


Mining and metals: Addressing ESG, climate, and sustainability challenges

Marsh Advisory: Your advisor in mining and metals for ESG and sustainability



“Massive thanks to the Marsh team for helping us understand the potential financial impacts of climate physical risk.”

RIO TINTO'S PRINCIPAL CLIMATE RESILIENCE

“Marsh worked with us to undertake our first CSRD materiality assessment, looking at all of the climate drivers, how they impact our operations, and documenting the controls that we have in place to manage and mitigate these risks.”

LITHIUM MINING COMPANY

“The TFCF gap analysis and maturity assessment has been extremely insightful to see how our peers are driving ESG, climate and sustainability as part of their agendas.”

ALUMINIUM MINING AND PORT OPERATIONS

“We found the assessment of physical and transition risks to be insightful, as it allowed us to better understand how climate change could impact our business in both the short and long term. The risk register provided us with a clear roadmap for managing those risks, and we have already started to implement some of the recommended actions.”

A HONG KONG LISTED MINING COMPANY

“The multi-phased engagement with Marsh has provided us with ongoing support for TCFD reporting and risk management. The physical and transition modelling has enabled us to understand the potential financial impacts of climate and translate this into operational strategies and make informed adaptation decisions to build resilience.”

SIBANYE-STILLWATER

In today's rapidly changing world, the success of mining and metals organizations can hinge on their ability to embrace environmental, social, and governance (ESG) principles and embed them into strategies, policies, and risk management activities.

As the global transition to a low carbon economy gains momentum, and extreme weather events become more frequent and severe, companies face increasing pressure from regulators, insurers, investors, and procurement entities to demonstrate their commitment to ESG practices. That's where our expertise comes in.

At Marsh Advisory, we understand the critical importance of ESG and sustainability in shaping the future of the mining and metals industry. Our 360-degree approach offers a range of solutions to help you adapt and thrive in this evolving landscape.

Our team of specialists — highly regarded in the industry — is proud to work with some of the world's largest mining companies, as well as smaller and emerging companies. Our wealth of knowledge and experience can assist you in equipping your business to meet the demands of ESG reporting requirements and stakeholder expectations.

Drivers for action

Prompt action and successful communication around ESG and climate strategy offer significant competitive opportunities, permitting companies to:



Get projects off the ground

Attract capital, strengthen relationships with local communities, and secure exploitation permits.



Foster community and government relationships

Position against increasing scrutiny faced as the world evolves and companies mature — for example, retain talent, and limit and diversify risks.



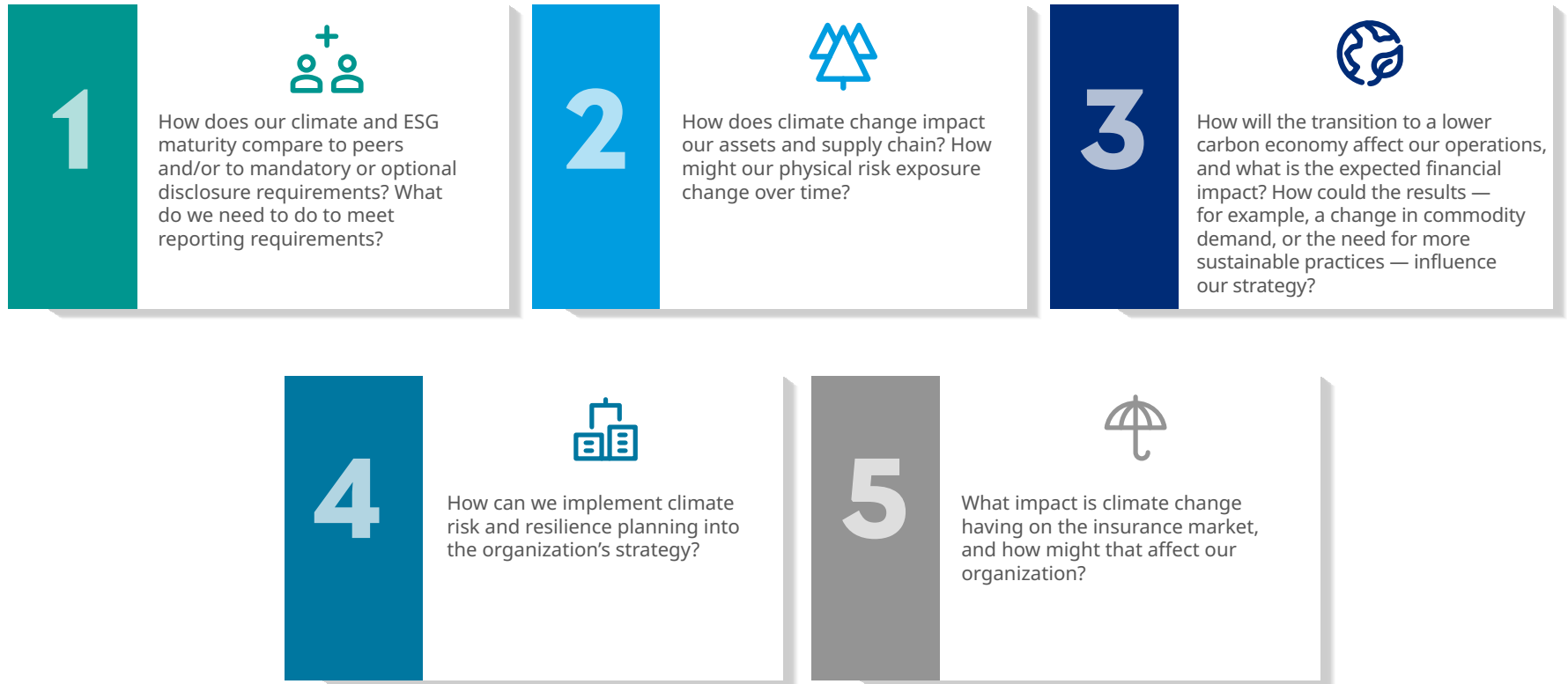
Mitigate physical damage and business interruption

Help to minimize primary and secondary impacts to operations and disruptions to supply chains following the increasingly severe and frequent climatic events, including water stress, extreme heat, and floods.



What should you focus on?

ESG and sustainability are broad and complex areas, making it difficult to know what to prioritize. We provide you with expert advice on questions including:



How can Marsh help?

Marsh offers a range of climate and sustainability solutions, tailored to your needs. We work with you to understand your current maturity and priorities. We help you find the right strategy and roadmap for your sustainability journey. With risk management at the core of our process, we deploy deep industry expertise, advanced analytics, market-leading models, and specialist engineering and resilience skills.

Projects take different shapes depending on the priorities and maturity of your business and individual operations



	Initial activities	Feasibility and construction	Production	Decommissioning and rehabilitation
Understanding materiality	Benchmarking and risk rating against peers	✓		✓
	Gap analysis, risk and materiality assessment	✓		✓
	ESG roadmap and strategy development	✓		✓
	Due diligence and physical and transition climate risk	✓		
	Physical and transition climate risk scenario modelling		✓	
	ESG engineering site surveys		✓	✓
	Emissions and carbon accounting for scopes 1-3		✓	✓
	Supply chain ESG impact analysis		✓	
Taking action	Disclosures, reporting, and submission writing (e.g., the Task Force of Climate-related Financial Disclosures (TCFD))		✓	✓
	Adaptation plans and business case, resilience playbook		✓	✓
	Net zero plans and decarbonization roadmap		✓	
	Insurance solutions		✓	✓

We proudly support a range of organizations on their journey to ESG maturity, climate resilience, and net-zero. Marsh has recently delivered:



6+ million global assets modelled for climate risk across all industry sectors



Reports for global and UK corporates on physical and transition climate risk reporting, including TCFD



Multiple industry leading climate risk curricula, tailored to specific clients



Hundreds of on-site ESG and climate surveys

“ Marsh is dedicated to helping mining and metals companies effectively manage the challenges associated with ESG, sustainability, and climate priorities. Whether the impetus to take action stems from investors, regulators, insurers, other stakeholders, or internal strategy, Marsh offers a range of expertise and customizes our products to meet your specific requirements.”

CHRISTOPHER PARTRIDGE,
Marsh Global Head of Mining & Metals



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Our extensive experience with mining and metals companies

Client	Leading global mining firm, with multi-million-dollar operations	Large mine under development	Global critical materials company	Diversified Mining Company in Asia	Global steelmaking group, headquartered in the Pacific
Project title	Physical risk portfolio-wide assessment.	Climate-related risk and opportunity assessment aligned with Equator principles.	Physical and transition climate risk modelling.	Transition risk impact assessment and target setting.	Quantitative climate risk modelling, supply chain hazard analysis.
Our approach	<p>Marsh modelled physical risk exposure to eight climate perils on >18,000 asset points across the value chain including ports, terminals, mines, housing, and railroad assets.</p> <p>We identified assets at high risk of physical damage and business interruption and created a bespoke model to assess the potential financial impacts of climate change in the operations network, capturing interdependencies within the chain. This helped provide a more accurate view of potential climate losses.</p>	<p>Marsh helped the client identify their climate-related risks and opportunities through the development and operational phase of the mine. This was done being conscious of the mutual impact the clients' operations have on the local climate and vice-versa.</p> <p>We also looked at the multifaceted impact of climate events on local communities – for example, the impact of droughts or floods on infrastructure and agriculture.</p>	<p>Marsh worked closely with the client to quantify the physical impact of climate perils in various climate scenarios on their portfolio assets, including mining/processing facilities, office buildings and distribution centres.</p> <p>Our insightful physical risk analysis led to a subsequent phase on transition risks quantification. This involved evaluating implications associated with their decarbonization efforts. By providing valuable insights and guidance, we supported the client in navigating the complexities of transitioning to a low-carbon economy, while identifying opportunities for growth, innovation, and focused risk mitigation.</p>	<p>Marsh assisted in developing a business case for emission reduction and setting targets for mitigating environmental impact. We quantified transition risk impacts by developing a Business Impact Model that represented the client's profit and loss and cash flow statements, which was then stress-tested against a customised set of climate scenarios.</p> <p>We worked with the client to set appropriate near- and long-term targets in light of growing insurer expectations and peer maturity. We created a dashboard that integrated previous feasibility studies on decarbonization initiatives and a governance model to outline the implementation, monitoring, and reporting of these targets.</p>	<p>Marsh helped the client quantify the physical impact of climate change on 70 assets under different climate scenarios and time horizons. This included a deep dive into the key steelmaking facilities. We cross-referenced model outputs against other independent model sources to provide a nuanced view of physical risk for the client.</p> <p>We then conducted a supply chain hazard analysis, mapping out the client's tier 1 upstream and downstream supply routes and nodes. We overlaid global hazard maps across these routes to provide a view of current and future hazard exposure, qualitatively assessing supply chain resilience on a supply basin-level to climate change.</p>
Client benefits	The completed analysis advised immediate prioritization of high-risk assets that support internal decision making on risk mitigation actions. The approach taken was consistent and repeatable and aligns with insurer-view of risk and allowed for the analysis to be owned by the client. Through our assessment, the client provided leading corporate reporting and climate disclosures among peers.	The client was exposed to the increasing expectation of capital markets to provide evidence of climate risk analysis. Our analysis was well received by investors. Assessment outcomes will continue to be used as a live document that is updated regularly and used alongside other risk management processes.	Marsh's physical risk analysis pinpointed a client site that was exposed to a significant rise in flood risk. In response, the client made the proactive decision to relocate their high-risk facility to a higher elevation, effectively mitigating the potential climate risk. Furthermore, our transition risk analysis projected an unforeseen substantial carbon tax within the EU region, which prompted escalation of the potential financial risk to their CFO, ensuring better visibility and effective financial planning.	The outcome of this project strengthened the client's capacity to manage transition risks and align with industry target-setting expectations. The customized climate scenario stress-testing offered the client targeted insights into how climate risks could directly or indirectly materialise in their profit and loss and cash flow statements. This can inform strategic decision-making and mitigation strategies by prioritizing risks with substantial potential impacts.	The outcome of this quantitative climate risk modelling supported the client's strategic and operational decision-making and delivered key inputs for reporting and disclosure. The supply chain analysis provided the client with a foundational understanding of supply chain climate risk exposures - supporting their future procurement decisions.



About Marsh

Marsh is the world's leading insurance broker and risk advisor. With more than 45,000 colleagues advising clients in over 130 countries, Marsh serves commercial and individual clients with data-driven risk solutions and advisory services. Marsh is a business of Marsh McLennan (NYSE: MMC), the world's leading professional services firm in the areas of risk, strategy and people. With annual revenue \$23 billion, Marsh McLennan helps clients navigate an increasingly dynamic and complex environment through four market-leading businesses: Marsh, Guy Carpenter, Mercer and Oliver Wyman. For more information, visit marsh.com, and follow us on [LinkedIn](#) and [X](#).

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