

Critical mineral deposits crucial to the clean [energy transition](#) can be found across the globe. As mining companies cannot control where geological deposits form, they are forced to tackle whatever challenges are present in the location of which they are found. One of the largest challenges within the environmental “E” of ESG is how to prevent biodiversity loss due to company operations.

It is crucial that **biodiversity** is considered and appropriately monitored at all stages, from acquisition through to mine closure and rehabilitation. Strategies for biodiversity management of a mine site should begin with an environmental impact assessment and mitigation strategies and targets set.

Mining operations that neglect their local environment can have serious adverse impacts on terrestrial and aquatic ecosystems due to habitat destruction and pollution.

Tracking [biodiversity](#) impacts is vital to minimising them. Benchmark’s Nickel ESG report finds that in jurisdictions where no net loss of biodiversity is a legal requirement, 60% of nickel refiners track their biodiversity, compared to less than a fifth where it is not.

The importance of biodiversity

Biodiversity encompasses all of the living life on earth including plants, animals, bacteria, and fungi. The relationship between biodiversity, climate, and water should be seen as a closely interlinked nexus, where the neglect of one has serious impacts on the others, resulting in ecological degradation.

It is not only the environmental dimensions of biodiversity that are of importance. It is also significant in the social and cultural connotations it holds for communities. Indigenous people and communities local to a mine site often have strong cultural connections to the land and rely on biodiversity for their livelihoods, food security, and traditional practices. Mining companies looking to operate sustainably should, as part of their engagement with local community stakeholders, demonstrate how they intend to protect biodiversity.

In 2022, **Rio Tinto** had mining licences revoked for its Jadar lithium project in Serbia due to sizeable local community opposition on a number of issues, including the impact the project would have on biodiversity.

Despite the known biodiversity impacts of mining, research across Benchmark’s Lithium, Cobalt and Nickel ESG reports shows that just a third of operating companies disclose having biodiversity monitoring in place. For operating nickel sulphate producers this falls even lower, with just 10% stating they monitor biodiversity.

A “no net loss” strategy

Ambatovy, a nickel and cobalt miner majority owned by the Sumitomo Corporation, deployed a biodiversity strategy known as “no net loss” for their nickel and cobalt mining

operation in Madagascar. Last year the mine produced 41,000 tonnes of nickel and 3,500 tonnes of cobalt.

The “no net loss” strategy aims to prevent biodiversity loss through increased conservation and mitigation efforts. The concept is based on the idea that some habitat destruction and harm to species is “unavoidable” in the context of human development. Yet, despite this harm caused, companies can still have a positive impact resulting in overall “net gain” by restoring and protecting biodiversity in other areas.

Madagascar is a highly endemic country with over 85% of all its mammals, reptiles and plants only existing in the country. The Ambatovy mine is situated in the eastern rainforest region of the island, thus providing numerous biodiversity obstacles.

Research published in the journal Nature Sustainability analysed Ambatovy’s efforts to offset their biodiversity impacts. The study showed that Ambatovy’s local offsets at four different sites via ecological monitoring, community forest management, environmental education programs and alternative income-generating activities are on track to avert as much deforestation as was caused by the mine. This is cautiously encouraging and potentially sets an example for other mining companies to follow.

Data from Benchmark’s Nickel ESG Report shows that 60% of operating refined nickel producers located in Australia and Canada, where no net loss provisions are in place, track their impact on biodiversity. In Indonesia, on the other hand, which does not require no net loss, only 16% have biodiversity indicators, despite having the greatest species richness of the top nickel producing countries.

Biodiversity rises up the agenda

Biodiversity is starting to be viewed with increasing importance on the global policy agenda. The recent United Nations Biodiversity Conference held in Canada last December concluded with a landmark agreement titled the “Global Biodiversity Framework” comprising several targets with the flagship being to place 30% of the planet and 30% of degraded ecosystems under protection by 2030.

Similarly, the investment community is beginning to take a greater interest in the biodiversity impacts of projects prior to making decisions.

The soon-to-be-released Taskforce on Nature-Related Financial Disclosures (TNFD) is set to create a framework for how organisations can address environmental risks and opportunities and disclose what steps they are taking to mitigate biodiversity loss. The TNFD has been welcomed by investors and lenders in that it allows decisions that can be made with clarity and confidence concerning nature-related risks.

TNFD disclosures will be voluntary at first, however it is likely that in time they will become

mandatory, in line with the Task Force on Climate-Related Financial Disclosures (TCFD) requirements in a number of jurisdictions.

In light of this, **BHP**, an Australian mining company, recently published a pilot case study on the application of natural capital accounting principles at one of its operations as part of its commitment to the TNFD framework. BHP shows leadership through being the first to implement such accounting mechanisms and bring nature to the forefront of financial decision-making.

Biodiversity conservation is a key concept to sustainable development as is the move away from fossil fuels to the use of critical minerals to power the clean energy transition. Mining companies must collaborate with biodiversity practitioners and scientists to continually develop novel ways to extract these minerals with the smallest possible impact on biodiversity.

Source: Benchmark Source