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the global coalition against corruption

GLOBAL TRANSITION, LOCAL TRANSFORMATIONS:

Governance Challenges for the Energy Transition at the Sites of Extraction

Transparency International's Accountable Mining Programme works across TI's global network to look at where and how corruption can get a foothold in the mining sector. Working with over twenty TI national chapters across six continents since 2016, we seek to identify and assess corruption risks in the mining sector. We work collaboratively with governments, companies, civil society organisations and communities, to ensure that mining sector governance is transparent, accountable and participatory and ensures the social and environmental interests of current and future generations are protected.

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Cover: Vertical aerial view of pier with stacked ore raw materials. Source: Su Tim, iStock

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Every effort has been made to verify the accuracy of the information contained in this report. All information was believed to be correct as of February 2025. Nevertheless, Transparency International Australia cannot accept responsibility for the consequences of its use for other purposes or in other contexts.

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ACRONYMS

Acronym	Full Form
ANM	National Mining Agency (Colombia)
ASM	Artisanal and Small-Scale Mining
CPI	Corruption Perceptions Index
COVID	Coronavirus Disease (COVID-19)
CSO	Civil Society Organisation
DRC	Democratic Republic of the Congo
ERGI	Energy Resource Governance Initiative
ESG	Environmental, Social, and Governance
EITI	Extractive Industries Transparency Initiative
EU	European Union
EV	Electric Vehicle
FARN	Fundación Ambiente y Recursos Naturales
FATF	Financial Action Task Force
FIRB	Foreign Investment Review Board (Australia)
FPIC	Free, Prior, and Informed Consent
IEA	International Energy Agency
ILO	International Labour Organization
JET	Just Energy Transition
JET-IP	Just Energy Transition Investment Plan
JETP	Just Energy Transition Partnership
MACRA	Mining Awards Corruption Risk Assessment
OECD	Organisation for Economic Co-operation and Development
PEPs	Politically Exposed Persons
R&D	Research and Development
SPV	Special Purpose Vehicle
TPA	Tonnes Per Annum
TI	Transparency International
UAE	United Arab Emirates
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
US	United States

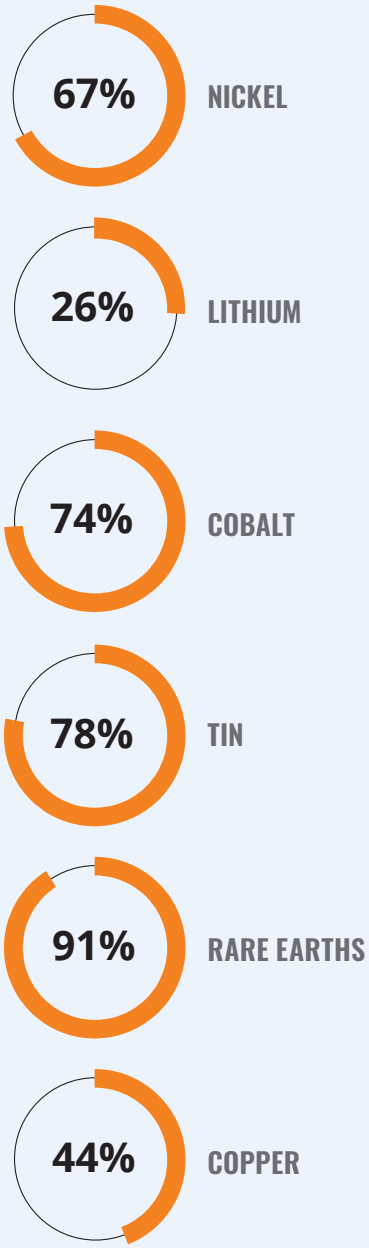
EXECUTIVE SUMMARY

In 2024, the world experienced its hottest year on record, with global temperatures rising over 1.5°C amid extreme weather events such as heatwaves, flash floods, and wildfires. In the same year, renewable energy investments surpassed USD 3 trillion[1] – more than double those in fossil fuel technologies – signalling an unprecedented global commitment to clean energy. As countries intensify their efforts to fulfil climate promises, global energy transition dynamics are transforming local contexts, particularly in resource-rich countries.

The shift towards clean energy technologies, such as wind turbines, electric vehicles and solar panels, is a major driver of the growing global demand for minerals across all commodities, particularly those dubbed 'critical', 'transition' or 'green' minerals. The International Energy Agency has estimated that the demand for minerals for clean energy technologies will quadruple by 2040.[2] To meet the increasing demand, mining exploration budgets are increasing, new mines are being opened, and others are seeking to expand across the globe, pushing the mining sector into the spotlight. While this growing demand brings significant opportunities for economic growth, increased mining activity worldwide exacerbates existing and poses new governance, environmental, human rights and social risks.[3]

This report analyses global reserves data of 14 key critical minerals against Transparency International's Corruption Perceptions Index (CPI). The CPI scores countries on their perceived levels of public sector corruption from 0 (highly corrupt) to 100 (very clean). Alarmingly, the analysis shows that more than half of all reserves in 11 of the 14 critical minerals are located in corrupt prone jurisdictions. This is measured as countries scoring less than the global average of 43/100 on the CPI. Overall, 91% of the world's rare earths, 74% of cobalt, and 67% of nickel are found in corrupt prone jurisdictions. The analysis also shows that 44% of the world's copper and 21% of lithium are found in corrupt prone jurisdictions.

Figure 1. Percentage of energy transition minerals located in jurisdictions with high perceived levels of corruption



Authors own calculations using U.S. Geological Survey Mineral Commodity Summaries 2024 Data Release (2024) Available at: https://doi.org/10.5066/P144BA54 and Corruption Perceptions Index 2024 (CPI), Transparency International (2025). Corruption Perception Indicator (CPI) Score: A country's score is the perceived level of public sector corruption on a scale of 0–100, where 0 means highly corrupt and 100 means very clean. See Transparency International. Corruption Perception Index 2024. https://www.transparency.org/en/cpi/2024

1 IEA (2024) *World Energy Investment 2024*, IEA, Paris, Licence: CC BY 4.0. Available at: https://www.iea.org/reports/world-energy-investment-2024 (Accessed: 4 February 2025)

2 IEA (2021), *The Role of Critical Minerals in Clean Energy Transitions*, IEA, Paris https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions, Licence: CC BY 4.0

3 Carballo A. and Sahla S. (2022) *What does the energy transition mean for the mining sector: Five trends to understand corruption risks in the extraction of transition minerals.* Transparency

For countries with high concentrations of key critical minerals, the risks are also significant. For example, the Democratic Republic of the Congo has almost 57% of the world's cobalt, and has a CPI score of 20, while Indonesia, which has almost 42% of the world's nickel, has a CPI score of 37. By linking CPI scores to mineral reserve data, the report highlights the elevated risks in regions where corruption may exacerbate challenges for local communities and the environment.

Furthermore, the report examines cases from six countries from the Americas, Africa and the Asia-Pacific region, in addition to Australia. Local communities in the six case studies are being impacted by the social, political and environmental challenges arising from the global energy transition. Each jurisdiction also faces unique challenges in balancing economic growth with environmental sustainability, inclusive development and good governance in their critical minerals value chains.

The report also analyses the complex and evolving geopolitical environment in which the energy transition is occurring.

Governments are under pressure to fulfil climate commitments, invest in cleaner energy and respond to the market. Governments are also under pressure to increase mineral value chain security and minimise dependency from single sources. This is important to avoid potential supply chain disruptions, and respond to human rights and environmental concerns embedded in critical minerals value chains. In this context, strategic policies are being adopted by countries, international institutions and industry associations to best respond to the priorities and demands of the energy transition. The International Energy Agency (IEA) has tracked over 450 new policies enacted to regulate the critical mineral sector, the vast majority adopted since 2019.[4]

These national policies emerge as well in a context of increasing bilateral agreements connected to the energy transition, which represent a useful example of 'Friendshoring' among countries in the Global North. This can be seen as an effort to reorganise the critical minerals value chain outside China. Examples of friendshoring initiatives include the *Mineral Security Partnership* or the *Conference on Critical Materials and Minerals* among other bilateral and mini-lateral agreements including partners such as the US, the EU, Canada, Japan, Australia and others.

While many friendshoring initiatives suggest efforts to catalyse investment in responsible critical minerals supply chains, there are shortcomings and risks associated with the strategies that can exacerbate governance and corruption risks across the critical minerals sector. Rather than strengthening Environmental, Sociak and Governance (ESG) standards across the entirety of the mining value chain, friendshoring poses risks of market bifurcation that could create two distinct supply chains: one between advanced economy producers and consumers with comparatively strong ESG commitments and one between developing economies with relatively weak commitments. This scenario could lead to deficient ESG commitments and weak developmental outcomes becoming entrenched in resource-rich but poorer countries or those scoring poorly on the CPI.

The increased mining activity required to fuel the energy transition has a very high risk of increasing harmful impacts on local communities and the environment. Without adequate regulations and monitoring, funds and royalties can be lost to corruption rather than improving the social spending of resource-rich countries. Without effective governance frameworks for natural resources and the implementation of suitable policies and standards, the increased demand for critical minerals can jeopardise the prospects for sustainability, equity, and transparency required for a just energy transition.

Ensuring strong governance frameworks is an urgent and crucial task to ensure that the energy transition is achieved without further costing the Earth and the local communities at the sites of extraction.

International Australia. Available at: https://transparency.org.au/wp-content/uploads/2022/11/Report_Critical-Minerals_web_compressed.pdf

4 IEA (2022) *Introducing the Critical Minerals Policy Tracker*, IEA, Paris. Licence: CC BY 4.0. Available at: https://www.iea.org/reports/introducing-the-critical-minerals-policy-tracker

RECOMMENDATIONS

This report provides recommendations for key stakeholders – civil society organisations, governments, and companies – to build responsible supply chains, protect human rights, and reduce environmental impacts.

Recommendations for Governments:

1. Implement strong anti-corruption measures, publicly disclose contracts and payments related to mining projects, and establish independent oversight bodies to ensure that regulations are enforced.

2. Align mining-related laws and strategies with Free, Prior, and Informed Consent (FPIC), in all extractive-related decisions, ensuring that affected communities – especially First Nations groups – have a decisive role in the projects.

3. Introduce and uphold environmental protection policies, including restoration programs, sustainable land-use planning, and penalties for environmental violations.

Recommendations for Civil Society Organizations:

4. CSOs should actively participate in mining sector activities and decisions and advocate for stronger regulatory enforcement through public campaigns and policy recommendations.

5. CSOs should provide technical assistance to local communities and help them navigate grievance mechanisms in the mining sector.

6. Building relationships with governments, companies, and international institutions can help CSOs amplify their impact and push for systemic reforms in responsible mining governance.

Recommendations for Companies:

7. Companies should embed anti-corruption policies into their operations, conduct rigorous due diligence on supply chains, and ensure compliance with international ESG standards.

8. Mining companies must engage meaningfully with communities and establish long-term, trusting partnerships with local communities, ensuring their participation in decision-making.

9. Mining companies should invest in sustainable technologies, adopt circular economy principles, and set clear targets for reducing emissions, land degradation, and water pollution.

INTRODUCTION

After a year of climate extremes, with heatwaves, flash flooding and wildfires featured in headlines across the globe, 2024 was confirmed as the hottest year on record. On average, temperatures rose over 1.5°C globally.[5] 2024 was also confirmed as the first year in which investments in renewable energy exceeded 3 trillion USD and were over double that of fossil fuel technologies.[6]

As countries worldwide intensified their efforts to meet climate commitments, the year was a clear sign that the global energy transition, that is, the shift towards renewable forms of energy, is already underway. With it, significant changes are being driven globally, particularly for the mining sector, which have profound impacts on the national and local contexts of mining operations.

The energy transition is pushing the mining sector into the spotlight, as it drives an increase in demand for minerals across all commodities, particularly those dubbed 'critical', 'transition' or 'green' minerals.[7] These are minerals that are required to fuel the energy transition, as they are essential to produce the clean energy technologies that make it possible. For example, lithium, cobalt, rare earths, nickel, and copper (amongst others), are crucial to developing clean energy sources and storage. Technologies such as wind turbines, solar panels, and electric vehicles are mineral-intensive, increasing the demand for minerals globally.[8] Widely reported, the International Energy Agency (IEA) estimated in 2021 that the global demand for minerals will increase fourfold by 2040 in response to these needs. These trends and forecasts can already be seen in increased demand growth across commodities, despite uneven trajectories and volatile market prices.[9]

> **"The energy transition brings significant opportunities for the mining sector, but increased mining activity worldwide poses significant governance, environmental, human rights, and social risks. While many of these risks are not new to the mining sector."**

This global shift towards renewable energy technologies has dramatically increased the significance of critical minerals in global economic and environmental debates, driving policy changes at the local, regional and global levels. The increased demand for critical minerals brings a multiplicity of challenges for governments, investors, companies, and, most importantly, local communities at the sites of extraction.[10]

The energy transition brings significant opportunities for the mining sector, but increased mining activity worldwide poses significant governance, environmental, human rights, and social risks. While many of these risks are not new to the mining industry, the context of the energy transition is underscored by an urgency to respond that compounds existing risks and creates new ones across the entirety of the value chain. For example,

5 World Meteorological Organization (2025) *WMO confirms 2024 as Warmest Year on record at about 1.55°C above pre-industrial level, World Meteorological Organization*. Available at: https://wmo.int/news/media-centre/wmo-confirms-2024-warmest-year-record-about-155degc-above-pre-industrial-level.

6 IEA (2024) *World Energy Investment 2024*, IEA, Paris, Licence: CC BY 4.0. Available at: https://www.iea.org/reports/world-energy-investment-2024 (Accessed: 4 February 2025)

7 As the notion of 'critical minerals' has become the consensus word to refer to minerals used in the energy transition, this report will continue using this terminology, while we acknowledge contestations on the naming.

8 IEA (2021) *The Role of Critical Minerals in Clean Energy Transitions*, IEA, Paris, Licence: CC BY 4.0. Available at: https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions (Accessed: 4 February 2025)

9 IEA (2024) *Global Critical Minerals Outlook 2024*, IEA, Paris, Licence: CC BY 4.0. Available at: https://www.iea.org/reports/global-critical-minerals-outlook-2024 (Accessed: 4 February 2025)

10 Carballo A and Sahla S (2022) *What does the energy transition mean for the mining sector: Five trends to understand corruption risks in the extraction of transition minerals*. Transparency International Australia. Available at: https://transparency.org.au/wp-content/uploads/2022/11/Report_Critical-Minerals_web_compressed.pdf

Figure 2 – Top 3 countries by percent of global reserves of key transition minerals, indicating perceived corruption levels using CPI Score.

Mineral	Position	Country	Per cent of global mineral reserves	Corruption Perception Index (CPI) Score (2024)
Bauxite	1st	Guinea	24.86%	28
	2nd	Vietnam	19.49%	40
	3rd	Australia	11.76%	77
Cobalt	1st	Democratic Republic of the Congo	56.99%	20
	2nd	Australia	16.15%	77
	3rd	Cuba	4.75%	41
Copper	1st	Chile	18.99%	63
	2nd	Peru	11.99%	31
	3rd	Australia	9.99%	77
Lithium	1st	Chile	33.59%	63
	2nd	Australia	22.39%	77
	3rd	Argentina	13.00%	37
Tin	1st	China	25.76%	43
	2nd	Myanmar	16.39%	16
	3rd	Australia	14.52%	77
Nickel	1st	Indonesia	41.97%	37
	2nd	Australia	18.32%	77
	3rd	Brazil	12.21%	34
Rare Earths	1st	China	38.12%	43
	2nd	Vietnam	19.06%	40
	3rd	Brazil	18.20%	34

Score Highly Corrupt — Very Clean

0–9 | 10–19 | 20–29 | 30–39 | 40–49 | 50–59 | 60–69 | 70–79 | 80–89 | 90–100

Scale adapted from Transparency International's Corruption Perceptions Index (CPI) classification, https://www.transparency.org/en/cpi/2024

over two-thirds of critical minerals mining projects are located in territories of land-connected peoples, most of them Indigenous Peoples' lands.[11] Most projects – and reserves – are located in environmentally fragile areas, that is, in areas with high water stress or high biodiversity loss risk.[12] At the country level, national and local governments, as well as local communities, are facing distinct challenges addressing and mitigating these risks while seeking to make the most of a favourable context and fulfilling climate commitments. To ensure a just energy transition takes place, strengthening mining governance standards is crucial. Ensuring transparent and accountable practices govern the entirety of the mineral supply chain, and that these are built on genuine engagement with local communities is key to protect the social and environmental interests of current and future generations.

This report examines the governance frameworks, environmental impacts, and social dynamics of the critical minerals sector in six key countries: Argentina,

11 Owen, J.R. et al. (2022) 'Fast track to failure? Energy transition minerals and the future of consultation and consent', *Energy Research & Social Science*, 89, p. 102665. Available at: https://doi.org/10.1016/j.erss.2022.102665.

12 Sonter, L.J. et al. (2020) 'Renewable energy production will exacerbate mining threats to biodiversity', *Nature Communications*, 11(1), p. 4174. Available at: https://doi.org/10.1038/s41467-020-17928-5.;

Photo: Aerial view of industrial battery units storing electricity in California, USA. Credit: The Desert Photo, iStock.

Australia, Colombia, Indonesia, Madagascar, South Africa, and Zambia. Case studies were selected with the aim of showcasing a diversity of geographical locations as well as a variety of critical minerals' reserves. Case studies were conducted by Transparency International chapters in each of the countries discussed, using a mixed methodological approach of desk-based research and expert interviews. They aim to answer essential questions connected to the way in which global energy transition dynamics are affecting local contexts.

The authors have identified common challenges and strengths in their attempt to respond: How can governance mechanisms be improved to ensure transparency and accountability? What strategies can enhance community participation in decision-making? How can environmental risks be managed while meeting global demand? Across the cases, authors identify the unique ways in which their local communities, their local environment, their societies and economies are being transformed and shaped by the global transition to cleaner sources of energy. More often than not, local contexts are adversely impacted, bearing the brunt of the energy transition's environmental and social costs while receiving little benefit. This is particularly the case where corrupt practices jeopardise the critical mineral value chain. Strong governance frameworks are needed to ensure that an energy transition not only takes place, but that it is a just transition that does not come at the cost of local communities or the earth. In the next sections, we will discuss some of the key trends of the global energy transition context and particularly highlight governance risks associated with geopolitical challenges and the ways they impact different regions. This global overview will serve as a background to understand the case studies and their specific challenges. We will then offer an overview of the case studies and main policy recommendations, before moving on to the case studies in detail.

GLOBAL GEOPOLITICAL CHANGES AND THE RISE OF 'FRIENDSHORING'

The energy transition is occurring amidst and, in turn shaping, a complex geopolitical environment. Governments are under pressure to both fulfil climate commitments connected to expanding cleaner energy source networks, and to respond to the appetite of the market and make the most of this unique situation. This is a unique opportunity for governments, particularly those in resource-rich countries, to increase investment in their natural resources, increase government revenue and distribute mineral rents. Governments are also under pressure to increase mineral value chain security and minimise dependency from single sources to avoid potential supply chain disruptions and safeguard future energy security. This latter trend, particularly in countries from the Global North, has been seen as an effort to counterbalance Chinese influence in the critical minerals supply chain and minimise

overreliance on a sole provider.[13] Finally, while not as prominent, governments are also under pressure to understand and respond to human rights and environmental concerns embedded in critical minerals value chains, strengthening calls for the traceability of critical raw materials.[14]

In this context, strategic policies are being adopted by countries, international institutions and industry associations to best respond to the priorities and demands of the energy transition. Multiple policy initiatives and guiding principles have been released in an effort to strategically navigate the energy transition in recent years. Examples from international institutions include the UN *'Resourcing The Energy Transition Principles To Guide Critical Energy Transition Minerals Towards Equity And Justice'* and the *OECD Guidelines for Multinational Enterprises on Responsible Business Conduct* released in 2023 with specific references to the critical minerals value chain. These demonstrate high-level commitments to ensuring high standards of governance in the critical minerals value chain.[15] At the national level, the International Energy Agency (IEA) has tracked over 450 new policies enacted to regulate the critical mineral sector, the vast majority adopted since 2019.[16] These new regulations, ranging from initiatives to encourage investment in the sector to limitations on the export of key commodities or increasing national content requirements, create opportunities and corruption risks for companies and an increasingly complex regulatory landscape.

These national policies emerge as well in a context of increasing bilateral agreements connected to the energy transition. These bilateral agreements are both an attempt to solidify partnerships across the Global North and the Global South while securing access to key commodities. They are, also, an example of the growth of 'friendshoring'. Friendshoring, a concept that has increasingly become a key issue since Biden's administration Executive Order 14017, seeks to reshape supply chains based on political alignment. In the critical minerals sector, friendshoring can be seen as an effort to reorganise value chains outside China, given the dominance of China in critical minerals extraction and processing.[17] Policy initiatives and agreements that demonstrate efforts along both these lines can be seen globally.

In Africa, for example, over one hundred agreements, including bilateral and multilateral agreements have been signed in recent years, including at least one African state and one partner external to the region in matters of cooperation connected to critical minerals. These include partners like the United Kingdom, Turkey, Saudi Arabia, the United Arab Emirates, Russia, India, China, South Korea, Japan, Indonesia, the United States and the European Union.[18] These agreements reflect policy efforts to secure access to key critical minerals markets to safeguard renewable energy value chains. In the case of the EU, these agreements follow strategic efforts to secure the region's access to critical raw materials, of which the most salient has been the *Critical Raw Materials Act*, passed in the European Parliament in 2024.[19]

13 Zhou, W. (2024). 'China's strategy on critical minerals surpasses geopolitics', *World Economic Forum*. Available at: https://www.weforum.org/stories/2024/11/china-critical-mineral-strategy-beyond-geopolitics.; Kumar, A. and Vishwanathan, A. (2025) 'Race for critical minerals: China's ambitions and challenges', *Comparative Strategy*, 44(1), pp. 56–72. Available at: https://doi.org/10.1080/01495933.2024.2445490.

14 Luckeneder, S. *et al*. (2024) 'EU consumption's hidden link to global deforestation caused by mining'. *Vienna University of Economics and Business*. Available at: https://doi.org/10.57938/B890EED0-1AB4-43AF-B577-DF48F43290A6.

15 OECD (2023) *OECD Guidelines for Multinational Enterprises on Responsible Business Conduct*, OECD Publishing, Paris. Available at: https://doi.org/10.1787/81f92357-en.

16 IEA (2022) *Introducing the Critical Minerals Policy Tracker*, IEA, Paris. Licence: CC BY 4.0. Available at: https://www.iea.org/reports/introducing-the-critical-minerals-policy-tracker

17 The White House (2021) *Building resilient supply chains, revitalising American manufacturing, and fostering broad-based growth, 100-day reviews under Executive Order 14017*. The White House June. https://www.govinfo.gov/app/details/GOVPUB-PR-PURL-gpo156599; Kumar, A., & Vishwanathan, A. (2025) 'Race for critical minerals: China's ambitions and challenges'. *Comparative Strategy, 44*(1), 56–72. https://doi.org/10.1080/01495933.2024.2445490

18 Beuter, P., Bhuee, R., Gabadadze, L., Gnanguênon A. and Hofmeyr, J., (2025) *Mapping Africa's Green Mineral Partnerships.* Africa Policy Research Institute. Available at: https://afripoli.org/projects/crm-mapping/

19 Regulation (EU) 2024/1252 of the European Parliament and of the Council of 11 April 2024 establishing a framework for ensuring a secure and sustainable supply of critical raw materials: https://eur-lex.europa.eu/eli/reg/2024/1252/oj

Friendshoring efforts, in contrast, can be seen in bilateral agreements across the Global North, like the *Mineral Security Partnership*[20], the Energy Resource Governance Initiative (ERGI)[21] or the *Conference on Critical Materials and Minerals*[22] among other bilateral and mini-lateral agreements signed in recent years. While recent changes in domestic US politics appear to challenge the notion of friendshoring to an emergence of trade nationalism, they reflect longer term trends that are not exclusive to the US.[23] These agreements include partnerships across countries from the Global North, such as the US, the EU, Canada, Japan, Australia and others. In general, they embed discussions of mineral value chain reliability in security considerations, highlighting opportunities to collaborate in strengthening value chain diversification and sourcing from political allies. While many of these friendshoring initiatives state efforts 'to catalyze public and private investment in responsible critical minerals supply chains globally' there are shortcomings and risks associated with such strategies that can exacerbate governance and corruption risks in the critical minerals sector.[24]

Friendshoring of critical minerals sourcing can have the unintended consequences of putting downward pressure on ESG standards globally by pushing "non-friendly" upstream producer countries – usually countries with higher levels of perceived corruption and governance risk – in a race to the bottom to compete for access to critical minerals market share. This scenario could see ESG standards lowering in resource-rich countries excluded from friendshoring agreements to compete against those resource rich-countries that are included. Rather than strengthening ESG standards across the entirety of the mining value chain, this scenario poses risks of market bifurcation that could create two distinct supply chains: one between advanced economy producers and consumers with comparatively strong ESG commitments and one between developing economies with relatively weak commitments. This scenario could lead to deficient ESG commitments and weak developmental outcomes becoming entrenched in resource-rich but poorer countries. As we will see below, there is a very real threat of these being compounded given existing governance risks connected to the geographical location of critical minerals reserves.

GLOBAL CRITICAL MINERAL GOVERNANCE RISKS

As the markets respond to increased demand, investment in critical minerals has experienced steady growth since 2020:[25] exploration budgets are increasing, new mines are being opened, and many mines are seeking to expand across the globe. As a result, we are seeing a flurry of new license applications, contract negotiations, environmental and social impact assessments, community consultations, profit-sharing arrangements, royalty regimes and land acquisition processes. This increased mining activity is underscored by changes in the global supply chain that, as discussed above, bring geopolitical changes to the fore and compound governance challenges to all stakeholders involved. Governments, international institutions and industry organisations are responding to these challenges with renewed interest in shaping governance frameworks, forming alliances, devising strategic plans and consolidating mining standards to maximise benefits from this context. Communities, including First Nations globally, are left to respond to multiple demands from government and industry to further mining projects in their territories, all the while trying to ensure that they secure sustainable and long-term benefits that overtake short-term gains and do not further environmental degradation in their lands.

20 US Department of State (2025) *Minerals Security Partnership.* Available at: https://www.state.gov/minerals-security-partnership

21 US Department of State (2019) *Energy Resource Governance Initiative.* Available at: https://www.state.gov/wp-content/uploads/2019/06/Energy-Resource-Governance-Initiative-ERGI-Fact-Sheet.pdf

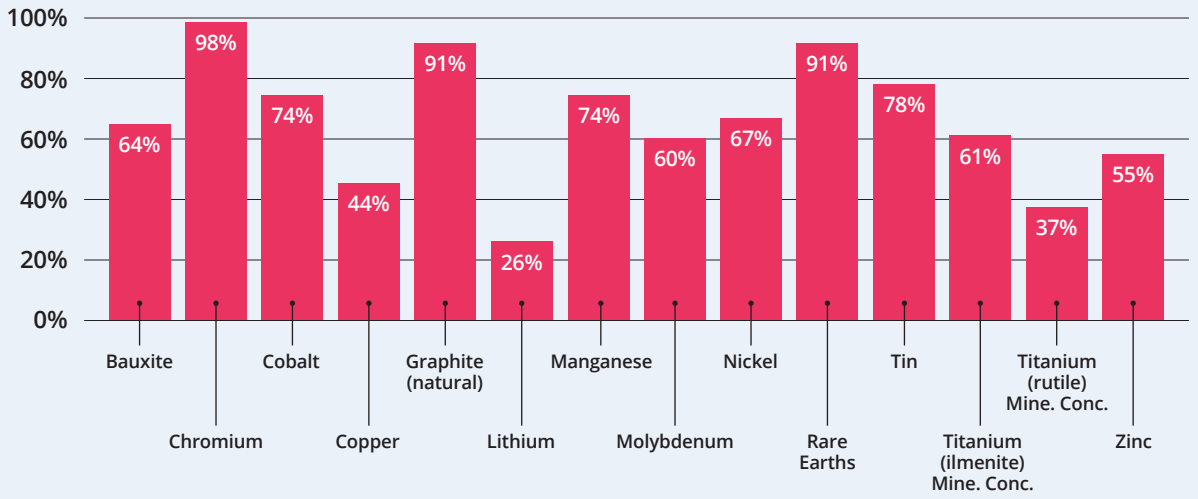
22 Japan Ministry of Economy, Trade and Industry (2022) *13th Conference on Critical Materials and Minerals Held.* Available at: https://www.meti.go.jp/english/press/2022/0623_003.html.

23 Anstey, C. (2025) 'Forget Trade Friend-Shoring. Trump Says He Wants No-Shoring', *Bloomberg.com*. Bloomberg. Available at: https://www.bloomberg.com/news/newsletters/2025-02-22/forget-trade-friend-shoring-trump-says-he-wants-no-shoring.

24 US Department of State (2025) *Minerals Security Partnership.* Available at: https://www.state.gov/minerals-security-partnership

25 IEA (2024) *Global Critical Minerals Outlook 2024*, IEA, Paris, Licence: CC BY 4.0. Available at: https://www.iea.org/reports/global-critical-minerals-outlook-2024.

Figure 3 – Percentage of key critical minerals located in countries with high levels of perceived corruption (CPI scores equal to or below the global average)



Source: Authors own calculations using U.S. Geological Survey Mineral Commodity Summaries 2024 Data Release (2024) Available at: https://doi.org/10.5066/P144BA54 and Corruption Perceptions Index 2024 (CPI), Transparency International (2025).
Corruption Perception Indicator (CPI) Score: A country's score is the perceived level of public sector corruption on a scale of 0-100, where 0 means highly corrupt and 100 means very clean. See Transparency International. Corruption Perception Index 2024.https://www.transparency.org/en/cpi/2024

The energy transition offers immense opportunities for countries and communities in the Global South and the Global North to benefit from access to clean sources of energy. Further, the energy transition can offer sources of economic growth from their natural resource endowments that can fuel sustainable development, lifting people out of poverty and energy insecurity. Yet, it also highlights significant governance challenges to ensure that these promises are fulfilled, ensuring a just and sustainable energy transition. These governance challenges are compounded in particular both by the pace at which the energy transition and climate commitments are unfolding but also by the location in which many of these changes are taking place. While many of the governance challenges and corruption risks associated with mining industry operations do not differ greatly from others, the pace at which these changes are being enacted, driven by the sense of urgency that drives energy transition commitments, further compounds them.

Even when demand has continued to grow for critical minerals, other market markers, such as overall investment, exploration budgets and commodity prices are experiencing more fluctuation. Overall mining investment in critical minerals grew by 10% in 2023, with uneven trajectories across commodities. This included a growth in exploration budgets, particularly in countries like Canada and Australia, where junior miners play an important role in critical minerals, with growth of over 15% in 2023.[26] Despite upward trends, analysts still forecast a critical gap in mining investment, with a recent report estimating that USD $3.1 trillion are still needed in critical minerals investment by 2050 to fulfill net zero demands.[27] This gap in investment is evident across the sector, including in current price fluctuations and drops in market value, as well as in uncertainties connected to potential technological changes that may significantly alter mineral demand. The location of many critical mineral reserves is also a key factor in understanding the context of the energy transition.

High geographic concentration in the location of key critical minerals reserves means that investment will also move into higher-risk jurisdictions. While many companies, particularly majors, have sought to invest in low-risk countries, the location of reserves has been driving mining investments into jurisdictions with weaker levels of governance, as measured by

26 IEA (2024) *Global Critical Minerals Outlook 2024*, IEA, Paris, Licence: CC BY 4.0. Available at: https://www.iea.org/reports/global-critical-minerals-outlook-2024; See Australian case study below for more details.

27 BloombergNEF (2024), *Transition Minerals Outlook 2024*, New York: BloombergNEF. Available at: https://about.bnef.com/transition-metals-and-outlook-report

international governance indexes. For this report, we developed a global mineral reserves database to visualise the percentage of global critical mineral reserves and production located in countries with weak governance scores as measured by perceived levels of corruption. This involved importing data from the *Mineral Commodity Summaries (2024)* from the *U.S. Geological Survey* for fourteen critical minerals – bauxite, chromium, cobalt, copper, graphite (natural), lithium, manganese, molybdenum, nickel, rare earths, tantalum, tin, titanium mineral concentrate, titanium and titanium dioxide, and zinc.[28] These were then linked to Transparency International's 2024 Corruption Perceptions Index (CPI) scores. The figure below summarises the percentage of global mineral resources in countries with a CPI score lower than the 2024 global average of 43.

As can be seen in the table, some key mineral reserves are located in countries with critically low governance scores, as measured by the CPI. The CPI ranks 180 countries and territories according to the levels of public-sector corruption perceived by experts and businesspeople. It relies on 13 independent data sources and uses a scale of zero to 100, where zero is highly corrupt and 100 is very clean. The average global score in both the 2023 and 2024 editions is 43, with two-thirds of the countries surveyed receiving a score of less than 50. In general, higher levels of perceived corruption can be associated with lower institutional capacity, which can translate into a prevalence of undue influence from industry in public policy, state capture and poorer development outcomes. It can also hinder international efforts to combat the climate crisis, including those directed specifically to ensure a just energy transition.[29]

For the mining sector in particular, low governance scores, such as those measured by the CPI, can be associated with poor institutional infrastructure to deal with the demand in licensing and agencies lacking the human and financial capacity to oversee the development and expansion of mining projects effectively, efficiently and transparently. This is particularly concerning for key commodities that are highly concentrated in locations with governance scores below the global average, such as the case of cobalt with 74%, rare earths with 91% or nickel with 67% of worldwide reserves. For example, the Democratic Republic of the Congo has almost 57% of the global reserves of cobalt, and has a CPI score of 20, while Indonesia, that has almost 42% of the global reserves of nickel has a CPI score of 37. In countries with higher levels of perceived corruption state institutions can have a lower capacity to monitor and scrutinise compliance with regulations, including following due diligence processes which can lead to increased opportunities for corruption. Indeed, a recent study identified over 53 cases of corruption connected to critical minerals in 30 countries.[30] Higher levels of corruption and governance risks jeopardise the energy transition, putting local communities at the site of extraction – a vast majority of which are First Nations – as well as local environments at increased risk.

Understanding the unique opportunities that the energy transition creates to address the climate crisis, as well as the valuable opportunities it offers for economic growth for resource-rich countries and mining industry development is an important step to ensuring that the world fulfils its net zero promises. Yet, the increased mining activity required to fuel the energy transition has a very high risk of increasing harmful impacts on local communities and the environment without adequate regulations and monitoring, and funds and royalties can be lost to corruption rather than improving the social spending of resource-rich countries. Without effective governance frameworks for natural resources and the implementation of suitable policies and standards, the increased demand for critical minerals can jeopardise the prospects for sustainability, equity, and transparency required for a just energy transition. Ensuring strong governance frameworks is an urgent and crucial task to ensure that the energy transition is achieved without further costing the Earth and the local communities at the sites of extraction.

28 A detailed discussion of the methodology used to develop the database is included in Annex I

29 Gverditseli G (2024), *Strengthening Just Energy Transition Partnerships (JETPs): Lessons learned for a just energy transition*, Transparency International, Berlin. Available at: https://www.transparency.org/en/publications/strengthening-just-energy-transition-partnerships-jetps-lessons-learned-for-a-just-energy-transition

30 Sayne A., Fitzgerald S. and Shipley T. (2024) T*en Red Flags for Corruption Risk in Transition Minerals Licensing and Contracting*. Natural Resources Governance Institute, New York. Available at: https://resourcegovernance.org/publications/ten-red-flags-corruption-risk-transition-minerals-licensing-and-contracting

BOX 1: RESOURCES TO IDENTIFY GOVERNANCE RISKS FOR THE MINING SECTOR CONNECTED TO THE ENERGY TRANSITION.

Some practical resources on these issues provide greater detail, which can be useful to further explore the implications and increased risks for the mining industry connected to the energy transition.

In 2022, Transparency International published the report *'What does the Energy Transition Mean for the Mining Sector? Five trends to understand corruption risks in the extraction of transition minerals'*. This policy brief highlighted a selection of key trends to understand corruption risks for the mining industry associated with the energy transition, organised around five key areas:

1. High demand will lead to an increase in licensing in jurisdictions with weak governance.
2. The rapid growth of demand for these minerals could increase speculative behaviour.
3. Fast-tracking of projects and strategic initiatives for the sector can increase government pressure and put new projects at risk.
4. Increase of state participation in the extraction and processing value–chain can heighten corruption risks.
5. Investments in sensitive locations can exacerbate environmental, social and political tensions.

Each of these trends is discussed in the report with suggestions as to how to assess corruption risks using our tools as well as providing references to best practices and specific guidance to strengthen anti-corruption initiatives. The report is available at: https://mining.transparency.org.au/publications/what-does-the-energy-transition-mean-for-the-mining-sector/

A recent report by the Natural Resources Governance Institute, entitled *'Ten Red Flags for Corruption Risk in Transition Minerals Licensing and Contracting'* provides insights to identify corruption and governance risks connected to critical minerals extraction, including clear examples of corruption cases in the sector spanning five continents. The report is available at: https://resourcegovernance.org/publications/ten-red-flags-corruption-risk-transition-minerals-licensing-and-contracting

A GLOBAL REPORT AND A CALL FOR ACTION

In the following sections, this report looks at how the energy transition is impacting national and local jurisdictions. Looking at six case studies, the global report highlights the unique challenges that each jurisdiction faces in balancing economic growth with good governance in the critical minerals value chain.

While some countries have made progress in creating regulatory frameworks, significant barriers remain in their enforcement and implementation. A common theme emerges from all the cases studied: a pressing need for greater community engagement, enhanced transparency, and strong governance mechanisms to ensure the energy transition benefits all stakeholders. An overview of these cases is provided below:

Argentina: Social Participation for Sustainable Development

Argentina's lithium sector presents significant opportunities for economic growth and technological advancement. However, tensions between mining operations and local communities remain unresolved, mainly due to inadequate implementation of regulatory frameworks. Although Argentina has sound legal provisions for community participation that incorporate national and international regulations, enforcement gaps persist. Court rulings in 2023 and 2024 highlighted the need for stronger environmental protections and improved consultation processes.

Recommendation: The Argentinian government must strengthen legal enforcement, implement standardised consultation protocols, and ensure impartial mediation between companies and communities. These measures will be crucial for achieving a just energy transition.

Australia: Harnessing Potential: Public and Private Partnership in Australia's Critical Minerals Sector

Australia is positioning itself as a global leader in critical minerals production through substantial government investment. However, gaps in governance, including weak transparency mechanisms and limited oversight of environmental and social safeguards, pose risks to long-term sustainability. Industry preferences for voluntary regulation and the prioritisation of rapid growth over ESG considerations highlight the need for stronger governmental oversight.

Recommendation: Companies and the Australian government must integrate ESG considerations into investment strategies and strengthen regulatory oversight to ensure the sustainable and ethical development of the critical minerals' value chain.

Colombia: Colombia's Commitment to a Just Energy Transition and its Challenges in the Anticorruption Fight Amid the Critical Minerals Rush

Colombia has ambitious plans for a just energy transition but faces delays in finalizing key policy frameworks, such as the National Mining Policy and Just Transition Roadmap. Despite growing global demand for its critical minerals, the country struggles with inadequate community consultation, weak institutional oversight, and opaque licensing processes. Governance gaps risk increasing corruption, environmental harm, and social tensions.

Recommendation: The Colombian government must finalise and implement the outstanding policy frameworks, emphasising transparency, community participation, and institutional strengthening to support the Just Transition Roadmap and its objectives in the National Development Plan.

Indonesia: Indonesia's Energy Transition: Will it Benefit Everyone and Leave No One Behind?

Indonesia's critical minerals sector, particularly nickel, is vital to global supply chains, yet rapid investment has incurred a high social and environmental cost. Weak governance structures and considerable corruption risks hinder equitable mining benefits. The absence of free, prior, and informed consent (FPIC for local communities has resulted in conflicts, forced displacements, and environmental degradation. Despite international funding commitments under the Just Energy Transition Partnership (JETP), mechanisms for transparency and accountability remain insufficient.

Recommendation: The Indonesian government and private sector must strengthen anti-corruption measures, ensure transparent governance structures, and implement community consultation processes to align investments with social and environmental sustainability.

Madagascar: Transition Minerals in Madagascar: Opportunities and Challenges of Governance

Madagascar's recent regulatory reforms have opened new opportunities for mineral extraction, but gaps in social and environmental governance persist. The country lacks a dedicated critical minerals strategy, and its legal framework did not require community consultations or comprehensive social impact assessments for over two decades. These shortcomings have fuelled local resistance to mining projects, as communities experience environmental degradation without fair compensation or engagement in decision-making processes.

Recommendation: To mitigate conflicts and promote sustainable development, the Government of Madagascar must formulate a comprehensive critical minerals strategy, enforce legal requirements for consultation, and improve environmental safeguards.

South Africa: A Just Transition Under Threat: Navigating Governance and Corruption Risks in South Africa

South Africa's Just Energy Transition Investment Plan has attracted substantial international funding, yet governance risks remain significant. Corruption in the mining sector, inadequate oversight of illegal chrome and copper mining, and transparency deficits in fiscal policy pose challenges to a just transition. The absence of accountability mechanisms endangers the country's capacity to provide equitable benefits from mineral extraction.

Photo: Aerial view of Cauchari solar project, one of the largest photovoltaic (PV) solar power projects in South America, located in Jujuy, Argentina. Credit: Estebran, Shutterstock.

Recommendations: The government should strengthen governance frameworks, enhance financial transparency, and improve regulatory enforcement. These measures are essential for ensuring a just and responsible distribution of resources generated by the mining sector throughout the country.

Zambia: The Race to Exploit Critical Minerals Amidst Governance Concerns in Zambia

Zambia has actively pursued foreign investment in its critical minerals sector by implementing tax incentives and policy reforms to attract mining companies. However, rapid growth has outstripped regulatory preparedness, resulting in governance vulnerabilities, particularly in licensing, environmental oversight, and artisanal and small-scale mining (ASM). Illegal mining activities, environmental degradation, and community displacement remain significant concerns. While the government began to reform the mining legislative framework and has introduced a National Critical Minerals Strategy, enforcement remains inadequate.

Recommendation: The Zambian government must enhance governance structures by improving institutional capacity, enforcing licensing and environmental regulations, and ensuring greater transparency in the mineral sector investments.

The case studies showcase that both governmental bodies and the private sector must work together effectively to build responsible supply chains, protect human rights, and reduce environmental impacts. This requires ensuring that community voices are heard, particularly First Nations. Local communities need to be engaged throughout the lifecycle of a project, and given the opportunity to voice their concerns, withhold consent and provide necessary inputs. The shift toward a just energy transition must prioritise social justice and climate integrity rather than compromising them.

Recommendations for Governments:

1. Strengthen Transparency and Accountability: Implement strong anti-corruption measures, publicly disclose contracts and payments related to mining projects, and establish independent oversight bodies to ensure that regulations are enforced.

2. Guarantee Inclusive Community Engagement: Align mining-related laws and strategies with Free, Prior, and Informed Consent (FPIC)[31], in all extractive-related decisions, ensuring that affected communities – especially First Nations groups – have a decisive role in the projects.

3. Enforce Environmental Safeguards: Introduce and uphold environmental protection policies, including restoration programs, sustainable land-use planning, and penalties for environmental violations.

31 *Indigenous Call to Action: Indigenous-led Pathways for Sustainable Futures in Mining Regions* (2024). Available at: https://www.oecd.org/content/dam/oecd/en/topics/policy-sub-issues/mining-regions-and-cities/iIndigenous-led-pathways-for-sustainable-futures-in-mining-regions.pdf/_jcr_content/renditions/original./iIndigenous-led-pathways-for-sustainable-futures-in-mining-regions.pdf (Accessed: 31 January 2025).

Photo: Indigenous communities of the Salinas Grandes protest against lithium mining on their territory. Credit: Felix Malte Dorn, Shutterstock.

Recommendations for Civil Society Organisations:

4. Monitor and hold Stakeholders accountable: CSOs should actively participate in mining sector activities and decisions and advocate for stronger regulatory enforcement through public campaigns and policy recommendations.

5. Empower Communities with Knowledge and Resources: CSOs should provide technical assistance to local communities and help them navigate grievance mechanisms in the mining sector.

6. Strengthen Multi-Stakeholder Partnerships: Building relationships with governments, companies, and international institutions can help CSOs amplify their impact and push for systemic reforms in responsible mining governance.

Recommendations for Companies:

7. Commit to Ethical Business Practices: Companies should embed anti-corruption policies into their operations, conduct rigorous due diligence on supply chains, and ensure compliance with international ESG standards. In particular, companies should commit to higher levels of financial and contractual transparency, fostering a culture of disclosure across the sector.

8. Engage in Meaningful Community Partnerships: Mining companies must move beyond symbolic consultations and establish long-term, trusting partnerships with local communities, ensuring their participation in decision-making.

9. Minimize Environmental Footprint: Mining companies should invest in sustainable technologies, adopt circular economy principles, and set clear targets for reducing emissions, land degradation, and water pollution.

ARGENTINA

LITHIUM IN ARGENTINA: SOCIAL PARTICIPATION FOR SUSTAINABLE DEVELOPMENT

Argentina's lithium deposits have been at the centre of the global lithium mining boom. Yet, a rapid expansion of projects in the sector has exposed frictions in the regulatory framework and conflicts with local communities. This chapter focuses on the critical role of community consultations in the development of lithium resources. We map regulatory developments and demonstrates how failures of implementation in key regulatory provisions pose important risks to local communities as well as to operations in the sector.

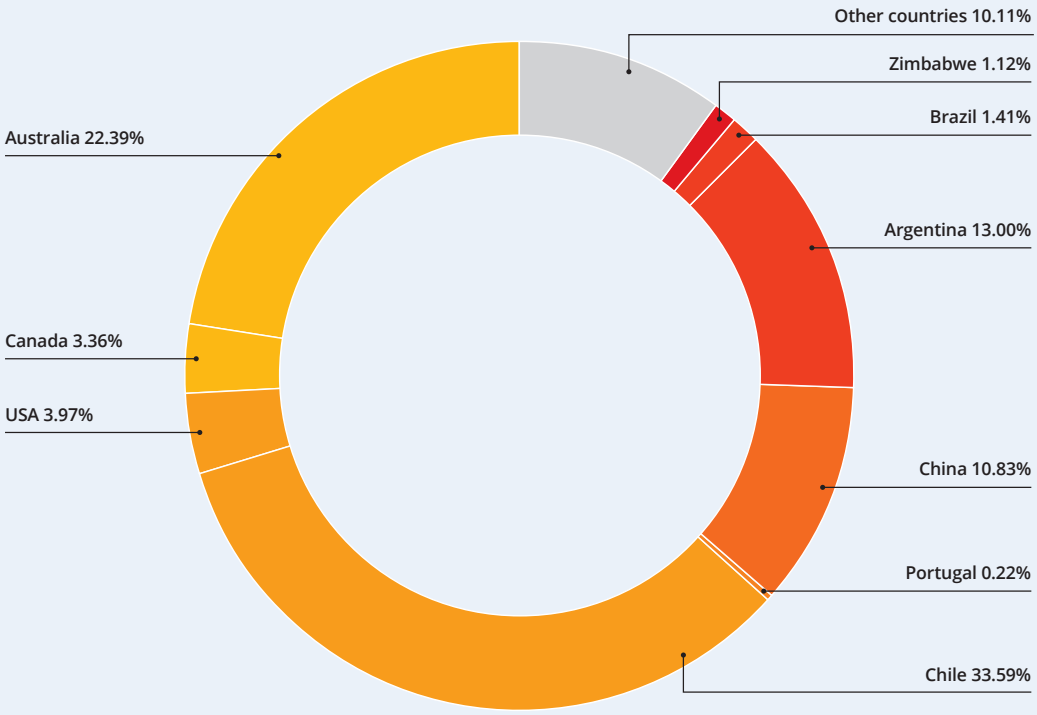
Key commodities	Gold, Lithium, Copper, Silver, Uranium, Lead, Iron Ore, Coal
Percentage of worldwide reserves of key commodity (2023)[32]	Lithium: 13.00% Molybdenum: 0.68%
Corruption Perceptions Index (2024)	37
EITI membership status	Implementing Country.[33] Joined in 2019.
Beneficial Ownership registry	Yes, but is not available to the public
Key regulations & critical mineral strategies	There is no critical mineral strategy document. Here you can find some official information: Mining potential in Argentina Mining Secretary website Strategic Plan for Mining Development in Argentina 2021

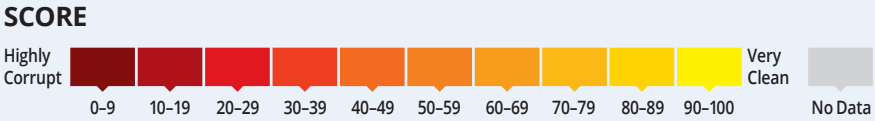
32 See National Minerals Information Center (2024) *U.S. Geological Survey Mineral Commodity Summaries 2024 Data Release (ver. 2.0, March 2024): U.S. Geological Survey data release* [data set]. Published March 2024. Available at: https://doi.org/10.5066/P144BA54, (Accessed: May 2024) Note: the AMP derived this figure using data from the U.S. Geological Survey.

33 EITI (no date) Argentina, *Extractive Industries Transparency Initiative*. Available at: https://eiti.org/countries/argentina (Accessed: 20 February 2025).

Argentina is the world's fourth-largest lithium producer, after Australia, Chile and China. The country is part of the "lithium triangle" – together with Bolivia and Chile – which concentrates around 53% of the world's deposits of this mineral.[34] As a result, Argentina will play an important role in both leading and contributing to the global energy transition. Yet while lithium is usually presented in Argentina as a strategic resource that can provide significant opportunities for socio-economic growth and technological advancement, ongoing conflicts with local communities point towards substantial social and environmental challenges that remain unresolved. In particular, failures in the implementation of the regulatory framework pose a key risk to the sector as well as to local communities.

Figure 4 – Global lithium reserves by jurisdiction including levels of perceived corruption





Scale adapted from Transparency International's Corruption Perceptions Index (CPI) classification, https://www.transparency.org/en/cpi/2024

34 U.S. Geological Survey (March 2024) *Mineral Commodity Summaries*. Available at: https://pubs.usgs.gov/periodicals/mcs2023/mcs2023-lithium.pdf

Photo: Salt flats in Jujuy, Argentina, where lithium is extracted from brines. Credit: iStock

Argentina's brine deposits under its vast salt flats have been at the centre of the global lithium mining boom. These deposits are concentrated in the northern provinces and have seen rapid expansions in new projects and concessions awarded in recent years. In March 2023, 38 lithium mining projects were at various stages of development[35], up from only two projects in 2008.[36] National and sub-national governments have supported the expansion of the lithium mining market and encouraged downstream technological linkages. Nonetheless, with the increase in lithium mining, environmental impacts and social tensions have grown.[37]

However, while the mining industry can contribute to economic growth, negative consequences can also arise from the expansion of mining projects. These include forced migration due to lack of access to clean water or other environmental problems, local violence, changes in social structure patterns and increasing pressures on both national and provincial systems.

To avoid harmful consequences that may be irreversible in the future – and to ensure inclusive and sustainable development – it is essential to guarantee the participation and involvement of communities throughout the whole process of exploration and development. Argentinian NGO *Poder Ciudadano*, Transparency International's chapter in Argentina, has highlighted the critical role that inclusive consultation and engagement processes with local communities play in avoiding or reducing detrimental environmental and social impacts and, consequently, in ensuring a sustainable and responsible energy transition.[38] Consultations and public hearings, environmental impact assessments and participatory monitoring are some of the key mechanisms needed to engage impacted communities in any mining project.

A just energy transition will only be feasible if the exploitation of the natural resources used for this purpose is sustainable and respectful of indigenous people and local communities.

35 Datos Argentina (2023) *Proyectos mineros de litio en Argentina*. Available at: https://datos.gob.ar/dataset/produccion-proyectos-mineros-litio-argentina-tablero-global-litio---siacam/archivo/produccion_630098dd-d50b-4034-969a-c8d59492fb52

36 Carballo, A. E. and Sahla, S. (2022) *What does the energy transition mean for the mining sector? Five trends to understand corruption risks in the extraction of transition minerals*, Transparency International Australia, page 21. Available at: https://transparency.org.au/what-does-the-energy-transition-mean-for-the-mining-sector/.

37 Paz, Walter Fernando Díaz, et al. (2023) 'Lithium mining, water resources, and socio-economic issues in northern Argentina: We are not all in the same boat'. *Resources Policy* 81: 103288.

38 Poder Ciudadano (2020) *Riesgos de Corrupción en Concesiones Mineras. Oportunidades para la Integridad y Transparencia en el Sector Minero en Argentina*. Available at: http://poderciudadano.org/publicaciones/PoderCiudadano_RiesgosCorrupcionConcesionesMineras.pdf

The legal framework for community participation

Argentina has different mechanisms for participation and consultation in public affairs, established in various regulations at the national and sub-national levels. These include consultations, referendums, access to public information, participatory budgets, public hearings and participatory elaboration of regulations, among others.[39]

Regarding the management of natural resources, participation is guaranteed by national and international regulations. Some of note include:

- Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean, better known as Escazú Agreement;
- ILO (International Labour Organization) Convention No. 169, Indigenous and Tribal Peoples Convention;
- Argentine Constitution, Article 75 paragraph 17; and
- National Decree No. 672/16.

The Escazú Agreement is a regional human and environmental rights instrument that seeks to address some of the most urgent current challenges in Latin America, such as the intensive exploitation of environmental assets, socio-environmental conflict, the situation of vulnerable groups and the protection of human rights defenders who work on environmental issues.[40] The Agreement, adopted in 2018, is widely considered a landmark for environmental rights protection. Article 7 of the Agreement specifically refers to the state's duty to ensure open and inclusive participation in environmental decision-making processes.

Another key agreement relating to the acquisition of mining rights is ILO Convention No. 169, ratified by Argentina through Law No. 24.071 in 1992. The ILO Convention states that indigenous communities must be consulted on measures that may positively or negatively affect their collective rights. However, it should be noted that this instrument has not been regulated by Argentinian law, and implementation protocols do not yet exist.

Convention No. 169, Article 75, paragraph 17 of Argentina's Constitution supports the participation of indigenous peoples in the management of natural resources in their territories. There is also a Consultative and Participatory Council of Indigenous Peoples created by the National Decree No. 672/16, whose functions include proposing a draft regulation of the right to free, prior and informed consultation, as established in ILO Convention No. 169. Among other issues, the consultation must be carried out by providing all the necessary tools to be informed, with sufficient and broad knowledge of the matter to be consulted, providing comprehensible information in the language of the people or community. The main objective of this consultation process is for indigenous and tribal peoples to be able to give their free, prior and informed consent to decisions which may affect them in some way.

The rules are there. But what happens in practice?

On the surface, Argentina has a sound legal framework to enhance social participation. However, relevant conventions and laws need to be put into practice, as major gaps remain in relation to the social participation of communities on the ground.

Indeed, communities complain about the lack of consultations and have reported the manipulation of free and informed public consultation processes, including pressure and physical attacks on community leaders to obtain their consent for mining projects.[41] At the same time, in many cases in which they are consulted, communities do not have the technical knowledge necessary to fully understand the complexity of, for example, Environmental Impact Assessment Reports. Finally, the State's intervention in these processes to mediate between communities and

39 Poder Ciudadano, Asociación Civil Por La Igualdad Y La Justicia, Asociación Por Los Derechos Civiles, Foro De Periodismo Argentino, Fundación Cambio Democrático, Fundación Directorio Legislativo (2016). *Manual para la Incidencia de la Sociedad Civil en Políticas Públicas.* P.201. Available at: https://www.poderciudadano.org/libros/manual-aliar-WEB.pdf

40 FARN (2020) "Informe Ambiental FARN", Capítulo 5: "Acuerdo de Escazú: la importancia de un nuevo acuerdo de derechos para la Argentina", FARN, p. 255. Available at: https://farn.org.ar/wp-content/uploads/2020/09/IAF_ONLINE_2020_CAP_5.1_ok.pdf

41 Poder Ciudadano (2020) *Riesgos de corrupción en concesiones mineras. Oportunidades para la integridad y transparencia en el sector minero en Argentina*, page 74. Available at: https://poderciudadano.org/publicaciones/PoderCiudadano_RiesgosCorrupcionConcesionesMineras.pdf

Photo: Aerial view of lithium fields or evaporation ponds in the highlands of northern Argentina. Credit: Freedom_wanted, Shutterstock.

corporations is limited; as a result, the power imbalance between communities and companies persists, without sufficient government oversight of mining activities.

Lithium exploitation does not seem to be an exception to the lack of meaningful social participation across the sector, as shown by a 2020 study in two of the most advanced lithium extraction projects in the Argentinean Puna, located in the Olaroz-Cauchari salt flats in the province of Jujuy.[42] The report's key findings include that:

- social and environmental impacts of the projects were not sufficiently considered by the local government;
- the free and informed public consultation with the communities did not comply with international standards and national legislation;
- the affected communities did not have access to the information they needed to make informed decisions about the project; and
- the provincial government has been absent in some stages of the consultation process, effectively denying the intermediation of an impartial third party, despite this being a non-transferable responsibility of the State.

A series of recent court cases brought by communities impacted by lithium mining, however, bring judicial support for stronger consultation processes as well as more meaningful environmental protections. In early 2023, the Supreme Court ruled on a case brought by local indigenous communities seeking to suspend new permits for lithium and borate exploration and mining in Salta and Jujuy provinces and requesting a comprehensive environmental impact assessment of the Salinas Grandes-Guayatayoc basin. Although the court did not agree to the claimants' requests, it did order the national government and Salta and Jujuy provinces to report to the court on any environmental and water impacts associated with lithium mining in Jujuy and Salta. The court also demanded detailed information be made available relating to any exploration and exploitation permits that had been granted including minutes of public hearings, any appeals, challenges or complaints received as well information on environmental aspects pertaining to those permits.[43]

42 FARN (2019) *Extracción de litio en Argentina: un estudio de caso sobre los impactos sociales y ambientales*, p. 3. Available at: https://farn.org.ar/wp-content/uploads/2019/05/DOC_LITIO_ESPAÑOL.pdf

43 CSJN,28/03/2023, Comunidad Aborigen de Santuario de Tres Pozos y otras c/ Jujuy, Provincia de y otros s/ amparo ambiental. Available at: https://farn.org.ar/wp-content/uploads/2023/03/litio-corte-FALLO-CSJ-2637-2019.pdf

In March 2024 in neighbouring Catamarca province, the Supreme Court went further. Granting an injunction sought by local indigenous groups, the Court ordered no new permits be issued in relation to lithium mining projects in the Salar del Hombre Muerto region nor environmental impact assessments be issued until a major new environmental impact assessment is undertaken for the region. This assessment must be 'cumulative and integral', covering the entire salt flat and considering the total impact of all projects that have applied for water use and extraction permits. The ruling also guaranteed that all projects must comply with the free, prior, and informed consultation of affected communities.[44]

Final words

It is extremely important to put into practice the legal framework on social participation in lithium projects in Argentina, considering that it is a community's right and the State's obligation to inform and hear them. In addition to this being an inalienable right, in situations where communities are not duly informed and heard, the possibilities of social conflict may increase considerably. The impact of not respecting social participation mechanisms – such as free, prior and informed consultation with indigenous communities – weakens the respect and exercise of community rights in a democratic system. Companies, civil society, communities and governments must work together to improve the management of natural resources, generating situations of social equity and strengthening mechanisms to prevent and sanction corruption.

Poder Ciudadano, and Transparency International are unequivocal in maintaining that if lithium is to be exploited in Argentina for economic development, it is necessary to ensure that the process of exploration, exploitation and closure of projects is based on the highest standards of transparency, integrity, accountability, social participation and respect for human rights. The energy transition should be socially and environmentally sustainable in both the extraction and processing value chain in order for a fair energy transition to take place.

44 Supreme Court of Catamarca, 13/03/2024, Corte Nº 054/2022 "GUITIAN, Román E. c/ PODER EJECUTIVO NACIONAL Y OTRO s/ Acción de Amparo Ambiental". Available at: https://juscatamarca.gob.ar/PDF/FalloAmbiental.pdf

The Australian government has a stated intention to be a world leader in ESG standards and has committed billions of dollars to its critical minerals sectors. These funds seek to develop critical minerals extraction and processing capabilities in Australia to secure the supply chain of minerals needed for energy transition. Australia must fulfill its commitments to be a world leader in ESG so that the record investment by government and the private sector is free from corruption and communities share in the benefits of the energy transition.

Key commodities	Lithium, Cobalt, Gallium, Germanium, Magnesium, Manganese, Nickel, Rare-earth elements, Scandium, Silicon, Tantalum, Titanium, Tungsten, Vanadium, Zirconium
Percentage of worldwide reserves of key commodity (2023)[45]	Lithium: 22.39%, Manganese: 26.21%, Cobalt: 16.15%, Nickel: 18.32%, Rare-Earth: 4.94%, Zinc: 28.57%, Titanium (ilmenite) Mineral Concentrates: 25.91%, Titanium (rutile) Mineral Concentrates: 63.37%
Corruption Perceptions Index (2024)	77
EITI membership status	Supporter.[46]
Beneficial Ownership registry	No
Key regulations & critical mineral strategies	Critical Minerals Strategy 2023–2030

45 See National Minerals Information Center (March 2024) *U.S. Geological Survey Mineral Commodity Summaries 2024 Data Release (ver. 2.0, March 2024): U.S. Geological Survey data release* [data set]. Available at: https://doi.org/10.5066/P144BA54. Note: the AMP derived this figure using data from the U.S. Geological Survey.

46 The Australian Government initiated an EITI pilot program in 2011 and announced plans to become an EITI implementing country in 2016. However, it has yet to implement the EITI Standard at the national level. For more information, see EITI (1 November 2023) *EITI urges Australia to implement the EITI Standard*. Available at: https://eiti.org/news/eiti-urges-australia-implement-eiti-standard

Australia has a considerable footprint for most minerals required for the energy transition as well as substantial reserves. Through broad support for trade and investment, including grant and debt-financing, Research & Development (R&D) and infrastructural development, the Australian government seeks to develop these resources to bolster supply chain resilience and answer the call for 'friendshoring' in global supply chains. Although Australia has witnessed relatively few documented cases of corruption in domestic mining, its desire to be a world leader and the evolving policy framework mean key corruption risks must be addressed.

Regulatory developments

The push to mobilise policy to support the growth of the critical minerals sector was first announced in the 2019 Critical Mineral Strategy. However, early policy focus on utilising government networks to promote and facilitate international investment in Australia's critical minerals sector soon shifted to bigger goals of de-risking individual projects and channelling investment towards hubs for downstream processing through common infrastructure and planning.

In 2021, the Critical Minerals Office was established alongside the Critical Minerals Facility, which distributes grants and debt-funding to private sector projects. With funds reaching AU$6 billion by 2024, the Facility seeks to strengthen the financial position of new critical mineral projects to better position those projects in private markets for investment funds.[47]

Alongside this direct funding is a broad suite of Research & Development funding supports to advance technological developments and build closer links between research and industry. This includes the AU$50 million National Critical Minerals Research and Development Centre as well as Cooperative Research Centre projects such as the Future Battery Industry Cooperative Research Centre[48] and a $500m program to map Australian reserves of critical minerals.[49]

Following the release of the 2023 Critical Minerals Strategy, the Federal Government pledged a further AU$7 billion Critical Mineral Production Tax Incentive targeting the development of downstream refining and processing as well as $500 million in targeted incentives to develop battery manufacturing capabilities.[50] The Production Tax Incentive is worth ten per cent of relevant processing and refining costs for Australia's 31 critical minerals processed and refined between 2027–28 and 2039–40, for up to ten years per project. The Critical Minerals Strategy has four main stated objectives:

- enable fast, efficient and durable environmental approvals while upholding robust environmental protections;
- embed strong ESG practices that enable access to global markets;
- support the sector's enduring social license to operate;
- fairly share the benefits of critical minerals development with communities, including First Nations Australians.[51]

The Critical Minerals Strategy envisages a series of strategic hubs for the co-location of critical minerals producers, users and exporters with infrastructure and planning support as well as funding coordinated across state and federal governments. These hubs are designed to replace existing raw material exports to China by supporting the downstream processing to bring the full value chain to Australia. Early targets for the hubs include Central West New South Wales, where a rare earths refinery is being built; and Queensland's newly funded Australian-Made Battery Precinct. The latter seeks to develop a battery manufacturing industry to support the energy

47 Prime Minister of Australia (24 October 2023) *$2 billion critical mineral boost crucial to energy transition* [media release]. Available at https://www.pm.gov.au/media/2-billion-critical-minerals-boost-crucial-energy-transition (Accessed: 1 May 2024).

48 See the Future Battery Industry CRC website. Available at: https://fbicrc.com.au/ (Accessed: May 1 2024).

49 The Hon Madeleine King MP (14 May 2024) *Securing Australia's critical minerals, exploration and processing industries* [media release]. Available at https://www.minister.industry.gov.au/ministers/king/media-releases/securing-australias-critical-minerals-exploration-and-processing-industries (Accessed: 1 June 2024).

50 See the Federal Government's webpage for its 'Future Made in Australia' policy package. Available at www.futuremadeinaustralia.gov.au (Accessed: 1 May 2024).

51 Australian Government, (2023) *Critical Minerals Strategy 2023–2030*, Available at: https://www.industry.gov.au/sites/default/files/2023-06/critical-minerals-strategy-2023-2030.pdf

Photo: Processing Plant at Lithium Mine in Western Australia. Mechanical processing used to refine lithium spodumene concentrate. Credit: Jasonbennee, iStock.

transition in Australia, as well as provide new value-added export industries.[52]

This prominence of de-risking and streamlining private investment in Australia's approach to critical minerals development is characterised by academics Lian Sinclair and Neil Coe as "a very Australian mode of developmentalism".[53] In contrast to other jurisdictions, Sinclair and Coe describe the Australian approach as one in which "the state acts as a facilitator of private capital but does not take direct ownership or control of strategic projects."[54] Australia's Foreign Investment Review Board (FIRB) has also significantly tightened investment screening in the critical minerals sector.

Corruption risks in critical mineral development in Australia

Australia's governance framework has consistently been ranked highly in governance measurement exercises, particularly in comparison to other mining countries. For example, in 2024 Australia scored 77/100 points and ranked equal 10th in Transparency International's 2024 Corruption Perceptions Index. This score is substantially higher than other key critical minerals jurisdictions, such as China, Chile, Indonesia and the Democratic Republic of Congo. Corporate governance in Australia is generally considered strong and is being further developed through new regulations such as anti-bribery legislation, modern slavery reporting, increased tax transparency and a new suite of climate reporting recently legislated. However, there are significant gaps in Australia's regulatory regime that remain to be addressed, particularly in those relating to the mining sector.

Previous research using the Mining Awards Corruption Risk Assessment (MACRA) tool examined corruption risks in Western Australia and Queensland's mining sectors.[55] The key risk identified for large-scale mining and coordinated projects (associated infrastructure), was inadequate due diligence investigation into the character and integrity of applicants for mining approvals. This includes a lack of investigation of beneficial ownership. Without adequate due diligence, even basic research into the track record of mining applicants, there is a risk that permits will be awarded to companies with a history of non- compliance or corruption, including in their operations in other countries.

Key to addressing these issues, and to facilitating stronger due diligence efforts are beneficial

52 See Queensland Government webpage on state and federal support for developing the battery industry in Queensland. Available at https://www.statedevelopment.qld.gov.au/industry/powering-queenslands-battery-industry (Accessed: 1 May 2024).

53 Sinclair, L., and Coe, N.M. (2024:7) "Critical Mineral Strategies in Australia: Industrial upgrading without environmental or social upgrading." Resource Policy, 91(pp. 1-11).

54 *Ibid*.

55 Transparency International Australia (2017) *Corruption Risks: Mining Approvals in Australia*. Available at: https://transparency.org.au/wp-content/uploads/2019/10/Australia-Report.pdf

ownership registries that allow transparency in corporate ownership structures, and that Australia still lacks. The federal government announced in 2022 a commitment to reform on its beneficial ownership regulations. Public consultations were undertaken in 2022 and 2024 and a 'pathway' to beneficial ownership committed as part of broader integrity reforms for implementation in 2024–2025.[56] However, weaknesses remain in the proposal and it is unclear how quickly a publicly accessible centralised register will be implemented.

The previous risk assessment of Western Australia and Queensland also identified a high potential for industry influence and state and policy capture in the awarding of mining approvals. Greater state and federal regulation of political donations, lobbyists and the movement of staff between government and industry, would help reduce risks that could enable corruption to occur. Federal whistleblower protections for both public and private sector employees can also be strengthened to reduce governance risks in critical minerals and help bring issues to light.

Globally, Australia is behind other mining jurisdictions in the implementation of the Extractive Industries Transparency Initiative (EITI), the global standard of natural resource governance, which takes a multi-stakeholder approach to governing a country's extractive sector.[57] The EITI standard includes disclosures across the value chain that would transform Australia's ESG standards. This includes systematic disclosures, transparency of payments to governments at a project level, disclosure of beneficial ownership information, including politically exposed persons (PEPs), publication of companies' anti-corruption policies and practices, reporting on fast-tracking processes, transparency of licenses, and disclosures of expected revenues that countries can expect to receive from fossil fuels and critical minerals under different market scenarios. While Australia has been an active supporter of the initiative at a global level, the standard has not been implemented in the country.

In Australia, the EITI would empower federal and state governments, industry and civil society, including First Nations, to strengthen public understanding of the sector and standards corporate governance and accountability. EITI reporting would also provide data to better inform policymaking and debate. It is worth noting that almost 20 of Australia's largest mining, oil and gas companies are EITI supporting companies.[58]

To date, Australia has not progressed the successful 2016 pilot and committed to implement the EITI domestically. Moreover, despite significant new country-by-country tax reporting legislation passing in 2024, reporting requirements remain low in comparison with other jurisdictions. The new country-by-country reporting is only required for a reduced number of jurisdictions. Further, Australian Stock Exchange listed companies are not required to disclose payments to governments at a project level, unlike the 27 EU nations, UK, Norway, Canada, and Switzerland, and relevant standards like the Global Reporting Initiative and the EITI.

Australia is also involved in developing critical minerals alliances with other jurisdictions through 'friendshoring' across the Global North, presented as another opportunity to increase ESG standards and reduce governance risks. This sees countries, like Australia, seeking to secure supply chains of critical minerals primarily by building new critical minerals supply chains that do not rely on China. This is reflected in the 2023 Critical Minerals Strategy but also in the strategic partnerships that Canberra has joined or formed including the *Australia-United States Climate, Critical Minerals and Clean Energy Transformation Compact*, and 'minilateral' groups such as the Mineral Security Partnership.[59] While this strategy can offer opportunities to the Australian critical minerals sector, it can result in governance risks in other jurisdictions.

Another element worth discussing to understand the context of Australia's critical minerals sector is the large number of junior miners active in the critical minerals space. TI Australia identified 392

56 The Hon Mark Dreyfus KC MP (15 December 2023) *Release of Australia's third Open Government National Action Plan* [media release]. Available at https://ministers.ag.gov.au/media-centre/release-australias-third-open-government-national-action-plan-15-12-2023 (Accessed: 17 June 2024).

57 Extractive Industries Transparency Initiative (2023) *'EITI Standard 2023'*. Available at: https://eiti.org/eiti-standard

58 EITI (2025) Supporting Companies. Available at: https://eiti.org/companies

59 See White House media release (20 May 2023) *Australia-United States Climate, Critical Minerals and Clean Energy Transformation Compact*. Available at: https://www.pm.gov.au/media/australia-united-states-climate-critical-minerals-and-clean-energy-transformation-compact (Accessed: 1 May 2024)

Photo: Blue green copper (Cu) oxide ore in Australia.
Credit: BJP7images, iStock.

Australia-based or engaged companies currently exploring for, mining, and/or processing critical minerals as of March 2024, 376 of which had easily discernible market capitalisations.[60] More than 90 per cent were worth less than A$1 billion, more than 70 per cent less than A$100 million, and more than a quarter less than A$10 million.[61] The small size of these companies limits environmental, social and governance risk management capacities, and highlights the importance for Australia to lead on high ESG standards and combatting corruption risks.

At the same time, medium and large mines are moving towards voluntary regulations. The Minerals Council of Australia, the peak industry body in the country that connects the major mining companies, has introduced implementation for all members of the Towards Sustainability standards, which were developed by Canada's peak body for mining companies. This represents a step away by the sector from support for government-administered regulation such as the EITI and reflects broader industry support for reduced regulation. As the Critical Mineral Strategy notes, "industry considers reducing the duplication, risk, and uncertainty of environmental and planning approvals to be one of the highest priorities for all levels of government."[62] This position is reflected in Western Australia, where the government has in the past two years repealed its own *Aboriginal Cultural Heritage Act* introduced in the wake of the Juukan Gorge disaster and also overhauled the *Environment Protection Act*.

Local communities that host mineral deposits themselves are often particularly vulnerable. While much critical minerals activity will occur in areas well-accustomed to mining, expansion is also likely in areas without significant past exposure or a record of successful management. A 2024 investigation by the University of Queensland's Centre for Social Responsibility in Mining found that some of Australia's most disadvantaged areas hosted the highest number of critical minerals mines and deposits. While this could be cause for optimism on delivery of benefits to First Nations and other groups, the authors noted that "without major reforms in policy and practice, the inequitable distribution of mining's impacts and benefits will persist."[63]

In summary, the expansion of the critical minerals sector in Australia calls for the development of Australian leadership in the management of environmental, social and governance risks. The sector faces risks that are a function of the locations in which critical minerals are found, which include many areas that are home to small, remote and disadvantaged communities that have little experience engaging with the mining sector. However, the industry itself also poses risks to sectoral development, given the high proportion of junior companies and the push towards voluntary regulation and wind-back of cultural and environmental regulation amongst some industry leaders. The Australian government's heavy investment in establishing an industry to serve the global energy transition is ambitious. It must not let the opportunity of this investment pass without raising standards on environmental, social and governance aspects that answer to the sensitivities of the critical minerals sector.

60 Transparency International Australia's calculations from analysis of companies listed on the Australian Stock Exchange, the Australian Trade and Investment Commission's Critical Minerals Prospectus (see endnote 61), and additional online research.

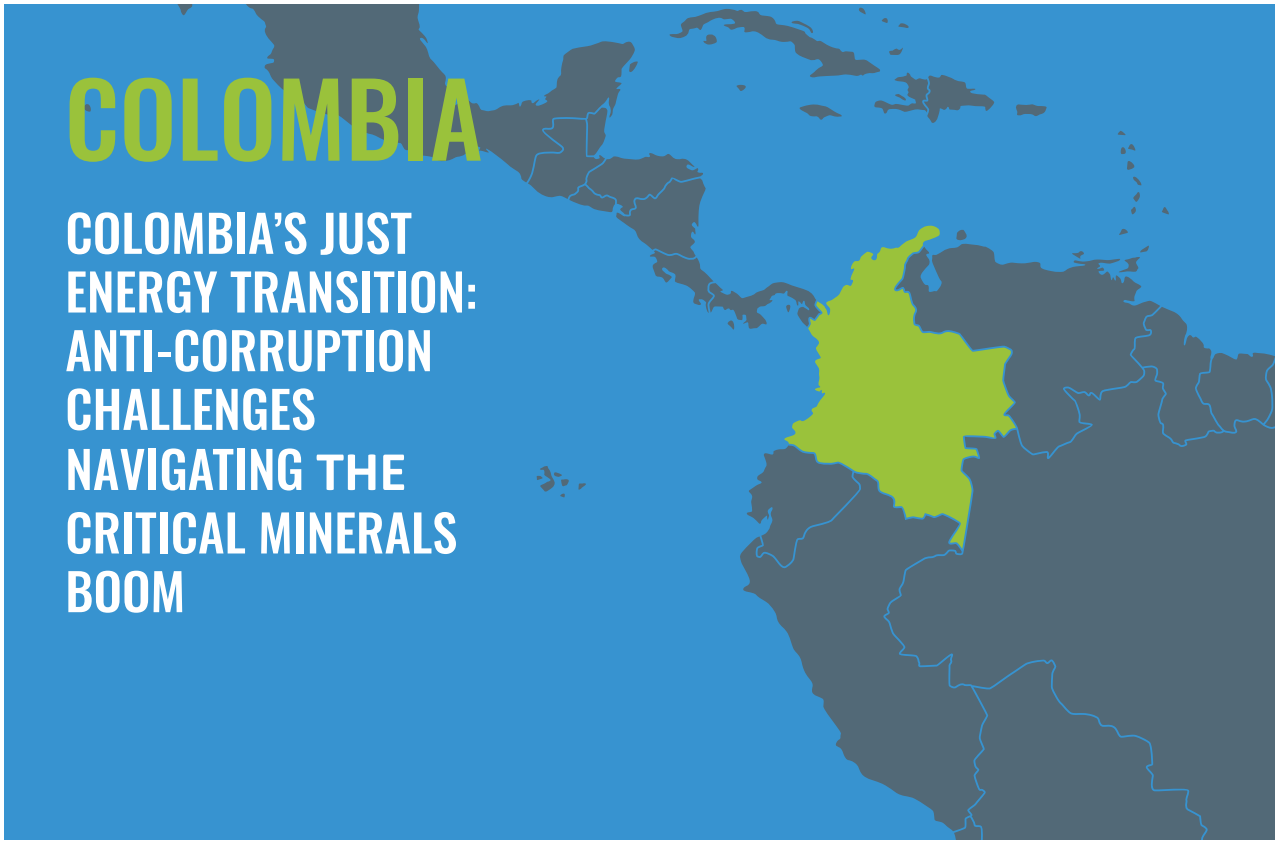
61 Australian Trade and Investment Commission (2024) *Critical Minerals Prospectus*. Available at: https://international.austrade.gov.au/en/do-business-with-australia/sectors/energy-and-resources/critical-minerals/prospectus

62 Australian Government (2023) *Critical Minerals Strategy*, page 40. Available at https://international.austrade.gov.au/en/do-business-with-australia/sectors/energy-and-resources/critical-minerals (Accessed: 1 May 2024)

63 Burton, J., Kemp, D., Barnes, R. and Parmenter, J. (2024) 'A Socio-Spatial Analysis of Australia's Critical Minerals Endowment and Policy Implications'. *Resources Policy*, 88: pp. 1–13 (p. 1).

COLOMBIA

COLOMBIA'S JUST ENERGY TRANSITION: ANTI-CORRUPTION CHALLENGES NAVIGATING THE CRITICAL MINERALS BOOM



In Colombia, key policies connected to the energy transition – the proposed new National Mining Policy and the Roadmap to a Just Transition – have been stalling due to lack of a broad support. As a result, despite ambitious plans, problems in the extractive sector remain. These include issues such as a failure to undertake meaningful community consultation or local governments' difficulties in delivering permitting and licensing processes. The chapter examines these issues, and highlights the urgency to strengthen the regulatory framework to answer to the urgency of getting new projects up and running while protecting local communities and local environments.

Key commodities	Coal, Gold, Silver, Platinum, Emerald, Oil, and Gas
Corruption Perceptions Index (2024)	39
EITI membership status	Implementing country. Joined in 2014
Beneficial Ownership registry	BO is called Single Registry of Beneficial Owners – (RUB) and is hosted by the National Tax and Customs Directorate – DIAN, Colombia.
Key regulations & critical mineral strategies	1. Law 1715 of 2014. Bogota, Colombia 2014. This law regulates the integration of non-conventional renewable energies into the National Energy System 2. Resolution 1006 of 2023. Bogota, Colombia 2023 Whereby the minerals of strategic interest for the country are determined 3. National Development Plan 2022–2026: Colombia, A World Power for Life. Bogota, Colombia 2022. 4. Colombian Mining Code, Law 685, 2001 5. Guidelines for the Establishment of Strategic Minerals in Colombia. National Mining Agency 2023.Bogota, Colombia 2023.

64 See National Minerals Information Center (2024) *U.S. Geological Survey Mineral Commodity Summaries 2024 Data Release (ver. 2.0, March 2024): U.S. Geological Survey data release* [data set]. Published March 2024. Available at: https://doi.org/10.5066/P144BA54, (Accessed: May 2024) Note: the AMP derived this figure using data from the U.S. Geological Survey.

Colombia is fully dedicated to the energy transition as a regulatory priority and continues to push towards a comprehensive roadmap for the country's sustainable future. Over the past decade, the government has focused on establishing a robust institutional framework to combat climate change by implementing policies for transitioning from fossil fuels to clean energy sources.[65]

The current government has proposed new regulations to decrease the carbon footprint, promote efficient energy use,[66] and update the list of strategic minerals. Minerals such as copper play a crucial role in the country; however, the mining sector faces historical obstacles, particularly concerning social license and environmental issues in areas where mining has been undertaken. Until the private sector and government can work together to overcome barriers to the completion of the regulatory framework, the extractive industries will continue to see poor outcomes for communities and local environments and long delays in administrative processes.

Colombian strategic minerals for the energy transition

Colombia's journey to identify its strategic minerals started in 2012 through Resolution 18-0102,[67] based on technical studies by the Colombian Geological Service (formerly INGEOMINAS). The National Mining Agency (ANM) revised the list of strategic minerals in 2023 in response both to geopolitical shifts at the national and international level[68] as well as the increasing prioritisation of energy transition and climate change mitigation in national policy. This list revision considered scientific research, technical advice to the government, the definition of critical minerals by countries such as the USA, Canada, Brazil, India, Japan, and Australia, and the guidelines of the "National Development Plan 2022–2026: Colombia, A World Power for Life."[69]

The nation's definition of strategic minerals encompasses all minerals that safeguard sovereignty by meeting current and future domestic demands related to the industrial advancements necessary to facilitate a phased transition towards non-conventional clean energy sources. This strategic mineral list comprises 17 essential minerals, including copper, nickel, zinc, platinum group metals, iron, gold, emeralds, construction materials, and metallurgical coal; their description is formalised via Resolution 1006 of 2023.[70]

Taken together, these recent regulatory developments signal efforts to drive a shift in Colombia's economy from an extractive to a more productive economy. These efforts seek innovation and collaboration across sectors in the mining value chain for developing value-add through industrial operations for manufacturing semi-finished and finished products. There is also a push to promote cooperation between small and medium-scale miners, inviting them to engage in more competitive mining activities or formalise their operations through responsible mining initiatives. In addition, according to the National Development Plan, these developments should align with food security policies, agricultural progress, and public infrastructure.

Aligning the mining industry with sustainability goals has been a complex process for the government, mainly due to the ongoing debate surrounding new policies and the lack of progress in policy

65 See Law 1715 of 2014. Bogota, Colombia 2014. This law regulates the integration of non-conventional renewable energies into the National Energy System. Available at: https://www.iea.org/policies/6304-law-1715-regulating-the-integration-of-non-conventional-renewable-energies-to-the-national-energy-system

66 See CONPES 4075 of 2022. Bogota, Colombia 2022. The National Government uses CONPES as a policy instrument to establish economic and social development guidelines. Available at: https://colaboracion.dnp.gov.co/CDT/Conpes/Econ%C3%B3micos/4075.pdf

67 See Resolution 18-0102 of 2012. Bogota, Colombia 2012. Determines minerals of strategic interest for the country. Available at: https://www.suin-juriscol.gov.co/viewDocument.asp?ruta=Resolucion/4029604

68 National Mining Agency (2023) *Guidelines for the Establishment of Strategic Minerals in Colombia. National Mining Agency 2023*. Bogota, Colombia. Available at: https://acmineria.com.co/wp-content/uploads/2023/05/27-03-2023_Documento_Lineamientos_minerales.pdf

69 Government of Colombia (2022) *National Development Plan 2022–2026: Colombia, A World Power for Life*. Bogota, Colombia. Available at: https://www.dnp.gov.co/plan-nacional-desarrollo/pnd-2022-2026#:~:text=Para%20convertir%20a%20Colombia%20en%20una%20potencia%20mundial%20de%20la,el%20cambio%20clim%C3%A1tico%20y%20Convergencia

70 See Resolution 1006 of 2023. Bogota, Colombia 2023. Whereby the minerals of strategic interest for the country are determined. Available at: https://acmineria.com.co/wp-content/uploads/2023/12/Resolucion-ANM-1006-de-30-noviembre-de-2023.pdf

Photo: Coal mine in Colombia. Credit: Shutterstock.

consolidation.[71] After almost a year of being open to comments from various stakeholders, there is still no official roadmap for a Just Energy Transition. One key sticking point remains the role of artisanal and small-scale (ASM) miners and the capacity for the roadmap to account for the needs of the ASM sector as well as mining companies, related production sectors and international investment.[72] Similarly, a new policy called "Mining Law for a Just Energy Transition, National Reindustrialization, and Mining for Life" seeks to update and consolidate the regulatory framework governing mining but this, too, remains stalled. The Law has failed to attract broad-based support from the private sector and has been criticised for its blunt engagement with issues like environmental planning, the historical impact of mining in different territories and the role of critical minerals in the shift to renewable energy.[73]

Copper extraction in Colombia

In recent years, copper has emerged as one of the country's most significant minerals of interest. According to data from the National Mining Agency, copper production has remained steady at around 39,000 tonnes between 2019 and 2022, positioning Colombia as one of six countries in Latin America that export this mineral.[74] Consequently, Colombia has become a key player in the global copper industry.[75]

This development reflects substantial national and international economic significance, particularly in light of copper's pivotal role in the energy transition. The transition demands careful attention, and the mining sector must consider the lessons learned from the social and environmental impacts of gold mining extraction and the extractive industry in general.

71 Analitik, V. (21 February 2024) 'Ley Minera en colombia alarma a la industria: Estas Son las razones', *Valora Analitik*. Available at: https://www.valoraanalitik.com/ley-minera-en-colombia-alarma-a-la-industria-estas-son-las-razones/ (Accessed: 20 May 2024).

72 Garzón, C.A. & Diaz, A. (2023) 'Sin ruta, no se puede saber cómo va el gobierno en Transición Energética', *La Silla Vacía*. Available at: https://www.lasillavacia.com/silla-academica/sin-ruta-no-se-puede-saber-como-va-petro-en-transicion-energetica/ (Accessed: 20 May 2024).

73 The Mining Law, released for public comments in February 2024, is currently pending approval by the Congress of the Republic.

74 National Mining Agency Colombia (2022). *Fact Sheet*. Bogota, Colombia. Available at: https://mineriaencolombia.anm.gov.co/sites/default/files/2022-08/Fact%20Sheet%20Colombia%2008%202022.pdf

Environmental, social, and governance issues

Colombia's primary copper deposits are situated in the areas of Córdoba, Chocó, Nariño, Antioquia, La Guajira, and Cesar. These regions often intersect with territories inhabited by ethnic communities and are known for high levels of social conflict, biodiversity, and limited institutional presence. The absence of local institutional oversight hampers the monitoring and follow-up of the social and environmental agreements of approved Programs of Works and Environmental Management Plans, which are crucial for mining companies to adhere to. Inadequate institutional infrastructure can lead to subpar administrative practices, insufficient data gathering, and a lack of transparency. These challenges and deficiencies in the extractive sector, particularly in the rush of critical mining, emphasise the necessity of reform if local communities are to share benefits in a "Just" Energy Transition.

Citizen participation is essential for achieving "Justice" in the Energy Transition. Limited involvement in decision-making, such as through the Free, Prior, and Informed Consent (FPIC) process, significantly diminishes the rights of affected communities and hinders project success and progress.[76] In Colombia, this process exemplifies the importance of inclusive participation, which is mandatory for all development projects involving ethnic communities in the area of interest. The Free, Prior, and Informed Consent process has been identified as the most vulnerable aspect in Transparencia por Colombia's assessment of corruption risks in Colombia's hydrocarbon sector.[77] This process ensures that ethnic communities' rights and interests are protected and they have a say in development projects impacting their culture and territory. The study from Transparencia por Colombia identified risks linked to these communities' restricted access to public information. It also highlighted the necessity for a tailored approach that offers thorough information about the established agreements, project advancement, identified impacts, and executed measures.

However, companies have often entered local communities' territories without notifying the local authorities or community leaders, leading to social, environmental, and cultural disputes in the affected regions. With the government heavily involved in mining development and growing interest from multinational corporations in critical minerals, it's essential to prioritise mechanisms that empower communities to influence the terms of access to their lands and project execution, including the mining lifecycle.

In this context, the huge demand for critical minerals that we are now seeing coming through the pipeline for permits poses substantial risks. In November 2023, there were 1,413 current applications for copper mining in Colombia. Of these, 1,362 were under evaluation, and 12 were in community mining precincts, known as Special Reserve Areas. Additionally, there were 23 applications for differential concessions. As for mining titles, there were 1,074 in force, with 902 active titles in different stages. Among these, 195 were in the exploration stage, 589 were in exploitation, and 59 were suspended. However, only two projects were in the contractual exploration stage and two in the contractual stage of construction and assembly, all of which are pending various assessments and permits.[78]

Nonetheless, there is limited public information on copper projects in the country. This exemplifies the challenges that citizens face when seeking access to information about environmental licenses, social issues, project status, and the royalties paid to the nation from these projects. Addressing the lack of

75 Bohórquez, K.S. (2023) 'Colombia,¿Potencia Mundial del Cobre, Forbes Colombia.' Available at: https://forbes.co/2023/06/13/editors-picks/colombia-potencia-mundial-del-cobre (Accessed: 23 May 2024).

76 Law 21 of March 4, 1991. and ILO Convention 169 1991. Bogota, Colombia 1991. The Free, Prior, and Informed Consultation is a mechanism to ensure the rights of Indigenous peoples and other ethnic groups when decisions may affect them directly or when projects are planned within their territories.

77 Transparencia por Colombia (2023) R*iesgos de Corrupción en el sector de Hidrocarburos en Colombia.* Transparencia por Colombia – Capítulo Transparencia Internacional. Available at: https://transparenciacolombia.org.co/riesgos-corrupcion-sector-hidrocarburos/ (Accessed: 30 May 2024).

78 G.A. Poveda Forero, E.C. Rincón, F.A. Herrera Ospina, S.F. Sánchez Delgado, and S. Cuadrado Castañeda. (2023) *Social, Environmental, and Economic Analysis of the Leading Copper Mining Projects in Colombia*. UPME, Bogotá, Colombia. Available at: https://www1.upme.gov.co/simco/Cifras-Sectoriales/EstudiosPublicaciones/Documento_Cobre_29-12-2023.pdf (Accessed: 20 June 2024).

Photo: Gold mining is the Segovia municipality of Antioquia, Colombia. Credit: Memo Ossa, Shutterstock

transparency is essential, especially for projects classified as "Projects of National and Strategic Interest",[79] of which there are currently two at execution stage. The government considers these projects of significant economic and productive importance, and they are granted special permission to circumvent environmental protection law. Yet, their centralised approval process without local consultation diminishes community participation in terms of access to information about how these projects contribute to local and regional development, and there is a threat of pressure to expedite their implementation in areas without adequate input from local authorities and communities. This has resulted in many risks associated with streamlining the licensing and contracting processes, diminishing the relevant authorities' management, monitoring, and control capacity and removing necessary safeguards.

Transparencia por Colombia has also identified that access to information throughout the mining and energy sector chain is critical for managing the risk of corruption. Accessible information is essential in awarding contracts and licenses, allocating areas, and requesting, evaluating, and granting environmental permits. Deficient access to public information can encourage irregular, illegal, or corrupt behaviour.

In line with the above, the increasing demand to evaluate new projects and the pressure of tight deadlines are straining institutional capacities. This common challenge in public management significantly raises the potential for corruption. Specifically, within the licensing process, which involves application, evaluation, approval, and environmental oversight, there is also, according to Transparencia por Colombia, a shortage of personnel to manage the workload of the country's mining and hydrocarbon agencies. This shortage raises concerns about expediting licensing at the expense of thorough due diligence, particularly in environmental and social impact assessments, and poses a risk to established assessment frameworks.

79 National and Strategic Interest projects stem from the document CONPES 3762 of 2013, titled "Policy Guidelines for the Development of PINE." This document establishes the criteria for identifying projects of strategic national interest and outlines actions to facilitate their efficient and timely execution in line with government policies.

Furthermore, in the analysis presented in "Towards a Reading of the Energy Transition from an Anti-corruption Perspective",[80] Tranparencia por Colombia highlights a critical issue: the current state of the energy transition process in the country lacks essential information on participation channels. This deficiency significantly hinders practical deliberation and decision-making involving local authorities and communities. Consequently, the governance of natural resources for the energy transition is inadequate regarding monitoring and control, potentially leading to social conflicts in certain territories due to the lack of coordination among involved actors.

The limited institutional capacities of local authorities compromises their ability to ensure and oversee consultative processes and fulfil commitments made by involved parties. This results in discussions about project entry and compensation with information asymmetry among actors.[81] As a result, the responsibility of supporting communities has fallen on social organisations in the area or advisors hired by mining companies. These advisors tend to prioritise advancing projects quickly under the most favourable conditions for the company by which they are employed.

To ensure a Just Energy Transition in the country, it is crucial to establish a regulatory and institutional framework and a governance approach that empowers communities to participate and have their voices heard throughout the mining sector's value chain. Active participation and transparency are essential to drive this process forward for a thriving civic space. Additionally, local authorities and communities have numerous opportunities for advocacy, such as participating in public consultations, engaging with civil society organisations, and advocating for their rights and interests in the energy transition process. By seizing these opportunities, they can ensure their voices are heard, and their concerns are addressed.

80 Transparencia por Colombia (2023) *Hacia una lectura de la Transición Energética desde una perspectiva anticorrupción.* Transparencia por Colombia - Capítulo Transparencia Internacional. Available at: https://transparenciacolombia.org.co/lectura-transicion-energetica-perspectiva-anticorrupcion/ (Accessed: 25 May 2024).

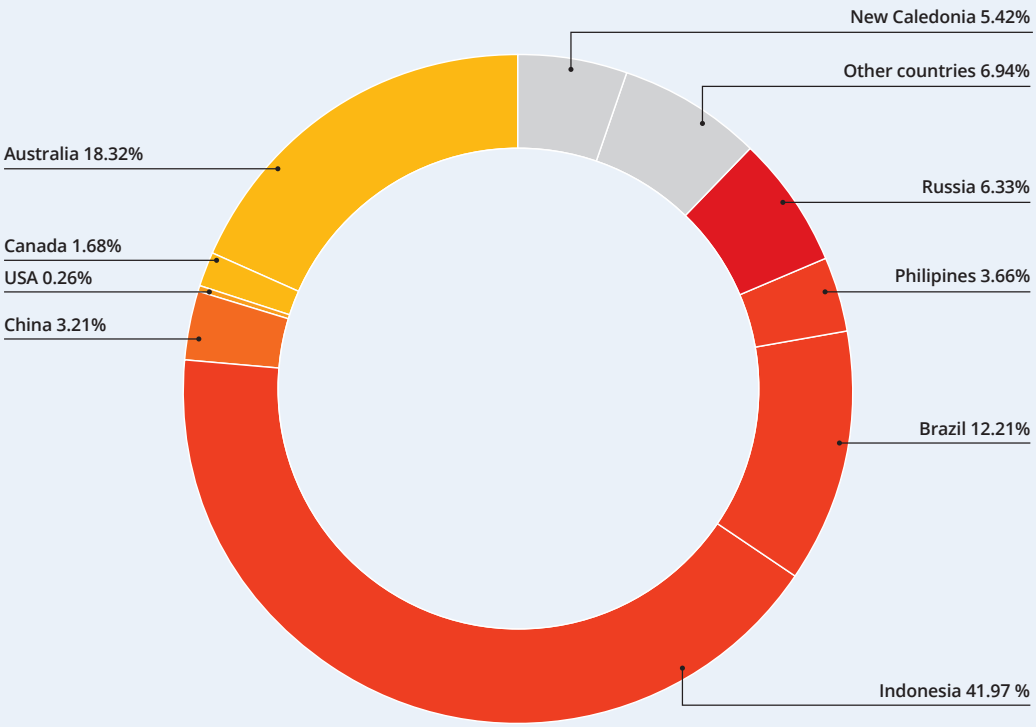
81 Observatorio de Conflictos Ambientales (OCA) & Universidad Nacional de Colombia (UNAL) (2023) Proyecto de Minería de Cobre en Mocoa: Un Caso Para Revisar Las Políticas del Gobierno." Periódico UNAL. Available at: https://periodico.unal.edu.co/articulos/proyecto-de-mineria-de-cobre-en-mocoa-un-caso-para-revisar-las-politicas-del-gobierno?lgn=en (Accessed: 19 May 2024).

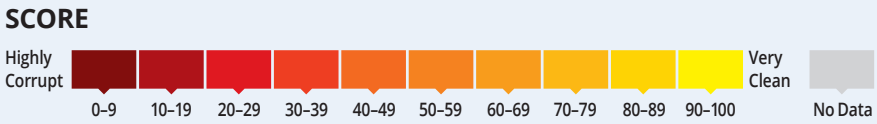
INDONESIA'S ENERGY TRANSITION: WILL IT BENEFIT EVERYONE AND LEAVE NO ONE BEHIND?

Indonesia's nickel deposits position it to become a major player in the energy transition. Policy settings have attracted foreign investment to mine and process nickel but the costs to the environment and local communities have often been devastating. This chapter maps corruption risks in the sector in Indonesia and identifies key gaps in the regulatory framework. The chapter also highlights the continued risks of displacement and destruction of livelihood that communities face as mining for transition minerals continues to expand.

Key commodities	Coal, Nickel, Gold, Copper, Tin, Bauxite
Percentage of worldwide reserves of key commodity (2023)	Nickel: 41.97% Copper: 2.4% Bauxite: 3.36%
Corruption Perceptions Index (2024)	37
EITI membership status	Implementing Country. Joined in 2010.
Beneficial Ownership registry	Yes
Key regulations & critical mineral strategies	1. Law No. 3 Year 2020 on Coal and Mineral (UU 3/2020) 2. Government Regulation No. 25 year 2024 concerning Amendments to Government Regulation No. 96 year 2021 regarding the Implementation of Coal and Mineral Mining Business Activities (PP No.25 tahun 2024) 3. Ministry of Energy and Mineral Resources Decree No. 296 year 2023 regarding mineral commodities classified as critical mineral (Kepmen ESDM No. 296 tahun 2023)

Figure 5 – Global nickel reserves by jurisdiction including levels of perceived corruption





Scale adapted from Transparency International's Corruption Perceptions Index (CPI) classification, https://www.transparency.org/en/cpi/2024

The Energy transition has become a buzzword in Indonesia in recent years. The high profile of the term stemmed from Indonesia's G20 Presidency in 2022, where the "Sustainable Energy Transition" was amongst the key thematic issue chosen for the agenda of the Indonesian Presidency. The result was the "Bali Compact",[82] agreed by G20 Energy Ministers during the G20 meetings. Viewed as a legacy of the Indonesian Presidency, the Bali Compact outlines nine core principles for accelerating the energy transition, with the goal of benefiting everyone and not leaving anyone behind.[83] The principles are focused on issues of energy security, energy supply, energy efficiency, innovative and affordable technology, and research & development to accelerate the energy transition.

82 See G20 Energy Transition Ministers (2 September 2022) *Bali Compact – Energy Transitions Minister's Meeting*. Available at: https://www.g20.utoronto.ca/2022/G20-Bali-COMPACT_FINAL_Cover.pdf

83 See Ministry of Energy and Mineral Resources (8 November 2022) 'Bali Compact, Legacy Indonesia dalam Forum Transisi Energi G20'. Available at: https://ebtke.esdm.go.id/post/2022/11/09/3327/bali.compact.legacy.indonesia.dalam.forum.transisi.energi.g20 (Accessed: 20 May 2024)

As a product of a global economic forum, the Bali Compact did not skip the importance of inclusive and sustainable investment. In addition to that, it also called for the mobilisation of all sources of funding to reach the Sustainable Development Goals 2030 agenda and Paris obligations. As a result of these efforts, G7 countries and others such as Norway, have committed to supporting access to USD 20 billion in funds through a mix of concessional and non-concessional loans, grants, guarantees and private investments to accelerate the energy transition in Indonesia under the Just Energy Transition Partnership (JETP) initiative.[84] Projects covered under the JETP include the early retirement of coal-fired power plants, the development of new infrastructure such as renewable power plants, improvements in the electricity grid/transmission and in renewable energy supply chains, and energy efficiency.[85]

As is the case with renewable energy projects globally, the development of renewable power plants and renewable energy supply chain projects covered under JETP will increase demand for so-called transition or critical minerals. These are the minerals required to enable the establishment of clean energy technologies, the demand for which is increasing rapidly. In fact, the International Energy Agency (IEA) has estimated that the demand for minerals for clean energy technologies globally will quadruple by 2040.[86] The IEA predicts that Indonesia will profit from the global clean energy transition as total revenues from critical minerals in 2030 are projected to be nearly three times higher than in 2022.[87]

A huge influx of climate funding: will it become another opportunity for corruption?

Following this funding announcement, the Government of Indonesia faces a considerable task in deciding which projects will be worthy of being covered by the JETP initiative. With such large funds pledged, the government will face a grand challenge in ensuring that high standards of governance can tackle corruption risks. In fact, the substantial size of the climate funds that will be coming into the country will likely compound existing issues. Concentrated decision-making power, conflicts of interest, a weak rule of law, and lack of transparency, accountability, and participation mechanisms in policy-making processes in Indonesia could pose an increase in corruption risks for the JETP project.[88]

Governance indicators, for example, provide a concerning outlook. Indonesia's Corruption Perceptions Index (CPI) score has dropped gradually since 2019, from 40 to 37 in 2024. The beginning of score decline was in conjunction with the momentum of the revision of Anti-Corruption Commission (KPK) law which reduces the KPK's prosecutorial authority and independence. Aside from the perception of conflicts of interest between public officials and business people,[89] other factor which causes decline in Indonesia's CPI score are corruption in the export/import, and political corruption which involve individuals from the executive, judiciary and parliament.[90]

The ubiquity of Politically-Exposed Persons (PEPs) in the energy and extractives sector can also be

84 See Tempo. (6 December 2022) 'Pendanaan JETP 310 triliun ditindaklanjuti pada 2023, Airlangga: Terima Kasih Amerika dan G7'. Available at: https://bisnis.tempo.co/read/1665160/pendanaan-jetp-rp-310-triliun-ditindaklanjuti-pada-2023-airlangga-terima-kasih-amerika-dan-g7 (Accessed: May 20 2024)

85 See Ministry of Energy and Mineral Resources (16 February 2023) 'Sekretariat JETP Terbentuk, Siap Realisasikan Kerja Sama Pendanaan Transisi Energi.' Available at: https://www.esdm.go.id/en/media-center/news-archives/sekretariat-jetp-terbentuk-siap-realisasikan-kerja-sama-pendanaan-transisi-energi (Accessed: 21 May 2024)

86 IEA (2023) *Critical Minerals: The Role of Critical Minerals in Clean Energy Transition*. Available at https://www.iea.org/topics/critical-minerals. (Accessed: 20 September 2023).

87 IEA (2022) *An Energy Sector Roadmap to Net Zero Emissions in Indonesia*, p. 133. Available at: https://iea.blob.core.windows.net/assets/b496b141-8c3b-47fc-adb2-90740eb0b3b8/AnEnergySectorRoadmaptoNetZeroEmissionsinIndonesia.pdf (Accessed: 21 September 2023).

88 Transparency International Indonesia (2017) *Corruption Perception Index, Indonesia*. Available at: http://riset.ti.or.id/wp-content/uploads/2018/09/IPK-2017_Report1.pdf (Accessed: 20 September 2023).

89 Ibid

90 Transparency International Indonesia (11 February 2025). *Corruption Perceptions Index (CPI) Indonesia 2024: Korupsi, Demokrasi, dan Krisis Lingkungan*. Available at: https://ti.or.id/wp-content/uploads/2025/02/presentasi-CPI-2024.pdf

Photo: Nickel ore production in Sorowako, Indonesia. Credit: KAISARMUDA, Shutterstock.

considered a red flag for corruption and conflicts of interest.[91] When the presence of PEPs is not sufficiently regulated in the energy and extractive sector, the risk of undue influence and policy capture in the policy-making process is significantly increased. Moreover, inadequate regulation to prevent conflict of interest, such as revolving door policies and lack of protection toward whistle-blowers, can worsen known corruption risks.[92] In this context, energy transition acceleration projects – not limited to JETP – have clear potential to become subject corruption.

Increased demand for critical minerals: what are the benefits for the mining-affected communities?

The clean energy transition will drive a greater demand for minerals, such as nickel, globally. In fact, it is projected, that by 2040, demand for nickel will grow 60–70%.[93] Indonesia is the largest nickel producer, with around 50% of global production in 2023,[94] and has the world's largest reserves of battery-grade nickel, at 22% of global deposits.[95] As such, the

91 The Jakarta Post (22 April 2021) 'Coal-Fired Power Plant Companies Knee Deep in Lobbying With Little To No Transparency: TII', The Jakarta Post. Available at: https://www.thejakartapost.com/news/2021/04/22/coal-fired-power-plant-companies-knee-deep-in-lobbying-with-little-to-no-transparency-tii.html (Accessed: 20 September 2023).

92 Transparency International Indonesia & Indonesia Corruption Watch (2023) *Strengthening Anti-Conflict-of-Interest Policy: Case Study of the Businessmen in the Energy Sector*. Available at: https://riset.ti.or.id/wp-content/uploads/2023/02/TII-ICWKajian-Konflik-Kepentingan-Sektor-Sumber-Daya-Energi-1.pdf (Accessed: 19 September 2023).

93 IEA (2022) *The Role of Critical Minerals in Clean Energy Transitions*, IEA, Paris. Available at: https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions

94 Annur, C.M. (2024) 'Indonesia, the largest nickel producing country in the world in 2023'. *Databoks*. Available at: https://databoks.katadata.co.id/datapublish/2024/02/13/indonesia-negara-penghasil-nikel-terbesar-di-dunia-pada-2023 (Accessed: 13 June 2024)

95 IEA (2022) *An Energy Sector Roadmap to Net Zero Emissions in Indonesia*, p. 173. Available at: https://iea.blob.core.windows.net/assets/b496b141-8c3b-47fc-adb2-90740eb0b3b8/AnEnergySectorRoadmaptoNetZeroEmissionsinIndonesia.pdf (Accessed: 13 June 2024)

Photo: Blue green copper (Cu) oxide ore in Australia. Credit: BJP7images, iStock.

investment opportunities created by growing nickel demand have increased significantly. The government has imposed an export ban on unprocessed nickel ore since January 2014 to encourage investment in nickel smelters. Consequently, it has successfully attracted Chinese companies' investment with a total investment of USD 30 billion.[96] This policy option – banning raw material export and improving the downstream nickel industries at the national level – is considered a benchmark that should be followed for other critical mineral endowments in Indonesia, such as those of tin, copper, and bauxite.[97]

While the Indonesian government argues that its regulatory policies over the nickel industry are best practice with respect to increasing state revenue, negative impacts due to nickel mining and the nickel smelter industry remain unaddressed. Many provinces with substantial nickel mining areas are experiencing a high rate of deforestation, with nickel now overtaking palm oil as the primary driver of deforestation across the archipelago.[98,99] The connection between nickel extraction and deforestation highlights the complexity of the energy transition: the need for these critical minerals must be consistently weighed against the environmental impact of mining for the minerals themselves.

A critical shortcoming in the regulatory framework is its failure to guarantee free, prior and informed

96 Center for Strategic and International Studies. (8 December 2021) 'Indonesia's Nickel Industrial Strategy'. Available at: https://www.csis.org/analysis/indonesias-nickel-industrial-strategy

97 Cabinet Secretariat of the Republic of Indonesia. (30 January 2023) 'Presiden Jokowi Apresiasi Rampungnya Peta Jalan Hilirisasi'. Available at: https://setkab.go.id/presiden-jokowi-apresiasi-rampungnya-peta-jalan-hilirisasi/

98 Forest Digest (10 May 2022) 'Ironi Penambangan Nikel'. Available at: https://www.forestdigest.com/detail/1723/bahaya-pertambangan-nikel

99 Giljum, S. et al. (2022) 'A pantropical assessment of deforestation caused by industrial mining', Proceedings of the National Academy of Sciences, 119(38), p. e2118273119. Available at: https://doi.org/10.1073/pnas.2118273119.

consent from mining affected communities. This principle is not specified in the relevant Indonesian mining law[100] despite the fact that is a right of indigenous communities, enshrined in the United Nations Declaration on the Rights of Indigenous Peoples. This principle posits that any activity that may affect the ancestral lands, territories and natural resources of indigenous communities, should require the consent of these communities prior to activities such as natural resource extraction.[101] Without these safeguards, local communities are at a significant disadvantage in consultation or negotiation processes with government and mining companies throughout the licensing stage of a mine.

New research from TI-Indonesia identifies corruption in the nickel mining industry and explores the costs of this corruption to local communities through extensive fieldwork with local communities.[102] The research examined a range of forms of corruption in the nickel sector in Halmahera in North Moluccas Province including bribery in the issuance of mining license,[103] the manipulation of the land registry and alleged conflict of interest. Moreover, evictions of *O'Hangana Manyawa*, the indigenous people from Halmahera, have occurred as industry players seize land with no warning nor compensation, displacing local communities and depriving them of their livelihood.[104]

These conditions indicate that ensuring a just energy transition in Indonesia will be challenging. Given the considerable size of the JETP initiative and the impact it will have in shaping Indonesia's energy transition, it is critical that high standards of governance are maintained throughout the entire extractive sector. The donor community and the state must work together to ensure that JETP doesn't pay for transition projects like those in Halmahera, which destroy the land, deepen poverty and displace local communities. To avoid this, it is critical that transparency, accountability and participation mechanisms are improved, not only to preclude damage like that in Halmahera but more broadly to prevent vested interests from influencing the policy making process connected to the energy transition.

100 Primi Suharmadhi Putri (2023) 'Local communities and transparency in Indonesian mining legislation', *Journal of Energy & Natural Resources Law*, 41(4): 431–455.

101 Food and Agriculture Organisation of the United Nations (FAO) (2016) *Free Prior and Informed Consent: An indigenous peoples' right and a good practice for local communities*. Available at: https://www.fao.org/3/i6190e/i6190e.pdf

102 Transparency International Indonesia (2024) *Industri Keruk Nikel: Korupsi Struktural dan Dampak Multi Dimensinya*. Available at: https://ti.or.id/books/industri-keruk-nikel-korupsi-struktural-dan-dampak-multi-dimensinya/

103 Nikkei Asia (3 April 2024) 'Indonesia Nickel Concerns Stoked by Corruption and Land Disputes'. Available at: https://asia.nikkei.com/Business/Markets/Commodities/Indonesia-nickel-concerns-stoked-by-corruption-and-land-disputes

104 See Survival International. (2021) 'We Are the Hongana Manyawa. We Defend the Forests and Mountains Because We Think of Them As Our Parents'. Available at: https://www.survivalinternational.org/tribes/honganamanyawa

MADAGASCAR

TRANSITION MINERALS IN MADAGASCAR: OPPORTUNITIES AND CHALLENGES OF GOVERNANCE

Madagascar has important critical mineral reserves and active mining operations that forecast substantial growth in activity. Yet, although the Mining Code has recently been updated, key gaps in the regulatory framework remain. Mining for critical minerals is becoming increasingly contested by local communities with key conflicts emerging around the lack of consultation or protection of livelihoods. As this chapter argues, conflict will continue to pose obstacles to development plans in the sector until the regulatory framework is updated to give a voice to local communities in the development of critical minerals in the country.

Key commodities	Nickel, Cobalt, Graphite, Rare-earth elements
Percentage of worldwide reserves of key commodity (2023)	Cobalt: 0.95% Graphite: 8.57% Titanium (ilmenite) Mineral Concentrates: 3.89%
Corruption Perceptions Index (2024)	26
EITI membership status	Implementing country. Joined in 2008.
Beneficial Ownership registry	No
Key regulations & critical mineral strategies	Mining Code Law No.2023-007

Madagascar is facing a critical period in its mineral and strategic resources sector. Following 12 years of regulatory uncertainty, the sector is set to expand significantly as the country's substantial mineral deposits are opened up to growing global demand. However, persistent community grievances highlight continuing challenges in the sector that flag important risks for future growth.

In 2011, the government suspended the award of new mining permits,[105] putting administrative procedures for obtaining authorisation for exploration activities on hold. Although this suspension represented an opportunity for the country to rejuvenate its mining sector governance system, it also had the effect of stifling new investment in the sector. The 2011 suspension did not affect the shift from existing exploration activities into exploitation permits[106] but put a halt on new investment in exploration. Over the years, successive governments have tried to remedy this situation by launching revisions to the legal framework that governs the industry, in particular its Mining Code. Between 2016 and 2021, for example, a series of revisions to the Mining Code were proposed but failed to become law. It was welcome news to see the Mining Code finally codified into Law 2023-007 on June 7th, 2023.[107]

Key gaps, however, remain in the Code – especially in relation to new global demand for the critical minerals that are key to the energy transition. In fact, the new Mining Code includes only a few broad paragraphs on critical minerals. The Code grants government discretion in defining critical minerals as well as government control over the designation of a quota of production that must be allocated to the domestic market, based on existing domestic needs. However, it does not establish specific strategies for the extraction of these minerals.

The booming of graphite production to meet global demand

With the energy transition a key policy priority for governments across the globe, the race to secure the supply of minerals required for the transition is intensifying in Africa. Madagascar has substantial deposits of a number of minerals necessary for the energy transition, including cobalt, nickel, and graphite. These are currently being exploited by a small number of primarily foreign investors. The most significant of these is the Ambatovy Project, which has been in production since 2012 and produces and exports refined nickel and cobalt of 99.9% purity to customers in Asia, Europe, and the United States.[108]

Madagascar also has major deposits of graphite, with six large projects accounting for 3% of global production and 8% of global reserves.[109] With the ongoing boom in the exploitation of this ore, more substantial export forecasts are expected in the years to come. Tirupati Graphite, a British company operating two mining sites (Vatomina and Sahamamy) on the island's east coast, produces more than 30,000 tonnes per annum (TPA) as at 2024.[110] The Canadian company, NextSource Materials, publicly announced in February 2023 that the construction of a processing plant at its Molo graphite mine had been completed, with an estimated production capacity of 17,000 TPA during the start-up phase of the project.[111] In October 2024, the company completed its first shipment of *SuperFlake* graphite to Germany and the United States of America.[112] Another key player in the sector is the

105 For further detail, see Razananirina, H. and Ihariantsoa, S.C, (2020) *Evaluation des Riskques de Corruption dans l'Octroi des Titres Miniers a Madagascar*. Available at: https://bit.ly/3yw2kcd (Accessed: 24 May 2024)

106 Some exceptions are outlined in the Mining Cadastra Office website, which shows some mining companies have been granted their Exploitation Permits within the suspension period. See https://bcmm.mg/donnees-tabulaires-3/

107 Republic of Madagascar (2023) *Law n° 2023-007*, June 7, 2023, Mining Code of Madagascar, article 72, p.24, https://eitimadagascar.mg/wp/wp-content/uploads/2023/09/Loi-2023-007-du-27-juillet-2023-portant-Refonte-du-Code-Minier_promulguee_Madagascar.pdf

108 Ambatovy (2022) *Our products*. Available at: https://ambatovy.com/en/operations/products/ (Accessed: 6 May 2024)

109 Sturman, K., Loginova, J., Worden, S., Matanzima, J and Arratia-Solar, A. (2022) *Mission Critical: Strengthening governance of mineral value chains for energy transition*. Available at https://eiti.org/documents/mission-critical (Accessed: 24 May 2024)

110 See Tirupati Graphite (no date) *Madagascar Graphite Mining Company | Madagascar Projects*, Tirupati Graphite. Available at: https://tirupatigraphite.co.uk/madagascar-projects/ (Accessed: 9 July 2024).

111 Laetitia B. (2023) 'Madagascar: Nouvelles tensions autour des activités de l'entreprises minière QMM à Fort-Dauphin', RFI. Available at https://bit.ly/3KkbSJD (Accessed: 24 May 2024)

112 NextSource Materials (2024) 'NextSource Materials Completes First Commercial Shipments of Graphite Concentrate to Germany and USA'.

Australian company, Evion, which is exploring graphite at its *Maniry* site and has signed a contract with the German company, Luxacarbon, to supply 25,000 tons of graphite annually. The company expects annual production of up to 500,000 tonnes in the first phase.[113]

This substantial and growing contribution of Madagascar in meeting global demand for critical minerals highlights the need for a dedicated critical minerals strategy with which to meet the challenges of upscaling mining in Madagascar. These challenges are clearly illustrated in local disputes with existing mining operations.

Transparent local consultations and respect for free and informed consent: challenges for the mining industry

International norms demand that the consent of local populations is sought before projects affecting them are approved. Consent requires that consultation with local communities is sought and that legal means are established through which participatory decision-making processes can be undertaken. Although these norms are widely accepted internationally, the lack of local consultations has proved a recurring problem in Madagascar. Local communities in the Anôsy region where a subsidiary of Rio Tinto is mining mineral sands, for example, complain of a lack of consultation. Specifically, these communities identify a lack of engagement in the process around renewing the establishment agreement that the mining company concluded with government, which has denied them an opportunity to discuss grievances with either government or the company itself relating to the project.[114]

Twenty-nine families displaced by Ambatovy's Nickel and Cobalt has denounced the lack of transparency and accountability during the negotiation process in 2008, which they describe as misleading. Complaints have been filed with the environmental authority and the company without any concrete actions being taken.[115]

These communities bear impacts caused by mining activities on their land to their income, their livelihoods, and their health. The mines' disruption of local ecosystems and impacts on water quality have been particularly contentious in the context of the local community's reliance on local rivers and lakes.[116] Given these costs to the environment, local communities do not feel that they are benefiting from fair compensation from the mining companies. This lack of community integration in mining projects is the primary source of social conflict and dissatisfaction in areas impacted by mining operations. Several communities are beginning to reject mining projects, given the impacts recorded in some mining localities[117] and the fear of losses in other parts of the country.[118]

Furthermore, the outdated legal framework has been a direct cause of these issues, as it has failed to require social impact assessments and transparent community consultations since 2004. Known as the

Available at https://www.nextsourcematerials.com/nextsource-materials-completes-first-commercial-shipments-of-graphite-concentrate-to-germany-and-usa/

113 See Maniry Graphite Project (2023) 'Madagascar', *MiningTechnology.* Available at: https://www.mining-technology.com/projects/maniry-graphite-project-madagascar/?cf-view

114 Laetitia B. (2023) 'Madagascar: Nouvelles tensions autour des activités de l'entreprises minière QMM à Fort-Dauphin', RFI. Available at https://bit.ly/3KkbSJD (Accessed: 24 May 2024)

115 Transparency International – Initiative Madagascar (2024) *Ambatovy : Fampandrosoana Manalasala*. Available at : https://www.youtube.com/watch?v=Vall42bAMd8&t=326s

116 For example, see Leigh Day (3 April 2024) 'Rural villagers living near mine in Madagascar take legal action against mining giant Rio Tinto', *Leigh Day*. Available at: https://www.leighday.co.uk/news/news/2024-news/rural-villagers-living-near-mine-in-madagascar-take-legal-action-against-mining-giant-rio-tinto-after-tests-show-dangerous-levels-of-lead-in-their-bodies/ (Accessed: 9 July 2024).

117 Malavika V. (16 May 2023) 'Fish deaths near Rio Tinto mine in Madagascar dredge up community grievances', *Mongabay*. Available at: https://news.mongabay.com/2023/05/fish-deaths-near-rio-tinto-mine-in-madagascar-dredge-up-community-grievances/

118 CRAAD-OI (14 April 2021) 'La voix et les droits de la grande masse de la population de Toliara I et II directement affectée par le projet Base Toliara comptent. Non à toute forme de discrimination à leur égard!', *Centre de Recherches et d'Appui pour les Alternatives de Développement – Océan Indien.* Available at: https://www.craadoimada.com/la-voix-et-les-droits-de-la-grande-masse-de-la-population-de-toliara-i-et-ii-directement-affectee-par-le-projet-base-toliara-comptent-non-a-toute-forme-de-discrimination-a-leur-egard/

Photo: A small mining town in Madagascar. Credit: Shutterstock.

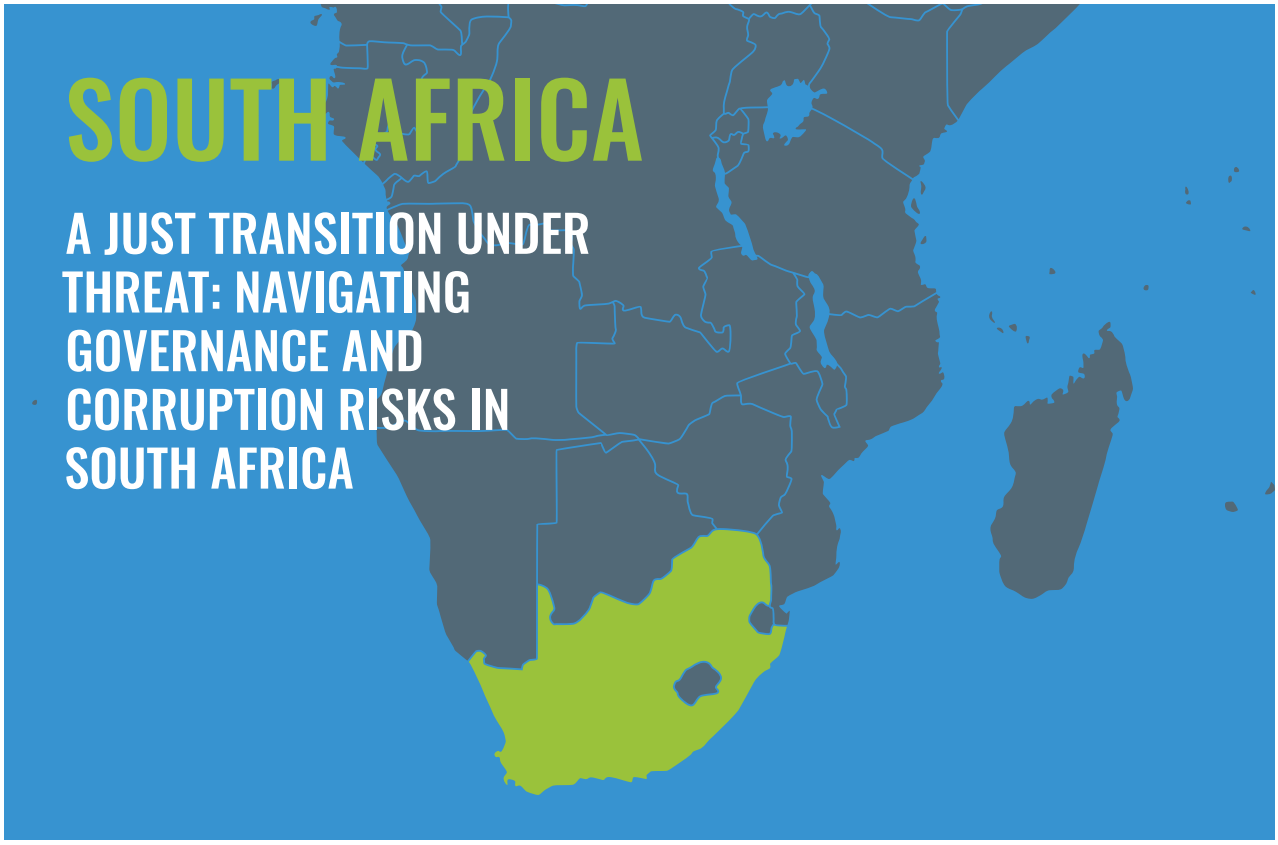
MECIE decree,[119] this framework does not mandate mining companies to assess the social consequences of their mining projects.[120] Nor does the framework require a sincere and transparent consultation with affected local communities. However, in January 2025, a reform of this law was promulgated, introducing new provisions that could offer hope for communities seeking greater inclusion in the decision-making process for extractive projects.[121]

To guarantee a just energy transition in Madagascar, the government must adopt a dedicated strategy so that the exploitation of mining resources required for the global energy transition better balances the needs of local communities, the government, and mining companies. An effective implementation of the reforms could mark a turning point in ensuring that mining projects align more closely with the rights and needs of local populations.

119 See Republic of Madagascar (2004) 'Décret n° 99-954 du 15 décembre 1999 modifié par le décret n° 2004-167 du 03 février 2004 relatif à la mise en compatibilité des investissements avec l'environnement (MECIE)' Ministry of Environment, Water, and Forests. Published in the Official Journal No. 2648 of July 10, 2000, and No. 2904 of May 24, 2004. Available at: https://edbm.mg/wp-content/uploads/2017/12/Decret_MECIE.pdf (Accessed: 1 May 2024).

120 See OSCIE (2024) *La revision du Décret MECIE est imminente*. Available at: https://oscie.org/2024/04/11/la-revision-du-decret-mecie-est-imminente/

121 See Decree no.2025-080 on Social and Environmental Evaluation procedures for the MECIE. Available at : https://www.environnement.mg/wp-content/uploads/2025/02/DECRET-2025-080-ESS-MECIE.pdf



SOUTH AFRICA

A JUST TRANSITION UNDER THREAT: NAVIGATING GOVERNANCE AND CORRUPTION RISKS IN SOUTH AFRICA

South Africa's governance context highlights considerable risks for the energy transition. The country has received large sources of funding committed to the country's Just Energy Transition Investment Plan, despite governance challenges remaining. Yet another layer of risk emerges at the remote locations where key critical mineral deposits where significant illegal mining activity exists. As this chapter makes clear, the Just Energy Transition cuts across governance issues at the national level as well as the local level, including conflict between communities, illegal mining operations and local authorities.

Key commodities	Manganese, Lithium, Vanadium and Copper
Percentage of worldwide reserves of key commodity (2023)	Manganese: 31.45% Chromium: 36.70% Titanium (rutile) Mineral Concentrates: 11.04% Titanium (ilmenite) Mineral Concentrates: 4.03% Zinc: 2.77%
Corruption Perceptions Index (2024)	41
EITI membership status	Not a supporter nor implementer
Beneficial Ownership registry	Yes
Key regulations & critical mineral strategies	Exploration Strategy for the Mining Industry of South Africa (2022) Targeted Critical Minerals and Metals List (2022)

The combination of unprecedented climate disasters and energy insecurity in South Africa has amplified the call for decarbonisation and the prioritisation of a shift towards cleaner and more reliable energy sources such as wind and solar. In 2022, floods in KwaZulu Natal caused 459 deaths[122] and an estimated US$2 billion in damage.[123] Major flooding was repeated in April and again in June of 2023 and most recently in January of 2024. At the same time, South Africa's energy crisis intensified. Eskom, the country's national energy supplier, was forced to schedule power outages on 330 days in 2023 – more than double the amount experienced in 2022 and almost ten times as much as in 2021.[124] This punishing schedule of 'loadshedding' has crippled businesses and compromised food security, prompting widespread protest.

South Africa's Just Energy Transition Investment Plan (JET-IP) is aimed at weaning South Africa off its heavy reliance on coal and setting its economy on a pathway to decarbonisation and climate resilient development. Envisioned to be implemented from 2023 to 2027 at a cost of ZAR1480 billion,[125] the Investment Plan seeks to rapidly scale back emissions, which currently position South Africa as the 14th largest greenhouse gas emitter on global rankings.[126] To date, the grey-listed has attracted pledges of $11.9 billion (almost entirely in concessional lending rather than grants) from International Partners Group donors, which include the US and a number of European countries.[127]

Low carbon minerals – manganese, lithium, vanadium and copper – are identified as key strategic minerals in the Plan's pathway to decarbonisation. With over 80% of the world's deposits of manganese ore as well as commercial mining in vanadium and copper,[128] South Africa's mining sector is central not only to the JET-IP but to the energy transition globally.

Yet the JET- IP Plan emerges against the backdrop of several institutional and policy concerns, including rampant corruption, a poorly designed fiscal regime, and, of particular focus in this piece, a historically troubled mining sector, among others.[129] Discussed in detail below, all these issues threaten the integrity and feasibility of this ambitious plan. Urgent action to strengthen governance is crucial to ensure a just energy transition, that doesn't come at the cost of the earth or the local communities near the sites of extraction.

A troubled mining sector

South Africa's mining sector turmoil is no secret. For decades, the government has battled to get a handle on the irregular issuing of mining licenses, the displacement of mining town communities, and ensuring accountability and transparency from mining corporations, amongst other issues.[130] For example, Corruption Watch found a general lack of transparency around the negotiation and confirmation of mining royalty agreements with mine-

122 Mbatha, A. (29 May 2022) 'Death toll from flooding in South Africa's KZN rises to 459', *Bloomberg*. Available at: https://www.bloomberg.com/news/articles/2022-05-29/death-toll-from-flooding-in-south-africa-s-kzn-rises-to-459 (Accessed: 6 May 2024).

123 Magidimisha-Chipungu, H. (20 January 2024) 'Why are floods in South Africa's KwaZulu-Natal so devastating? Urban Planning expert explains', *The Conversation*. Available at: https://theconversation.com/why-are-floods-in-south-africas-kwazulu-natal-so-devastating-urban-planning-expert-explains-221285 (Accessed: 6 May 2024).

124 BusinessTech (2 January 2024) 'Load shedding and blackout warning for 2024', BusinessTech. Available at: https://businesstech.co.za/news/energy/739825/load-shedding-and-blackout-warning-for-2024 (Accessed: 6 May 2024).

125 The Presidency of the Republic of South Africa (no date) *South Africa's Just Energy Transition Plan* (JET IP) 2023-2027. Available at: https://www.stateofthenation.gov.za/assets/downloads/climate/South%20Africa%20JET%20IP%202023-2027%20At-a-Glance.pdf (Accessed: 6 May 2024).

126 Prater, T. (2021) 'The Carbon Brief Profile: South Africa', *Carbon Brief*. Available at: https://www.carbonbrief.org/the-carbon-brief-profile-south-africa (Accessed: 6 May 2024).

127 Creamer, T. (29 September 2024) 'Jet pledges rise to $11.9bn as South Africa moves to Finalise Implementation Plan', *Engineering News*. Available at: https://www.engineeringnews.co.za/article/jet-pledges-rise-to-119bn-as-south-africa-moves-to-finalise-implementation-plan-2023-09-29 (Accessed: 6 May 2024).

128 Adams, MD. (2020) *A Competitiveness Analysis of The South African Manganese Industry Using Porter's Diamond Model*. Available at: https://wiredspace.wits.ac.za/server/api/core/bitstreams/559bb7bf-5810-4816-a6dd-45b507eed2ec/content (Accessed: 9 May 2024).

129 ECDPM (2023) 'Two years into South Africa's Just Energy Transition Partnership: How real is the deal?' Available at: https://ecdpm.org/work/two-years-south-africas-just-energy-transition-partnership-how-real-deal#index-4 (Accessed: 9 May 2024).

130 Corruption Watch (2018) *Mining Royalties Research Report 2018*. Available at: https://www.corruptionwatch.org.za/wp-content/uploads/2019/03/Mining-royalties-research-report-final1.pdf (Accessed: 6 May 2024).

Photo: Bus with passengers driving by power lines in South Africa at sunset.Credit: stevecoleimages, iStock.

affected communities, including the withholding of mining royalties by companies.[131] With unaddressed weaknesses in governance in the mining policy framework, there is an increased risk of corruption in the sector. In this context, expanding mineral extraction in connection to the energy transition without addressing systemic inefficiencies poses very real threats for local communities, the national economy and the public interest at large.

These concerns are exacerbated by the fact that much of the critical mineral reserves that are targeted in the JET-IP are found in the country's remote and less developed provinces. The vast majority of the 20 manganese mines in South Africa, for example, are located in the dry Kalahari Basin of Northern Cape Province. The Northern Cape has been a major mining province since the diamond rush of the 1870s. However, it continues to grapple with historical challenges, including inadequate infrastructure to support mining, illegal mining activities and the unjust displacement of indigenous communities by mining companies.[132] Auditor-General Tsakani Malulekehe's remarks that "the lives of the people in the Northern Cape are negatively affected by municipalities' inability to properly manage the resources under their control",[133] highlighting weakening regulatory capabilities and a decline in political and administrative leadership in the region.

In this context, the increase of demand for transition minerals can exacerbate illegal mining activities. Of particular concern is the apparent rise in the prevalence of organised illegal mining, especially in the chrome and copper sector, by large, sophisticated, internationally affiliated syndicates. Avaricious opportunists have already begun to take advantage of the growing demand for these minerals with

131 ibid.

132 Nkabane, N. (2023) *Remarks by the honourable deputy minister of Mineral Resource and Energy Dr Nobuhle Nkabane on the occasion of the Northern Cape Provincial Mining Investment Conference, 10th March 2022*, Kimberly. Office of the Premier, Province of the Northern Cape. Available at: http://www.northern-cape.gov.za/index.php/component/content/article?id=1690%3Aremarks-by-the-honourable-deputy-minister-of-mineral-resource-and-energy-dr-nobuhle-nkabane-on-the-occasion-of-the-northern-cape-provincial-mining-investment-conference-10th-march-2022-kimberley (Accessed: 6 May 2024).

133 O'Regan, V. (2023) 'AG slams northern cape municipalities' "inability to manage their resources"', *Daily Maverick*. Available at: https://www.dailymaverick.co.za/article/2023-06-02-auditor-general-slams-northern-cape-municipalities-inability-to-manage-their-resources/ (Accessed: 6 May 2024).

estimates suggesting that as much as 10% of annual chrome production (roughly 600,000 tonnes) depends on illegal mining.[134]

Surface-level mines in the north-eastern parts of the country have begun to spring up where chrome is first washed in local washing plants and then smuggled through neighbouring Mozambique or domestic ports eventually ending up in China.[135] With operators of these mining operations bypassing the legal supply chain, there are no accountability measures related to fiscal, environmental or social considerations.

This lack of accountability is exacerbated by the use of small-scale mining permits by large operations. Obtaining a mining permit in South Africa is a 5-step process comprising application lodging, community consultation, a compliance assessment, license approval, and then ultimately, prospecting and mining can occur.[136] The same process applies to small and medium to large scale mining, except that medium to large mining requires a further financial and technical capability check and an environmental impact assessment. The acquisition of small mine permits by mining operations which then operate beyond their concession and at scale has become a major concern in South Africa.

Transparency deficits in the National Fiscal Policy

The governance landscape at the national level poses a further layer of issues. In February 2023 the Financial Action Task Force (FATF), the global money laundering and terrorist financing watchdog, officially grey-listed South Africa, citing inadequate compliance with international standards around the prevention of money laundering, terrorist financing and nuclear, chemical or biological weapon proliferation financing. In addition, the FATF noted a lack of satisfactory beneficial ownership transparency, monitoring, investigation and financial intelligence, concerns which are echoed in corruption scandals relating to South African political and business leaders in the critical minerals sector.[137] These factors pose important threats to the implementation of the JET-IP by exacerbating the corruption risks present in the remote regions in which critical minerals are located.

Similarly, the role of the national energy distributor, Eskom, in South Africa's energy transition poses a set of risks for the JET-IP. Eskom is a state-owned enterprise that was once awarded for being the world's best power company by the Financial Times. As a result of widespread corruption, mismanagement and poor planning, however, it is now considered by many to be the biggest threat to South Africa's economy.[138] Tainted by scandal and heavily indebted, Eksom is poorly positioned to manage the huge new flows of finance that are required of the energy transition.

Ensuring a just energy transition in South Africa

The JET-IP represents a historic opportunity for South Africa. Given that South Africa has been more than prudent in adopting, implementing and complying with the requirements of the United Nations Framework Convention on Climate Change (UNFCCC) – the only legal instrument with codified funding opportunities so far – a serious consideration of new funding for the mineral and energy sector is a welcome opportunity. Yet, for the JET-IP to effectively herald a 'just' transition, serious challenges and risks remain.

134 Global Initiative Against Transnational Organized Crime (30 June 2022) 'The Shine Dims on South Africa's chrome as ruthless pirates muscle in on mining operations', Daily Maverick. Available at: https://www.dailymaverick.co.za/article/2022-06-30-the-shine-dims-on-south-africas-chrome-as-ruthless-pirates-muscle-in-on-mining-operations/ (Accessed: 6 May 2024).

135 Skrdlik, J. (27 June 2022) 'Illicit chrome mining economy thriving in South Africa', *Organised Crime and Corruption Reporting Project*. Available at: https://www.occrp.org/en/daily/16489-illicit-chrome-mining-economy-thriving-in-south-africa (Accessed: 6 May 2024).

136 Transparency International – Accountable Mining Program (2020) *Mining License Process Map: South Africa*. Available at: https://mining.transparency.org.au/wp-content/uploads/2020/06/South-Africa_mining-permit_V1_June-2020.pdf (Accessed: 6 May 2024)

137 Sguazzin, A. (2 March 2023) 'Vekselberg-linked firm helps pay for ANC's electoral conference', *Bloomberg*. Available at: https://www.bloomberg.com/news/articles/2023-03-02/vekselberg-linked-firm-helps-pay-for-anc-s-electoral-conference#xj4y7vzkg (Accessed: 6 May 2024).

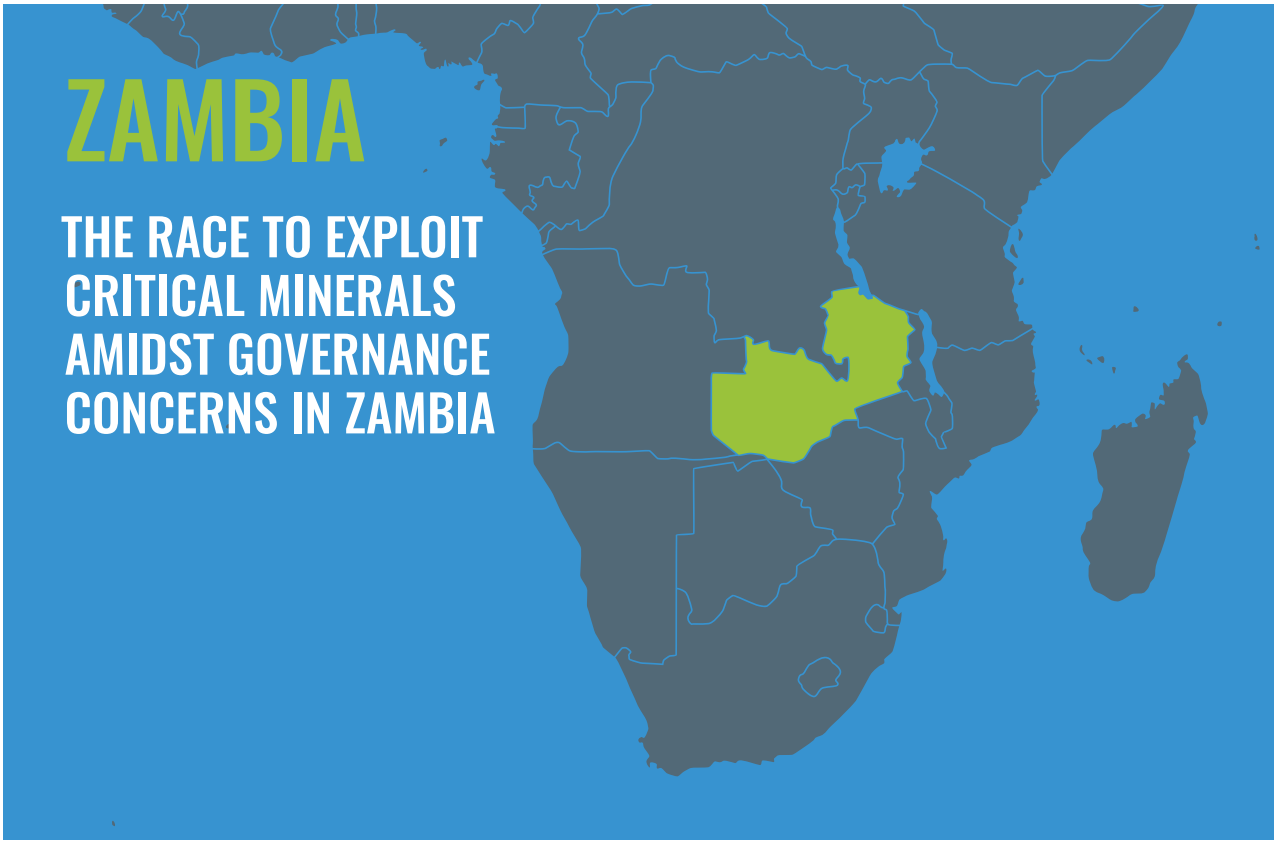
138 Sguazzin, A., Naidoo, P. and P. Burkhadt (27 September 2022) 'Eskom turns 100 next year - here's how it went from world best to SA's biggest economic risk', *News 24 Business*. Available at: https://www.news24.com/fin24/economy/eskom-turns-100-next-year-heres-how-it-went-from-world-best-to-sas-biggest-economic-risk-20220927 (Accessed: 6 May 2024).

Photo: Chrome and Platinum mine, North Eastern part of South Africa. Credit: Sunshine Seeds, Shutterstock.

The Minister of Forestry, Fisheries and Environment, Barbara Creecy, said "South Africa must act fast and implement the Just Energy Transition (JET) plan before competition for funds from other developing countries increases".[139] South Africa has certainly acted fast, but perhaps too fast. It was cautioned that the scramble for low carbon energy sources and that the financial incentives being offered to developing countries would result in ill-thought-out commitments and actions which would worsen already prevalent corruption.[140] In order to manage these risks, the South African government must strengthen governance in the sector or otherwise, the JET-IP risks jeopardising a 'just' transition that may never materialise.

139 Nyathi, M. (14 March 2023) 'Creecy: SA must act on just energy transition or lose out on funding', *The Mail & Guardian*. Available at: https://mg.co.za/environment/2023-03-14-creecy-sa-must-act-on-just-energy-transition-or-lose-out-on-funding/ (Accessed: 2 May 2024).

140 Carballo, A. E. and Sahla, S. (2022) *What Does the Energy Transition Mean for the Mining Sector?*, Transparency International, Accountable Mining Program Available at: https://transparency.org.au/what-does-the-energy-transition-mean-for-the-mining-sector/ (Accessed: 2 May 2024)



Zambia, a key global exporter of copper, is experiencing a mining boom in its copper and critical minerals sector as global demand grows. To meet this demand, Zambian policy has taken a decisive turn in recent years to attract foreign investment. This chapter analyses the context, as well as current challenges for mining sector governance in the country. As growing illegal mining in Zambian critical minerals attests, an array of issues that are symptomatic of the inadequacies of current governance frameworks to properly regulate the artisanal and small-scale mining sector, in addition to the long-standing environmental, social and governance issues that have long characterised large copper projects. In this context, the push to attract foreign investment despite flux in governance frameworks, as well as environmental frameworks, poses the potential for worsening governance and environmental risks.

Key commodities	Copper, Cobalt, Manganese, Nickel, Lithium, Gold, Emeralds, Coal
Percentage of worldwide reserves of key commodity (2023)	Copper: 2.10%
Corruption Perceptions Index (2024)	39
EITI membership status	Implementing Country. Joined in 2009.
Beneficial Ownership registry	Yes[141]
Key regulations & critical mineral strategies	National Critical Minerals Strategy (2024–2028)[142] Minerals Regulation Commission Act No. 14 of 2024[143] Three (3) Million Tonnes Copper Production Strategy (2023–2030) National Green Growth Strategy (2024–2030) Zambia – EU Strategic Partnership on sustainable raw materials value chains (2023)

Zambia has been mining for over a century, with copper being the predominant mineral export and a significant export earner for the country's economy. Over the years, the country has attempted to diversify the economy away from mining as well as add value to its exports, which are principally exported in raw form. This stems from the historical instability of copper prices, characterised by peaks and troughs that have had disruptive impacts on the economy.[144] However, in the wake of the energy transition, copper mining may continue to be the bedrock of Zambia's economy.

In addition to being Africa's second-largest copper producer, after the Democratic Republic of Congo (DRC), Zambia also has deposits of other 'transition minerals': cobalt, nickel, manganese[145] and recently discovered lithium.[146] Despite Zambia's minerals endowments and its century long track record in mining, it is arguable that mining has done very little to ensure inclusive and sustainable growth.

Simultaneous problem-fixing and intensifying mining

The new administration elected in 2021 has focused on growth in the mining sector, reversing the policies of the previous government in an effort to attract foreign investment in the sector. This includes the introduction of targeted incentives and an array of reforms that seek to spur mining investment and production. Key to this reorientation of policy is the restructuring of the mineral royalty regime undertaken through the Mines and Minerals Development Act, which seeks to attract investment by reducing taxation in the copper sector. Forecast at a cost to the state of US$140 million in net revenue losses, the reduction of taxes in copper mining is justified by government as the cost of reclaiming Zambia's position as the continent's top copper producer.[147]

Accompanying the Mines and Minerals Development Act, the Ministry of Mines launched the National Mineral Resources Development Policy in late 2022. The Policy aspires to address persistent challenges in the sector pertaining to geological mapping and exploration, licensing, artisanal and small-scale mining and environmental management, among other concerns.[148] The government is also in the process of introducing legislative reforms to establish a commission to regulate mineral resources,[149] called the Minerals Regulation Commission.[150] This Commission, now passed by Parliament, and assented to by the Republican President, will be responsible for mining licensing as well as monitoring and regulation of mining rights. Subsequently, the government also intends to enact the Geological and Minerals Development Act, which will provide for issues related to geological mapping, mineral development, artisanal and small-scale mining and general policy direction. The administration has also developed the National Critical Minerals Strategy following the country's

141 Beneficial owner information can be accessed through the PACRA Business Search Registry, available at https://search.pacra.org.zm, for a fee of approximately US$4 per company search.

142 At the time of publishing, the link to the National Critical Minerals Strategy (2024-2028) on the Ministry of Mines and Minerals Development is incorrectly linked to the National Mineral Resources Development Policy. See Ministry of Mines and Minerals Development. Available at: https://www.mmmd.gov.zm/?page_id=3168

143 Republic of Zambia (2024) *Minerals Regulation Commission Act No. 14 of 2024*. Available at: https://www.parliament.gov.zm/sites/default/files/documents/acts/Act%20No.%2014%20of%202024%20The%20Mineral%20Regulation%20Commission.pdf (Accessed: 18 February 2025).

144 Sikamo, J., Mwanza, A., & Mweemba, C. (2016) 'Copper mining in Zambia - history and future', *Journal of the Southern African Institute of Mining and Metallurgy*, 116(6), 491-496.

145 Zambia Extractive Industries Transparency Initiative (2023) *Final Report*. Available at https://eiti.org/documents/zambia-2022-eiti-report (Accessed: 5 May 2024)

146 Presidential Delivery Unit (5 February 2024) 'Largest Copper Deposits in 100 Years Discovered in Zambia – HH's Mining Policies Paying Off in a Big Way'. *Government of Zambia*. Available at https://www.pdu.gov.zm/blog/largest-copper-deposits-in-100-years-discovered-in-zambia-hhs-mining-policies-paying-off-in-a-big-way (Accessed: 5 May 2024).

147 2023 National Budget Speech delivered on 30 September 2022 by the Minister of Finance and National Planning, Republic of Zambia. Available at https://www.parliament.gov.zm/node/10630

148 Jalasi,J., Howie, R. & Ziyaeval, D. (2023) 'A glance into recent changes impacting miners in Zambia', *Canadian Mining Journal*. Available at https://www.canadianminingjournal.com/featured-article/a-glance-into-recent-changes-impacting-miners-in-zambia/

149 On the origins of the commission, see comments by the Permanent Secretary at the Ministry of Mines and Minerals Development, Government of Zambia as reported on March 12, 2020 by ZCCM Investments Holdings PLC News blog available at

Photo: A surveyor at an open-pit copper mine in Zambia. Credit: Michael Fuller, iStock.

Cabinet approval to declare critical minerals like copper, cobalt, lithium, manganese etc. as 'strategic minerals' in 2023.[151]

Some of these measures, particularly pertaining to tax incentives, have been met with scepticism. These efforts notwithstanding, a number of governance risks persist, for example: a lack of comprehensively geologically mapped data, a weak Public Private Partnership model, opacity in the awarding of mining licences and a largely informal artisanal and small-scale mining sub sector. These challenges undermine the government's aspirations for the sector, particularly with the projected increased demand for critical minerals for which the country's mining regime, in its current form, is ill-prepared. Moreover, the country is also grappling with a substantial debt challenge that the incumbent government has been working to resolve through debt restructure arrangements and agreements.

These challenges have been aggravated by an energy crisis due to a climate change-induced drought that was experienced in the country in 2024, given that Zambia generates over 80 percent of its electricity from hydro generated power. The country is still reeling from the effects, which not only affected electricity availability for households but also has had significant repercussions on the mining sector.[152]

The critical minerals rush – the new gold rush?

Zambia still struggles with several challenges in its extractives sector. Recognising the scale of mismanagement in licensing, the Ministry of Mines

https://www.zccm-ih.com.zm/2020/03/12/zambia-hints-of-setting-up-commission-to-regulate-mineral-resources/ (Accessed: 5 May 2024)

150 See The Minerals Regulation Commission Bill, 2024 on the Zambian Government's website. Available at: https://www.parliament.gov.zm/sites/default/files/documents/bills/THE%20MINERALS%20REGULATION%20COMMISSION%20BILL%2C%202024.pdf

151 This is discussed by Joseph Alexander Jalasai, Chamas Simbeye and Wana Chinyemba in their Mining Law Blog on January 31st, 2024. Available at: https://www.dentonsmininglaw.com/mining-reforms-coming-in-zambia-2024/

152 Nhede, N. (14 November 2024) 'Zambia Targets Hydropower Expansion for Mining Operations', *Energy Capital & Power*. Available at: https://energycapitalpower.com/zambia-targets-hydropower-expansion-for-mining-operations/ (Accessed: 19 February 2025).

and Minerals Development suspended mining licence issuance in February 2022 for eight months in order to audit licenses and address purported corruption and speculative behaviour in the sector.[153] The suspension affected exploration and mining licensing projects for all minerals that were to be approved and granted at the time but did not affect existing projects. Mining licence issuance only resumed in November 2022 with a backlog of over 2000 licence applications.[154] Moreover, in April 2024 the Ministry of Mines cancelled over 2600 mining and non-mining rights due to non-compliance to various requirements of the mining law.[155]

In 2022, the government announced its plans to increase copper production with a target of 3 million tonnes by the year 2031.[156] This will be a colossal feat given that current copper production was stated to be 820,676.34 tonnes in 2024, an increase from approximately 732,583.45 tonnes in 2023.[157] Copper production had dropped from 837,003 metric tonnes in 2020 to 763,550 metric tonnes in 2022,[158] due to a combination of COVID and operational issues with some large mining projects on the Copperbelt. Reaching the government's ambitions will require ramping up copper production by over threefold through the expansion of copper mines as well as new copper mining projects amidst a power deficit.

As a result of this push to increase production and leverage the projected boom in demand for critical minerals, the country is 'open for business' as reiterated by the Republican President as well as the Minister of Mines and Minerals Development during the Annual Mining Indabas held in Cape Town in 2022 and 2023 respectively.

Of note – and in spite of the challenges faced in the mining sector – the Minister of Mines whilst addressing a Ministerial Symposium during the 2023 Mining Indaba stated that Africa should focus on exploring its mineral wealth as opposed to 'wasting time' on negotiations. This suggests a focus on rapid growth in the sector, even if it comes at the cost of crucial accountability measures such as consultation with local communities and civil society.

"We need to stop wasting time on the negotiating table. Africa has a lot of minerals that need to be mined. The continent risks losing out if we delay in mining the minerals," –

Minister of Mines and Minerals Development.[159]

A boom in critical mineral investments

With the ambitious target set for 3 million tonnes of copper production by 2031, the government has developed a strategy specifically for copper production which entails an unprecedented expansion and increase in greenfield and brownfield copper mineral projects.

The government has since launched a country-wide high resolution geophysical survey aimed at enhancing the geological and mineral mapping of the country. This is a massive undertaking that requires huge financial investments. As a result, the government has embarked on this exercise through

153 Lusaka Times (23 February 2022) Minister Suspends Issuance of Mining Licenses due to Corruption, We Inherited a Rotten System, 'Lusaka Times'. Available at https://www.lusakatimes.com/2022/02/23/minister-suspends-issuance-of-mining-licenses-due-to-corruption-we-inherited-a-rotten-system/#google_vignette (Accessed: 24 May 2022).

154 Ministry of Mines and Minerals Development (11 May 2023) *Processing and issuance of mining licences will improve – Kabeta* [media release]. Available at: https://www.mmmd.gov.zm/?p=2538

155 Zambia Legal (18 April 2024) 'Mines Act breach: Over 2600 mining and non-mining rights cancelled in Zambia', *Zambia Legal*. Available at: https://zambia-legal.com/mines-act-breach-over-2600-mining-and-non-mining-rights-cancelled-in-zambia/ (Accessed: 19 February 2025); See Ministeral Public Notice. Available at: https://www.mmmd.gov.zm/?p=2787

156 Editorial (1 November 2022) 'Zambia's target to increase copper Production to 3 million tonnes in the next ten years is attainable', *Lusaka Times*. Available at https://www.lusakatimes.com/2022/11/01/zambias-target-to-increase-copper-production-to-3-million-tonnes-in-the-next-ten-years-is-attainable/ (Accessed: 24 May 2024)

157 See Media statement by the Minister of Mines and Minerals Development, Honourable Paul C. Kabuswe, MP, at the press briefing on the performance of the mining sector in 2024. Available at: https://www.mmmd.gov.zm/?p=3792

158 Zambia Extractive Industries Transparency Initiative (2023) *Final Report*, page 15. Available at https://eiti.org/documents/zambia-2022-eiti-report (Accessed: 5 May 2024)

159 Quoted in Phiri, L. (2023) 'Zambia leveraging vast mineral wealth – Kabuswe', *The Daily Nation*, February 7th. Available at https://dailynationzambia.com/2023/02/zambia-leveraging-vast-mineral-wealth-kabuswe/ (Accessed: 24 May 2024).

Photo: Copper and Malachite in Zambia. Credit: Africanway, iStock

partnerships and memorandums of understanding.[160] This raises concerns around data sovereignty and conflict of interest issues given the lucrative information at stake.

Over the last three years, Zambia has seen a substantial increase in mining investment owing to renewed confidence by investors in the new administration's reforms to enhance the business environment. This investment is estimated to be worth about US10 billion. These investments are notably in the exploration and extraction of minerals key to the energy transition, and include:

- The expansion of three distinct copper mining projects in the Northwestern province. One worth US$1.25 billion, which was approved in 2022;[161] another worth US$2 billion, the feasibility study for which is scheduled to be completed in 2024.[162] In addition, a recently launched US$2 billion project is expected to commence in 2025.[163]
- A US$150 million investment in copper and cobalt minerals exploration and development in the Copperbelt province that will utilise innovative technological advancements in artificial intelligence and machine learning in the discovery of minerals.[164] This project is being undertaken by a Silicon Valley start-up backed by prominent billionaires and announced that it has discovered the largest copper deposits ever recorded in the history of mining in Zambia at its Mingomba exploration project in the Copperbelt province.[165]

160 Ministry of Mines and Minerals Development of Zambia (17 September 2024) *Zambia and Finland Strengthen Partnership through a Memorandum of Understanding on Geological Data Quality Assurance*. Available at: https://www.mmmd.gov.zm/?p=3376

161 Reuters (9 May 2022) 'First Quantum Minerals approves $1.25 billion mine expansion in Zambia', *Reuters*. Available at https://www.reuters.com/world/africa/first-quantum-minerals-approves-125-bln-mine-expansion-zambia-2022-05-09/ (Accessed: 24 May 2024)

162 See Barrick (4 October 2023) *Barrick strengthens Zambia partnership, invests in major expansion of Lumwana Mine* [medial release]. Available at https://www.barrick.com/English/news/news-details/2023/barrick-strengthens-zambia-partnership-invests-in-major-expansion-of-lumwana-mine/default.aspx (Accessed: 24 May 2024)

163 Barrick (2024) 'Lumwana's Super Pit Expansion Officially Launched', *Barrick*. Available at: https://www.barrick.com/English/news/news-details/2024/lumwana-super-pit-expansion-officially-launched/default.aspx (Accessed: 19 February 2025).

164 See Mining for Zambia (2023) 'On the ground in Mingomba'. Available at https://miningforzambia.com/on-the-ground-at-mingomba/ (Accessed: 24 May 2024).

- The opening of the 'largest Nickel Mine in Africa' in the Northwestern province. The project was launched in 2022 and is worth an approximate investment of US$250 million.[166]
- The signing of a memorandum of understanding with the Democratic Republic of Congo for the processing and manufacturing of electric vehicle batteries in 2022.[167] The initiative is aimed at ensuring value addition for the two resource-rich countries and has received support from the US Department of State with the three parties signing a memorandum of understanding in December 2022.[168]
- The signing of memorandums of understanding with the European Union through strategic partnership agreements on critical raw materials value chains including to develop the 'Lobito Corridor' – a transport corridor to connect DRC and Zambia to global markets via the Port of Lobito in Angola.[169]

In pursuing the 2031 copper target, the administration has also put considerable effort in to bringing back online some major copper projects located in the Copperbelt province, some of which were entangled in legal issues, partly stemming from the challenges faced by these mining projects during the COVID pandemic. The first of these, the Konkola Copper Mines project, was subject to court proceedings instigated by the Zambian government seeking liquidation of Konkola Copper in 2019 in relation to a number of financial and operational concerns. The new government, however, was able to negotiate with majority stakeholder, Indian mining company Vedanta, and resolve the dispute.[170] In 2024, Vedanta committed to investing US$1 billion in the project, resuming operations with ambitious targets to expand production.[171]

The second, Mopani Copper Mines, announced that it would be closing due to the pandemic and low copper prices.[172] This led to the government negotiating with key investor, Glencore, for the purchase of a majority stake in Mopani by Zambia Consolidated Copper Mines Investment Holdings (ZCCM-IH), the State-Owned Enterprise that manages the state's mining interests and shareholdings.[173] In 2024, the government announced that a United Arab Emirates (UAE) investor had acquired 51 percent of the shares in Mopani Copper Mines through an investment of more than US$1 billion which transferred control of the mine to foreign ownership.[174] This transaction

165 See Lusaka Time's (6 February 2024) 'KoBold Metals Unveils Monumental Copper Discovery in Zambia'. Available at https://www.lusakatimes.com/2024/02/06/kobold-metals-unveils-monumental-copper-discovery-in-zambia/ (Accessed: 24 May 2024)

166 Muzala, L. (2022) 'Zambia launches Africa's largest nickel mine'. *Zambia Chamber of Mines*. Available at http://mines.org.zm/zambia-launches-africas-largest-nickel-mine/?doing_wp_cron=1717118753.3510921001434326171875 (Accessed: 24 May 2024)

167 UNECA (29 April 2022) 'Zambia and DRC sign cooperation agreement to manufacture electric batteries. UN Economic Coordination for Africa'. Available at https://www.uneca.org/stories/zambia-and-drc-sign-cooperation-agreement-to-manufacture-electric-batteries (Accessed: 24 May 2024)

168 Lusaka Times (19 January 2023) 'USA releases MoU on Zambia, Congo EV value chain'. Available at https://www.lusakatimes.com/2023/01/19/usa-releases-mou-on-zambia-congo-ev-value-chain/ (Accessed: 24 May 2024)

169 European Commission (2023) 'Global Gateway: EU sings strategic partnerships on critical raw materials value chains with DRC and Zambia and advances cooperation with US and other key partners to develop the "Lobito Corridor"'. Available at https://ec.europa.eu/commission/presscorner/detail/en/ip_23_5303 (Accessed: 24 May 2024)

170 Mckay, D. (2 September 2023) 'Vedanta reinstated as owner of Konkola Copper ending four years of colourful sparring', miningmx. Available at: https://www.miningmx.com/news/base-metals/54406-vedanta-reinstated-at-konkola-copper-ending-four-years-of-colourful-sparring/

171 Africa News (9 September 2023) 'Zambia: Largest copper mine dodges liquidation'. Available at: https://www.africanews.com/2023/09/09/zambia-largest-copper-mine-dodges-liquidation//

172 Jamasmie, C. (2020) 'Zambia: Glencore to close copper mining operations for three months citing low commodity prices and coronavirus pandemic', *Business & Human Rights Resource Centre*. Available at: https://www.business-humanrights.org/en/latest-news/zambia-glencore-to-close-copper-mining-operations-for-three-months-citing-low-commodity-prices-and-coronavirus-pandemic/ (Accessed: 21 January 2025).

173 Chifunda, E. (21 November 2024) *Ministerial statement by Honourable Paul C. Kabuswe, MP, Minister of Mines and Minerals Development on the full details of the transaction between ZCCM Investments Holdings PLC (ZCCM-IH) and International Resources Holdings (IRH) involving Mopani Copper Mines PLC*. Ministry of Mines and Mineral Development. Available at: https://www.mmmd.gov.zm/?p=3520 (Accessed: 21 January 2025).

174 Bloomberg News (22 December 2023) 'Abu Dhabi's IRH to invest $1.1 billion in Mopani copper mine', *Mining.com*. Available at: https://www.mining.com/web/abu-dhabis-irh-to-invest-1-1-billion-in-zambias-mopani-copper-mines/

attracted some controversy due to questions around the legality of selling state assets without parliamentary approval.[175] The administration has also more recently reopened a copper mining project that was closed for over 40 years[176] in Northwestern province and dewatered another copper mine that was dormant for nearly 20 years in the Copperbelt province.[177]

The government also seeks to enhance value addition in the mining sector by pursuing similar partnerships and initiatives such as the one with the DRC on EV batteries and through the EU strategic partnerships on critical materials. Thus far, a number of engagement meetings have been held by government with partners and investors, in addition to the development of roadmaps and feasibility studies, which should be underway for the above mining investment projects.

Moreover, the government's appetite to increase and secure the state's stake in the sector has significantly increased. This can be seen by the proposal to create a special purpose vehicle (SPV) that will manage the government's interest in mining, particularly greenfield projects. This would entail the government controlling and having access to a significant percentage of minerals produced in the country.[178] This proposed increase in government's stake in mining investment has raised concerns from both industry and civil society, albeit for different reasons. Further, it remains to be seen if the government will impose some forms of restrictions or bans on the exportation of critical mineral ores akin to other neighbouring countries such as DRC, Namibia, Malawi and Zimbabwe.[179]

Corruption risks for transition minerals earmarked for ASM

Unlike copper and cobalt mining which are largely formalised and large-scale projects, mining of other minerals including manganese and lithium has seemingly been relegated to the artisanal and small-scale mining (ASM) subsector.[180] For some time, successive governments have pursued plans to formalise the sector, with the current government in the process of developing a model for formalisation. However, the ASM subsector remains highly informal, which presents its own challenges and exacerbates an array of governance risks amidst the energy transition. For the most part, manganese and lithium exploration and extraction, which are fairly new frontiers for Zambia's mining sector, present unique challenges of their own. To seemingly get a handle on these challenges, the government has proposed strategies specifically for the ASM sector and manganese subsector.

Zambia's manganese production has been steadily increasing. Despite a slump in 2019 and 2020, manganese production doubled over a ten-year period, from approximately 65,000 tonnes in 2012 to over 130,000 tonnes in 2021. Zambia also reportedly exported manganese ore valued at US$34 million in 2021, which made it the twelfth largest exporter in the world.[181]

However, the extraction of manganese raises a number of issues local communities. Extraction of manganese is typified by illegal mining that is symptomatic of the inadequacies of the Ministry of

175 Sichula, A. (23 March 2024) 'President Hichilema accused of breaching constitution in sale of Mopani Copper mine', *Zambia Monitor*. Available at: https://www.zambiamonitor.com/president-hichilema-accused-of-breaching-constitution-in-sale-of-mopani-copper-mine/

176 Dowling, S. (19 May 2023) 'Australia lags the world in fund disclosure', *Morningstar*. Available at https://www.morningstar.com.au/insights/funds/235363/australia-lags-the-world-in-fund-disclosure (Accessed: 17 June 2024).

177 Constance (2024) 'President Hichilema Launches Revitalization of Luanshya Copper Mines', *Copperbelt Katanga Mining*. Available at: https://copperbeltkatangamining.com/president-hichilema-launches-revitalization-of-luanshya-copper-mines/ (Accessed: 19 February 2025).

178 First Mining DRC – ZAMBIA (2024) 'Zambia to establish special purpose vehicle for mining investments and trading', *First Mining DRC – ZAMBIA*. Available at: https://fmdrc-zambia.com/zambia-to-establish-special-purpose-vehicle-for-mining-investments-and-trading/ (Accessed: 19 February 2025).

179 Tevoedjre, E. (24 February 2023) 'Could the African Union soon be irrelevant?', *WATHI*. Available at: https://www.wathi.org/laboratoire/tribune/could-the-african-union-soon-be-irrelevant/ (Accessed: 21 January 2025).

180 Ministry of Mines and Minerals Development (2022) *The National Mineral Resources Development Policy 2022*, Republic of Zambia.

181 Observatory of Economic Complexity (OEC) (no date) *Manganese Ore in Zambia*, The Observatory of Economic Complexity. Available at: https://oec.world/en/profile/bilateral-product/manganese-ore/reporter/zmb (Accessed: 21 January 2025).

Photo: Conveyor belts feed broken rock into two different stockpiles (oxides and sulphides) at an open-pit copper mine in Zambia.
Credit: Africanway, iStock.

Mines to properly regulate and oversee the ASM subsector.[182] As well as health and related social consequences due to the extraction methods used by artisanal, small-scale and illegal miners,[183] local communities report an array of issues related to environmental degradation, including the pollution of water ways with mining effluent, which affects downstream communities as well as those that host mining operations.[184] Further, the lack of transparency in the issuing and awarding of mining rights has resulted in host communities' loss of land rights and displacements due to the tenuous land rights and tenure in rural areas, thereby disrupting livelihoods.[185]

In early 2023, reports of the discovery of lithium in the southern part of the country triggered an influx of people to the area looking to monetise the opportunity.[186] This was a seemingly unexpected discovery as the government now plans to include lithium ore in the country's Mineral Analysis database, in addition to determining the quantities being mined in the area.[187] Being a newly found ore for the country, it is unclear if the government will develop a specific strategy pertaining to licensing of lithium projects, valuation of the ore for exportation, or value addition initiatives.

182 Steenkamp C, N. (1 September 2023) 'There is more to Zambian mining than copper', *African Mining Online*. Available at: https://www.africanmining.co.za/2023/09/01/there-is-more-to-zambian-mining-than-coppe/ (Accessed: January 21 2025).

183 Sinkala, Z. (2023) 'Price of jobs in Zambian manganese mine: Parkinson's-like brain damage', *TRT Afrika*. Available at: https://trtafrika.com/africa/price-of-jobs-in-zambian-manganese-mine-parkinsons-like-brain-damage-13099470 (Accessed: 21 January 2025)

184 Nkala, O. (16 April 2024) 'Zambia tallies the costs of mining for electric batteries', *Oxpeckers*. Available at: https://oxpeckers.org/2024/04/zambia-electric-vehicles/ (Accessed: January 21 2025).

185 Mkandawire R. (2019) 'An Investigation of Political Conflict in Land Acquisition in Zambia: A Case Study of Mansa District of Luapula Province of Zambia'. MSc. Diss., University of Zambia.

186 Copperbelt Katanga Mining (19 January 2023) 'Residents of Sinazongwe & Zimba in Dispute Over Lithium Discovery', *Copperbelt Katanga Mining*. Available at: https://copperbeltkatangamining.com/residents-of-sinazongwe-zimba-in-dispute-over-lithium-discovery/ (Accessed: 22 January 2025).

187 Moses (7 January 2023) 'Lithium ore to be included in the mineral analysis database-Kabuswe', *Solwezi Today Magazine*. Available at: https://solwezitoday.com/lithium-ore-to-be-included-in-the-mineral-analysis-database-kabuswe/ (Accessed: 19 January 2023).

Exercising caution

In the meantime, civil society, including Transparency International (TI) Zambia,[188] remains cautious given the mammoth task the government is facing to appease investors in the sector, at the same time ensuring transparency and greater societal benefits for Zambia. Moreover, civil society actors were vocal in ensuring that the government develops a specific strategy for the exploration and extraction of critical minerals. Subsequently, the Zambian Government released the *National Critical Minerals Strategy 2024–2028* in August 2024,[189] following a stakeholders' meeting that was convened by the Ministry of Mines in February 2024.

As one of the chapters implementing the Accountable Mining Programme, TI Zambia undertook a Mining Awards Corruption Risk Assessment (MACRA) in 2018 which highlighted corruption risks pertaining to licensing, contracting and permitting, beneficial ownership, environmental and social impact assessments as well as community consultation and participation. Most of these governance risks persist and are yet to be adequately addressed. The major concern at present is that the government's dual approach to remedy the risks and challenges whilst increasing investment and production in the sector amidst the transition could undermine reforms aimed at enhancing governance in the sector.

188 Transparency International Zambia (17 May 2022) 'TI-Z Urges Government to Ensure Transparency in Mining Sector', *Transparency International Zambia*. Available at: https://tizambia.org.zm/2022/05/ti-z-urges-government-to-ensure-transparency-in-mining-sector/ (Accessed: 21 January 2025).

189 Sichula, A. (30 August 2024) 'Zambia unveils ambitious copper, critical minerals strategies to meet projected 3 million tonnes target per annum', *Zambia Monitor*. Available at: https://www.zambiamonitor.com/zambia-unveils-ambitious-copper-critical-minerals-strategies-to-meet-projected-3-million-tonnes-target-per-annum/ (Accessed: 22 January 2025).

ANNEX 1

Mineral database methodology

In 2024, the Transparency International Australia (TIA) Accountable Mining Programme (AMP) team developed a global mineral reserves database to visualise the percentage of global critical mineral reserves and production located in countries of weak governance as measured by perceived levels of corruption. This involved importing data from the *Mineral Commodity Summaries (2024) from the U.S. Geological Survey Mineral Commodity Summaries 2024 Data Release (ver. 2.0, March 2024)*,[190] which provides salient U.S. statistics and world production statistics for over 88 nonfuel mineral commodities.

The database focuses on fourteen critical minerals – bauxite, chromium, cobalt, copper, graphite (natural), lithium, manganese, molybdenum, nickel, rare earths, tin, titanium mineral concentrate, titanium and titanium dioxide, and zinc. These were compiled into a structured World Data summary sheet entitled.

By linking country mineral data to their respective 2024 Corruption Perceptions Index (CPI) scores, the team derived the percentage of global mineral resources in countries with a CPI score lower than the 2024 global average of 43. The data was then used to produce Pivot Tables and a variety of data visualisations.

190 Authors own calculations using U.S. Geological Survey Mineral Commodity Summaries 2024 Data Release (2024) Available at: https://doi.org/10.5066/P144BA54 and Corruption Perceptions Indicator 2024 (CPI), Transparency International (2025).

ANNEX 2

Table 1 – Summary of case studies, reserves and governance scores

Country	Corruption Perceptions Index (CPI) Score (2024)	EITI Membership Status[191]	Mineral	Percentage of global mineral reserves (2023)	Percentage of global mineral production (2023)
Argentina	37	Implementing Country	Molybdenum	0.69%	0.00%
			Lithium	13.00%	5.20%
Australia	77	Supporter	Nickel	18.32%	4.49%
			Bauxite	11.76%	24.80%
			Molybdenum	4.74%	0.19%
			Lithium	22.39%	46.57%
			Manganese	26.21%	15.08%
			Cobalt	16.15%	2.01%
			Copper	9.99%	3.76%
			Tin	14.52%	3.13%
			Zinc	28.57%	9.03%
			Titanium (ilmenite) Mineral Concentrates	25.91%	4.65%
			Titanium (rutile) Mineral Concentrates	63.37%	35.84%
			Rare Earths	4.94%	5.09%
Colombia*	39	Implementing Country	N/A	N/A	N/A
Indonesia	26	Implementing Country	Nickel	41.97%	50.48%
			Bauxite	3.36%	5.06%
			Cobalt	47.75%	7.41%
			Copper	2.40%	3.90%
			Tin	–	17.89%
Madagascar	26	Implementing Country	Graphite (natural)	8.57%	6.30%
			Cobalt	0.95%	1.74%
			Titanium (ilmenite) Mineral Concentrates	47.75%	3.72%
			Titanium (rutile) Mineral Concentrates	2.40%	0.00%
			Rare Earths	–	0.27%
South Africa	41	Implementing Country	Manganese	31.45%	36.20%
			Zinc	2.77%	1.89%
			Titanium (ilmenite) Mineral Concentrates	4.03%	11.62%
			Titanium (rutile) Mineral Concentrates	11.04%	17.92%
			Chromium	36.70%	43.48%
			Rare Earths	0.68%	0.00%
Zambia	39	Implementing Country	Copper	2.10%	3.53%

191 Authors own calculations using U.S. Geological Survey Mineral Commodity Summaries 2024 Data Release (2024) Available at: https://doi.org/10.5066/P144BA54 and Corruption Perceptions Indicator 2024 (CPI), Transparency International (2025).

**Note: commodity data for Colombia was not included in the U.S. Geological Survey Mineral Commodity Summaries 2024 Data Release (2024) for the selected minerals.*

Table 2 – Percent of global reserves of fourteen selected minerals in countries with a 2024 Corruption Perceptions Index (CPI) score below the 2024 global average of 43.

	CPI Score (2024)	Bauxite	Chromium	Cobalt	Copper	Graphite (natural)	Lithium
Argentina	**37**						13.00%
Bolivia	**28**						
Brazil	**34**	9.07%				26.43%	1.41%
China	**43**	2.39%			4.10%	27.86%	10.83%
Cuba	**41**			4.75%			
Democratic Republic of the Congo	**20**			56.99%	8.00%		
Gabon	**27**						
Ghana	**42**						
Guinea	**28**	24.86%					
India	**38**	2.18%	14.50%			3.07%	
Indonesia	**37**	3.36%		4.75%	2.40%		
Iran	**23**						
Kazakhstan	**40**	0.54%	42.21%		2.00%		
Kenya	**32**						
Korea, North	**15**					0.71%	
Madagascar	**26**				0.95%		8.57%
Mexico	**26**				3.50%	1.11%	
Mozambique	**25**					8.93%	
Myanmar	**16**						
Papua New Guinea	**31**			0.47%			
Peru	**31**				11.99%		
Phillipines	**33**			2.47%			
Russia	**22**	1.61%		2.37%	8.00%	5.00%	
Sierra Leone	**33**						
South Africa	**40**		36.70%				
Sri Lanka	**32**					0.54%	
Tanzania	**41**					6.43%	
Turkey	**34**	0.21%	4.95%	0.86%		2.46%	
Ukraine	**35**						
Uzbekistan	**32**						
Vietnam	**40**	19.49%					
Zambia	**39**				2.10%		
Zimbabwe	**21**						1.12%
Grand Total		**63.71%**	**98.36%**	**73.61%**	**43.87%**	**91.11%**	**26.36%**

Manganese	Molybdenum	Nickel	Rare Earths	Tin	Titanium (ilmenite) Mineral Concentrates	Titanium (rutile) Mineral Concentrates	Zinc
	0.69%						
				9.37%			
14.15%		12.21%	18.20%	9.83%	6.19%		
14.68%	39.82%	3.21%	38.12%	25.76%	30.22%		19.64%
				2.81%			
3.20%							
0.68%							
1.78%			5.98%		12.23%	13.40%	3.30%
		41.97%					
	0.30%						
0.26%							2.99%
					0.02%	0.13%	
					3.89%	0.94%	
0.26%	0.89%						6.25%
					3.17%	1.30%	
				16.39%			
	10.30%			3.04%			9.38%
		3.66%					
	7.55%	6.33%	8.66%	10.77%			11.16%
						5.25%	
31.45%			0.68%		4.03%	11.04%	2.77%
			0.77%				
	0.36%						
7.34%					0.85%	4.53%	
	0.14%						
			19.06%	0.26%	0.23%		
73.79%	**60.04%**	**67.38%**	**91.48%**	**78.23%**	**60.82%**	**36.59%**	**55.49%**

NOTES

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