





Indonesia has become one of the major nickel producing nations in the past decade, capturing international attention.

Cobalt occurs as by-product in Indonesian nickel deposits and will play in increasing role in the near future.

Recent reserve and resource estimates confirm the importance of Indonesia in satisfying the growing demand of nickel and cobalt, notably for a green energy transition.

On December 1, 2022, the Nickel Institute and the Cobalt Institute organised a workshop to discuss Environmental, Social and Governance (ESG) risks and the need for sustainable supply chains. The majority of the 55 participants joined the workshop from Indonesia.

Metals such as cobalt and nickel are under growing scrutiny by policy makers, regulators, industry, trade platforms, investors and civil society at the global level. These stakeholders seek assurances that raw materials are produced and sourced responsibly and sustainably. The Indonesian government has set out goals including ensuring availability of nickel needed for energy transition and minimisation of the ESG risks.

SCIENCE & ENVIRONMENT

During the workshop it was acknowledged that the environmental risks in Indonesia are complex, particularly with its large biodiversity and the unique freshwater and marine ecosystems. Scientific studies from the Nickel Institute are available with information around (eco)-toxicological impact on species in the tropical region related to nickel. Further scientific research is underway with respect to specific challenges for lateritic mining.

ELECTRIC VEHICLES & ESG

Producers and consumers of electric vehicles are aware of the ESG challenges. Additional guestions surrounding ESG concerns are arising in the stainless steel market. The common aim is to achieve more sustainable nickel and cobalt products. How the industry responds to these inquiries will influence the nickel and cobalt markets. External stakeholders are applying increased scrutiny of material sourcing, and some actors within the supply chain engage directly with the mining companies on decarbonisation and responsible sourcing aspects.

MINING IN INDONESIA

There are several challenges related to the mining and production of nickel in Indonesia:

- Coal is still the major energy source used in nickel production;
- Waste management is of key importance. Rainfall, the topography of the landscape, as well as the risk of earthquakes increases the risk of dam failure;
- Mining activities take place in an area with rich biodiversity;
- Erosion might occur with consequences for the surrounding aquatic environment.

Addressing these issues in view of the rapid growth of nickel mining in a short timeframe is a major challenge for the Indonesian government. Indonesia is therefore reviewing regulation to adapt to the new situation. It was acknowledged that there is a need for scientific and life cycle support to ensure that Indonesia does not suffer from a reputational issue due to sustainability concerns which can affect the market.

MORE VALUE CHAINS WILL REQUIRE ESG STANDARDS IN THE FUTURE



Standards and a framework are available.

The Nickel Institute is working on a specific framework for nickel, the Ni Mark, which will ensure that specific ESG impact categories for nickel will be addressed.

The Ni Mark is in pilot phase until July 2023.

Several companies in the region are committed to sustainable mining and processing and have already taken actions in the areas of land rehabilitation, decarbonisation and engagement with the local communities.

Not addressing ESG issues is perceived as a potential risk to access the electric vehicle market. It was acknowledged that more value chains will require ESG assurances in the future.

ESG CHALLENGES

The workshop participants identified the following as the main ESG challenges:

- 1. Water protection
- 2. Decarbonisation
- 3. Biodiversity and Rehabilitation
- 4. Local community engagement
- 5. Corruption

The main recommendation from the workshop is that it would be beneficial for international associations such as the Nickel Institute and the Cobalt Institute to engage with Indonesian regulators on scientific data, ESG standards and carbon footprint.

Supply chain due diligence can help supplement regulatory enforcement, but specific guidelines or templates may be needed to address unique issues in lateritic nickel operations.

Associations have data, tools and expertise which can support regulators to address the challenges identified and to share good practices.

Follow-up activities with Indonesian stakeholders in nickel and cobalt production are envisaged for 2023.



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