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Delivering Critical Raw Materials: Ecological, Ethical and Societal Issues

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Leaders across geographical and political boundaries are united behind a pledge to deliver a net zero carbon world by 2050. Society's conundrum is that mining is an essential part of that delivery, yet is an activity regarded by many as unpalatable. Projects that have fallen short on ecological, ethical, or social grounds, serve to confirm to many that mining is currently not an industry to be trusted, rather than being the industry that could and should be empowering significant societal development.

Examples of societal failure include the incidents around the 2012 miners' strike at the Marikana platinum mine in South Africa which escalated into violence and loss of life. Failure on ethical grounds was most recently highlighted by the settlement of corruption claims in the Democratic Republic of Congo (DRC) where international mining company staff bribed country officials to secure "improper business advantages." Ecological failures are all too common and most visible in the failure of tailings storage facilities such as the 2015 Mariana (Brazil), 2019 Brumadinho (Brazil), and 2022 Jagersfontein (South Africa) dam disasters.

The challenge for those who explore, extract, and process the raw materials so vital for the energy transition, is to do so whilst delivering on true Sustainability right from the start of any project. Mining disasters are rarely a surprise. The proactive management of both threats and opportunities is therefore key to the urgent delivery of materials to secure our net zero future in a responsible manner. We must ensure that this delivery is achieved by projects with wholly net positive outcomes for the environment and people.