



Image: Hariandi Hafid / Alamy



35007/Getty Images

An Overview of Nickel Mining in Indonesia

The Other Side of The Energy Transition Efforts

Intergovernmental Group of Experts on E-commerce and Digital Economy, 12th May 2025

Agenda

1. Indonesia's goals and ambitions
2. Global and Indonesian nickel mining
3. Contributions, opportunities and challenges
4. Impact of nickel mining
5. Recommendations



Harita Nickel's ferronickel processing plant on Obi Island, Maluku. (Doc. Dimas Ardian/Bloomberg)

Article 33(3) of the Indonesian constitution (UUD 45)

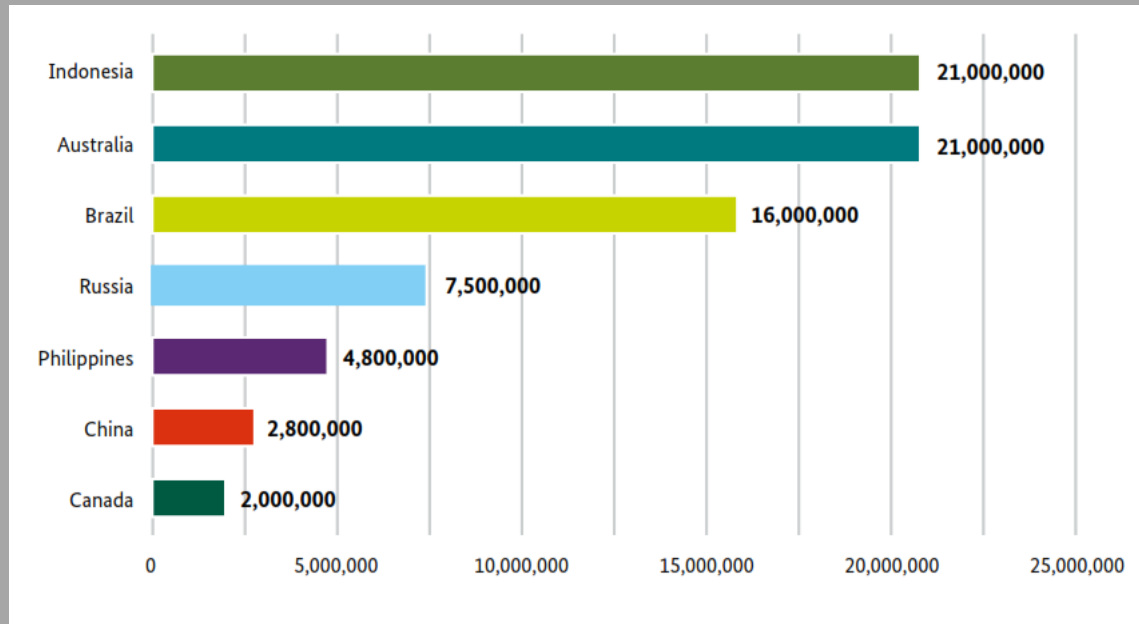
- *"The land and waters and the natural wealth contained in it shall be controlled by the state and utilized for the optimal welfare of the people"*

The Indonesian Government's ambition

- to become a major player in the global electric vehicle (EV) ecosystem which includes battery production.

Indonesia and Global Nickel Mining

Top 7 Countries with Largest Nickel Reserves (in metric tonnes)



(Source : Seagert J. et al (2022))

Nickel Production, Processing and Reserves Overview (in metric tonnes)

Country	Reserve	Production	Processing
Indonesia	21.000.000	853.000	375.700
Australia	21.000.000	160.100	106.700
Brazil	16.000.000	60.600	54.000
Rusia	7.500.000	250.000	167.300
Philippines	4.800.000	232.300	n/a
China	2.800.000	104.700	806.000
Canada	2.000.000	187.100	123.900

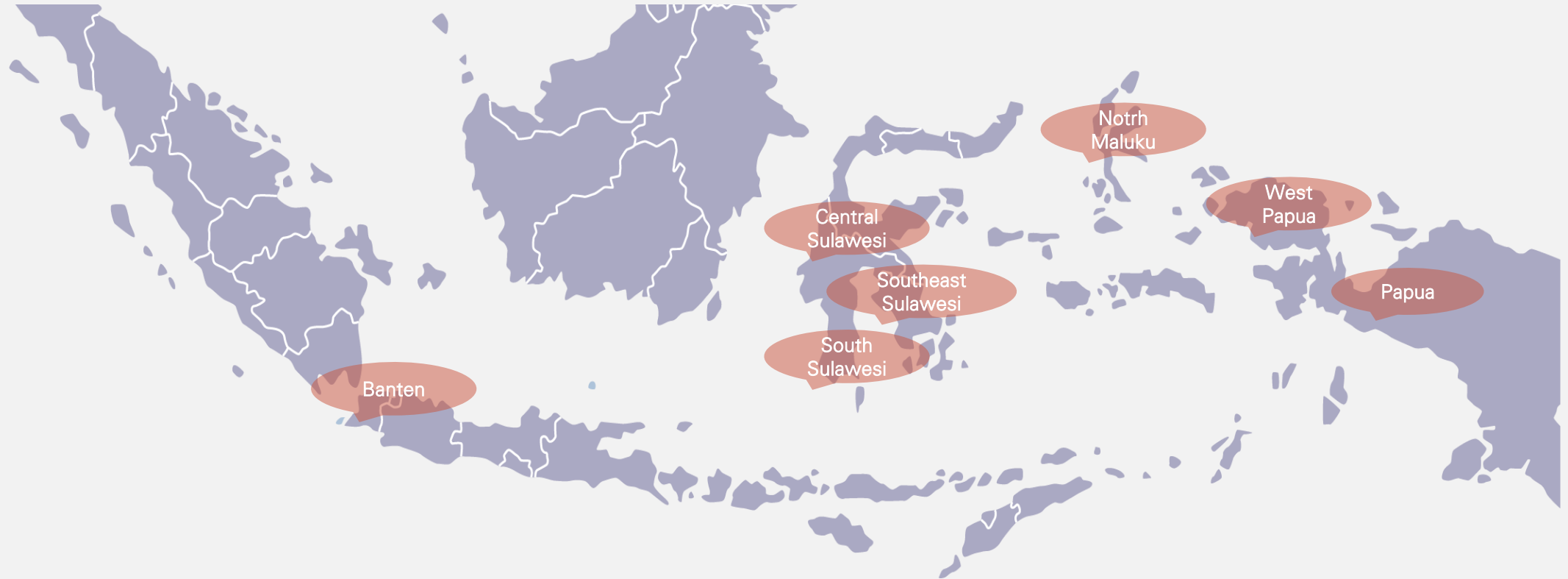
(Source: Seagert J. et al (2022))

Key takeaways

- In 2022, Indonesia produced:
 - 48% world nickel ore,
 - 47.71% world primary nickel outputs
 - 74% world Nickel Pig Iron (NPI)
 - 49% world nickel matte

(Source: Sangaji A. et al (2023))

Nickel Mining in Indonesia



Banten



5 smelters

544.585 tonnes/year

Central Sulawesi



85 Mining Business Permits (IUP)

17 smelters

10.374.758 tonnes /years

Southeast Sulawesi



154 IUP & 1 CoW

3 smelters

5.700.000 tonnes/year

South Sulawesi



34 IUP

1 smelter

50.000 tonnes/year

North Maluku



48 IUP

18 smelters

6.255.358 tonnes/year

West Papua



3 IUP

1 CoW

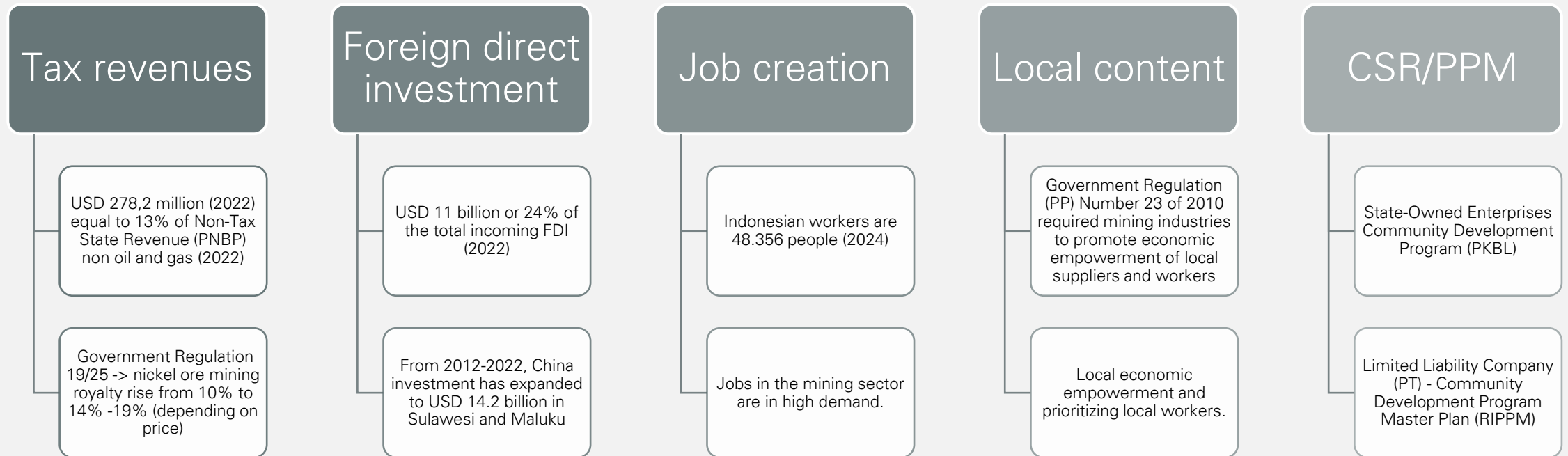
Papua



1 IUP

1 CoW

Contribution of Nickel Mining Sector



Opportunities

Abundant nickel mining resources

Number 1 in the world with Australia



Pro-investment legal framework

New Minerba and Job creation Law

Tax incentives



Supporting infrastructures

Indonesia Morowali Industrial Park

Indonesia Weda Bay Industrial Park

Konawe Industrial Park



Skilled workforce

More than 12 million university graduates

25,000 bachelor of engineering



Digitization of mineral and coal data (minerba)

Simbara

MOMI

MODI

Online permit

Challenges

Geographical complexity and centralized government

Permit and licensed

Monitoring and supervision



Lack integrated plan

Massive exploitation

Underdeveloped downstream industry



Limited funds and technologies

Dependence on FDI

Lower return for the state



Governance issues and widespread mining corruption

Distributions of benefits favors a small and influential elite

Disproportionately affecting local communities

Nickel Ironies



Source: Project M/Adrian Mulya)



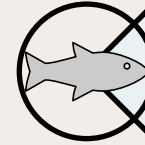
Economic disparities



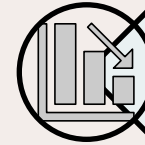
Land disputes



Deforestation



Water contamination

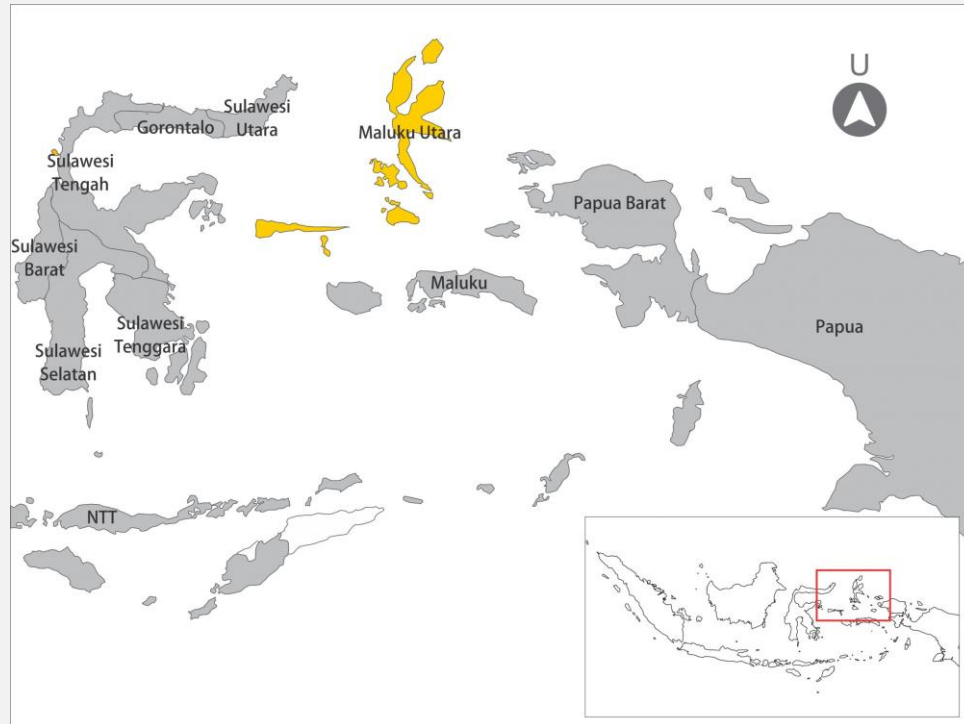


Livelihood disruption



Labor right violation

Current Developments in North Maluku



This province
is made up of
395 islands

- The area of this island is 140,255.36 km²
- 76.27% of it is ocean

Excessive nickel
exploitation

- 48 Mining Business Permits (IUP)
- 18 smelters

ESG-related
risks

- Human rights violations
- Air pollution
- Water contamination
- Land subsidence

Impacted
communities

- Limited access to information and resources to defend their rights
- Weak legal protection
- Limited job opportunities

Latest updates



<https://thiess.com/news/project-announcements/thiess-secures-a-240-million-nickel-contract-in-central-halmahera-indonesia>



LG withdraws from EV battery consortium, replaced by Huayou



Plan to reduce production quota from 270m tonnes to 150m tonnes



The return of military power with the ratification of the Indonesian National Army Law



Leakage of Harita Nickel's confidential documents revealed Cr 6 - contamination in surrounding water resources

Recommendations

For Indonesian governments

Evaluation of the centralized approaches.

- Enhance the governments capacity in monitoring and supervision of licensing processes.

Commit the use of cleaner and renewable energy

- Ensure the just transition to clean energy is in line with planned objectives. Prohibiting the construction of new coal-fired power plants.

Review the EV vehicle industry development plan

- Integrate the development planning with its implementation and manage nickel reserves responsibly.

Optimize tailings utilization and circularity

- Minimize waste discharge into the environment and maximizing recycling

Optimize the implementation of local content and CSR/PPM in the mining and mineral processing industry

- Guarantee the local communities' benefits from the supports from mining and mineral processing industries.

Develop a policy framework that balance investment and sustainable development

- Ensure the effective use of natural resources for the public welfare.

Optimizing mining digitalization

- Better licensing governance and mining supervision involving related parties (including communities and CSOs).

Ensure law enforcement is aligned with public interests.

- Implement rigorous environmental oversight and safeguarding human rights

Respect customary land rights and indigenous people

- Impose a requirement for mining companies in acquiring social license or Free, Prior and Informed Consent (FPIC).

Foster awareness of sustainable mining practices among the governments and the public

- Raise public awareness regarding long-term environmental impacts of the mining and mineral processing industries

Recommendations

For business actors in the nickel mining value chain

Comply with Indonesia legal requirements and policies

- Business actors must avoid exploiting legal loopholes to promote business interests.

Incorporate cleaner and new energy sources in mining and processing industries

- Promote a shift from fossil fuels to clean energy

Optimize the implementation of local content policies and Corporate Social Responsibility (CSR)

- Assist local communities in assuming the role of local host and in adapting to life after mining.

Implement ESG best practices in nickel mining and processing industries

- Mitigate and diminish detrimental practices toward society.

Participate in mining sustainability initiatives (e.g: IRMA initiative assessment)

- Business actors shall be open to ESG practice evaluation for better and responsible mining business operation

Balance business interests with local community needs and environmental considerations

- Assuming liability for adverse social and environmental practices to the affected communities

Partner solely with recognized and compliant business entities.

- Avoid working with companies proven to commit ESG harms

Respect customary land rights and indigenous people

- Pursue social license or FPIC

Recommendations

For international/national development organizations

Support the Indonesian Government in transitioning to renewable energy.

- Work alongside the Indonesian Government to drive the transition from coal to renewable energy sources for nickel mining and processing

Support the Indonesian Government in mining impact monitoring and environmental protection..

- Provide equipment support, capacity building, action research scholarships for government's staffs/scholars to conduct monitoring of environmental and mining impact..

Enhance the capacity of communities affected by nickel mining and processing to advocate for their rights..

- Collaborate with national/regional CSOs to build capacity of affected communities Particularly in Eastern Indonesia to voice their concerns and advocate for their rights..

Support the digital transformation of nickel mining development.

- In the context of licensing bureaucracy, mapping of potential, impact and intensity of impact on affected communities

Strengthen the capacity and resilience of the communities affected by nickel mining operation

- Collaborate with CSOs or the Indonesian Government to provide sustainable livelihood assistance programs in Micro, Small Medium Enterprises (MSMEs), agriculture, tourism for the nickel mining affected communities.

Advocate the Indonesian Government and Business entities for the adoption of mining sustainability initiatives

- Encourage the Indonesian government to provide incentives for mining business demonstrating voluntary sustainable mining practices

Thank You

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