



Mining in 10 minutes - Ep. 3: Navigating climate and sustainability risks

Raul Munoz: Welcome to 'Mining in 10', I'm your host Raul Munoz, Industry leader for Mining and Natural Resources at Marsh. And I'm thrilled to continue with our 5-part series exploring some of the biggest resilience challenges for mining companies today. We built our series around our Mining Resilience Guide, which is a practical framework to help mining leaders navigate an increasingly complex risk environment.

Joining me today is Ed Woolcock, a director at our Global Climate Center of Excellence, specializing in climate and sustainability risk at Marsh. Today we'll be discussing how to develop a sustainable future through climate adaptation. Welcome, Ed, and thank you for joining us.

Edmund Woolcock: Thank you.

Raul Munoz: So let's start at the top. Why is climate risk such a defining issue for mining companies today?

Edmund Woolcock: Thanks, Raul. That's a good question. I mean, I suppose there's probably two things going on there. Firstly, mining as a, as a very physical industry, an industry that, you know, with. A significant physical footprint, expensive equipment, land, assets, infrastructure is highly exposed to a changing climate. There are, you know, risks to the infrastructure involved risks to the continued operation of mines due to key dependencies on resources like water, and, at the same time the Mining as a sector is hugely important to the transition towards a... a cleaner economy, and ultimately a, you know, a stable climate. So there's this sort of... Physical risk and transition risk dynamics taking place, that mean that, you know the sector is increasingly important in many ways. It delivers a number of raw materials of increasing importance to things like, you know, battery technology, for example. Whilst also being increasingly under threat.

Raul Munoz: So it's a real dichotomy and a real tension. You're part of the solution on something that we're trying to solve, but you're also probably one of the most exposed industries out there just being so close and essentially part of the environment.

Edmund Woolcock: Yes, that's right. I think there's probably... four elements to this, if you break down the sort of, risk exposure in a bit more detail.

So, starting again with the physical risk elements within that, there's, I guess, the sort of first-order effect, which is the risk that particularly acute climate presents to mining sites in infrastructure. So that's, that's kind of, you know, flooding, for example, which sort of risks the structural integrity of mines, but it's also things like extreme heat. I mean, either disrupting the operation of mines for periods of time, or in some cases, and, you know, this is sort of particularly relevant around the Northern Arctic mines. You've got things like, changes to permafrost which impact the ability for the mine to operate, or for assets to come to and from the mine, because infrastructure's been developed around that permafrost.

You've then got more chronic risks, things like the water scarcity piece, that is, you know, relatively well publicized and particularly relevant to mines because of their heavy dependence on significant amounts of water. Of course, you know, drought is becoming more of a risk in certain parts of the world, so that ability to access water is under threat.

Then there are things like the human risks. So, you know, mining can be a challenging sector from a human perspective as it is. Mines are often heavily isolated, you know, staff working on them have to be on site in sometimes challenging conditions for prolonged periods of time. Adding a climate factor, you know, an extreme heat factor, perhaps things like wildfire risk, flood risk, to that only exacerbates the problem.

And then, lastly, moving away from physical risk, there's that transition element. So, you know, tightening regulations across a lot of the world, vis-a-vis climate increasing taxation or pricing of carbon, which can be, you know, problematic and challenging for the mining sector, the sort of social license element that's been such an important part of the mining industry for such a long time, probably, you know, greater pressures there for the industry to sort of validate its role and sort of value it has for local communities and economies.

Raul Munoz: Yeah, it's interesting to say that, we've been, obviously talking about the different aspects of resilience, in our previous episodes and social license keeps coming on and on, no matter what topic it is. So, It's really interesting to look at that from, from that perspective. But, so...the resilience guide talks about proactive resilience and it specifies five specific opportunities that you and your team work with our clients with. Could you elaborate a little bit more on that and what does that mean and how is that fit applied practically to our clients?

Edmund Woolcock: Absolutely, I mean, I think. Broadly speaking, the journey that we suggest firms undertake when it comes to climate and sustainability risk is to first understand the risk, identify and understand the risk in great detail, and then use that understanding to inform action. So... and the five steps that we recommend broadly follow that trajectory.

So we recommend that that organizations first focus on understanding in detail transition and physical risk. So, two important steps there, and that's two things, the sorts of transition risk analysis recommended by the Task Force for Financial Disclosure Framework, Task Force on Climate-Related

Financial Disclosure Framework, that's something that's informed regulation in Canada, the UK, Australia, a number of large mining economies. Understanding exposures to market changes as a result of climate, you know, consumer dynamic shifts, regulatory risks, litigation risks, etc. And there are a number of quantitative techniques that we employ to do that. We would very much recommend that firms as much as they can seek to understand these risks quantitatively. Similarly, you know, the physical risk side, steady...development and evolution in the quality and precision of climate. Data projections, right? That's... Work that we do a huge amount in the mining sector. Helping clients understand the vulnerability of their sites in a very sort of granular and specific way under a range of different scenarios, looking at a range of different climate hazards, whether that's flood, wildfire, heat, drought. And, I think probably the third step is doing both of those things, but applying them to the supply chain. So, you know, starting, of course, with your own operations, but moving beyond that towards that view of upstream, and to some extent, downstream distribution chain, too. You know, there are critical dependencies there, so understanding how, you know, for example, physical risks, how could those impact your ability to receive the kind of key supply chain inputs that you depend on as a site or as a business. And then moving into action.

We'd recommend, you know, net zero. Strategy is the key, the key action to mitigate transition risk. And similarly, employee training and education to ensure that those on site are familiar with the risks familiar with how, you know, changing physical climate exposure will impact operations on site and the risk to life, and, you know, aware of what they need to do to manage that.

And act appropriately.

Raul Munoz: Yeah, no, that's really, really interesting. And I find it really interesting that we close with education because I think that to me, when you look at the overall component around climate and sustainability, it starts with that. It starts with actually understanding what the problem and how to solve that. So I'm glad that it's one of the five pillars. If you could leave the audience with one message from this episode, what would that be?

Edmund Woolcock: I think it would be to view climate increasingly as core to the business is strategy and business model. So, not just a risk, but an opportunity, not just a sort of compliance,

tick box, but that's something that should be, you know, increasingly factored into the business's core strategy. And way of operating. I think, you know, in the mining sector, that is as important as it is in any sector for the reasons we've highlighted. There is significant opportunity.

But a need for businesses to, to, you know, in parallel to, to realising that opportunity ensure they're resilient to the risks that climate will increasingly bring.

Raul Munoz: Nicely put. Thank you. Well, thank you very much for joining us today, Ed. And to our audience, the Mining Resilience Guide is available at marsh.com. I encourage you, everyone, to download it and share it with your teams.

We'll be back next time when we look at cyber risk in the mining sector and discuss that in a lot more depth. Until then, see you soon. Thank you very much, Ed.

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