 20 years, focusing on continuous performance improvement across environmental and social responsibility, including tailings management, community engagement, and site-level accountability.

Across the sector, leadership teams have started to rethink and reshape their relationship with the land, communities, investors, and employees.

But standards and frameworks alone do not create responsible mining. **People do**.

The Opportunity

When risk is recognised early and taken seriously, it tends to reveal opportunity rather than just obligation. The mining sector is navigating a period of unusual pressure from governments, industries, and civil society all at once. How it responds to that pressure will define what the industry looks like for decades to come.

Governments are actively calling for the mining sector to grow. CEOs across industries that have never had reason to care about ore grades or tailings are now invested in where critical minerals come from and how they are produced. NGOs that spent decades campaigning against extractive industries are engaging, cautiously but genuinely, with the principles of responsible and sustainable supply. This is not the usual pressure.

The IEA's Critical Minerals Outlook 2025 goes further, making the case not just for more mining but for a fundamental rethinking of what mining companies are. Circularity beyond conventional recycling. Tailings reprocessing as a value stream rather than a liability. Business models built around materials stewardship across the full supply chain. This is far from incremental improvements on the existing model, and more representative of an invitation to become something different.

The companies that will define the next era are the ones treating that invitation seriously. They have sustainability professionals in the room when capital allocation decisions are made. They see community relationships as competitive advantage. They are building leadership teams capable of holding technical, commercial, and human complexity at the same time. These companies exist. The gap between them and the rest of the sector is widening. And that gap will not be closed by frameworks or reporting cycles. It will be closed by people.

"Cobalt's value chain runs from mine sites in the DRC, Indonesia and elsewhere to battery plants in Asia and Europe all the way to global end-users. Responsible practice has to be woven across all of it. To be credible, mining companies depend on experts who can move easily, and globally, between regulators, operators, and communities. People with this kind of talent are scarce, and the companies that invest in them will be the ones who hold their position through the cycle."

Dinah McLeod
Director General,
Cobalt Institute

"The mining and metals sector sits at the heart of some of the world's most urgent solutions. From the clean energy transition to the technologies reshaping how we live and work, the materials this industry provides are foundational. But meeting that moment takes more than resources. It takes people. Talented, driven, forward-thinking people who are committed to doing things better. That means the sector has a real responsibility to tell its story well, championing the progress being made on sustainability, innovation and responsible practice, and making a compelling case for why the brightest minds should want to be part of it."

Pernelle Nunez
Deputy Secretary General / Director
International Aluminium Institute

Building the Capability to Change

Since 2020, organisations across the natural resources sector have moved to strengthen in-house expertise across climate, biodiversity, human rights, community engagement, government affairs, health and safety, and strategic risk.

Roles that once sat at the margins of operations are increasingly moving closer to the centre of investment approval and project design. In some companies, sustainability leaders now report directly to boards, community engagement professionals have a seat at capital allocation discussions, and risk specialists are brought into operational planning earlier and with greater influence than before.

In many organisations, particularly when it comes to social performance, sustainability professionals still struggle for consistent resourcing, sponsorship and influence in decision-making. Where these perspectives remain under-weighted, companies risk overlooking the long-term risks and opportunities associated with responsible mining.

The mining sector needs multidisciplinary leaders with strong foundational business skills who can translate environmental and social complexity into commercial resilience.

The people driving this change have had to navigate commodity volatility, geopolitical instability and tightening capital discipline, all of which have placed real pressure on budgets and resources.

Finally, and crucially, the slow regulatory processes and litigation that touch nearly every mining project create pressures that make investors more cautious and often move talented individuals on before they can have the impact they hoped to make. All of this further strains the process and extends timelines for returns or community benefits. Meanwhile, expectations rarely ease during market downturns and, if anything, tend to intensify when economic conditions are at their most difficult.

Where are we now?

The mining sector has largely avoided the 'ESG backlash' seen in other industries, in part because the business case for responsible mining is relatively clear. Workforce diversity, for example, is less a political statement than a practical necessity, since reflecting local communities helps maintain a social license to operate. Likewise, decarbonisation is often pursued for business reasons such as energy security, cost stability, and continued market access. As a result, mining companies have generally remained committed to responsible mining despite broader cultural debates around ESG.

Today, however, mining companies operate in an environment of rising regulatory standards, greater scrutiny from investors and customers, and heightened community expectations. Compliance thresholds are higher along with broader transparency demands. Within these companies, responsible business teams are being asked to do more with thinning teams, fewer resources, and reduced investment.

This is where risk re-enters the system.

Frameworks like GISTM, TSM, CMSI and IRMA define the baseline for responsible practice, while emerging climate reporting standards bring greater clarity to disclosure expectations. Reforms in cultural heritage further reinforce legal responsibilities. Yet real progress ultimately relies on skilled professionals who truly understand risk, who can question prevailing assumptions, and who have the authority to shape decisions from the outset.

When expertise is stretched thin, institutional knowledge walks out the door, and critical functions go underresourced, the damage does not always show up right away.

The Talent Imperitive

The most important asset in responsible mining is not ore grade, equipment, or financial capital. It is the human capital entrusted with managing risk and building trust.

Over the past five years, the competition for experienced climate specialists, human rights advisers, tailings engineers, biodiversity experts, and community leaders has increased significantly. Mining talent now competes not only within the industry, but across infrastructure, energy, private equity, technology, and development finance for the same pool of multidisciplinary professionals.

But the more important question may not be where to find these people. It may be whether the people the industry has always recruited are the right ones to take it where it needs to go.

The mining industry carries deep institutional knowledge, and that knowledge has real value. But institutions also carry assumptions, ways of framing problems, definitions of what is possible and what is not. At a moment when the industry is being asked to rethink its business models from the ground up, those assumptions can become constraints.

The transformation described in the IEA's Critical Minerals Outlook 2025, towards circularity, tailings reprocessing, and full supply chain stewardship, will not be driven by people who are anchored in the way things have always been done.

This is the case for looking beyond mining's traditional talent pipeline. Leaders from renewable energy, from consumer goods, from technology and urban infrastructure bring different mental models. They are not encumbered by the industry's historical relationship with risk, community, or environmental impact. They see the opportunity first, and that shift in orientation matters. Reaching those candidates requires a different kind of recruitment. Early engagement makes far more sense when you are asking someone from outside the industry to imagine a future in mining they have not yet considered.

The companies making that case compellingly, and meaning it, will attract people who go on to drive genuinely different results. Recruitment, therefore, must be strategic rather than reactive. Organisations that treat responsible business roles as compliance hires will struggle to attract top-tier talent from inside or outside the industry. The strongest candidates, wherever they come from, are drawn to companies where sustainability is embedded in core business functions, where leadership is genuinely bought in, and where there is real opportunity for influence.

Retention is equally critical. Experienced professionals stay where their expertise is valued, long-term thinking is rewarded, and safety, ethics, and transparency are non-negotiable. They leave when responsible business functions are isolated, underfunded, or excluded from early decision-making. That is as true for a renewables specialist considering their first mining role as it is for a seasoned tailings engineer.

A new generation is also reshaping the workforce. Emerging engineers, geologists, and financiers are asking harder questions about impact, purpose, and accountability. They expect measurable climate ambition, genuine community engagement, and cultural respect. Organisations unable to articulate a credible vision for responsible growth will increasingly struggle to attract the next generation of leaders, regardless of which industry they trained in.

The industry's most valuable resource has never been in the ground. It is the capability, judgement, and integrity of the people entrusted to extract it responsibly. Organisations that invest deliberately in attracting, developing, and retaining that talent will do more than reduce risk. They will strengthen investor confidence, secure their licence to operate, and build resilience that outlasts commodity cycles. Everything else follows.

"About a decade ago, there was a necessary movement to prove the "business case" for sustainability. I think the time has come again to re-articulate it, as I can sense the bonds created at that time starting to fray. After the "ESG hype" of the past few years, Executives and Boards are asking some version of "why is this in our business interest to do" - this is a good and healthy question, and it gives the proponents of responsible mining another opportunity to strongly state their case."

Rohitesh Dhawan
President & CEO,
ICMM

"We are right to focus on access to critical materials in today's world - for the clean energy transition, for mobility, and for defence and security. But access to the people who will develop and scale the next generation of technologies, and to those who will design the policies and financial tools that enable them, is just as vital. If we fail to invest in people, talent could become as serious a bottleneck in our value chains as any export regulation."

Dr. Benjamin Davies
Chief Executive Officer
The Global Rare Earth Industry Association

REIA

"Canada's experience shows that responsible mining depends on people with strong and diverse skills. Through the Mining Association of Canada's two decades of work with the Towards Sustainable Mining program, we've seen measurable improvements in social and environmental performance because our members have invested in the skills, leadership, and accountability needed to implement strong standards and responsible practices. As expectations on issues like tailings management, Indigenous engagement, climate performance, and transparency continue to rise, the industry's success will depend, more than ever, on a diverse, highly skilled workforce. Simply put, strong performance demands strong people, and investing in our workforce is essential to the responsible growth of Canada's mining sector."

Ben Chalmers
Senior Vice President
Mining Association of Canada

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