11TH G20 PARLIAMENTARY SPEAKERS' SUMMIT

P20 SOUTH AFRICA 2025

PARLIAMENT OF THE REPUBLIC OF SOUTH AFRICA

HARNESSING CRITICAL MINERALS FOR INCLUSIVE GROWTH AND SUSTAINABLE DEVELOPMEN

18 August 2025

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Harnessing Parliamentary Diplomacy for the Realization of Global Solidarity, Equality, and Sustainability

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ACRONYMS

ABI:	Africa Battery Initiative
AfCFTA:	African Continental Free Trade Area
AIDA:	Accelerated Industrial Development for Africa
AMDC:	Africa Minerals Development Centre
AMSG:	African Minerals Strategy Group
CAHRA:	Conflict Affected and High-Risk Areas
COMESA:	Common Market for Eastern and Southern Africa
COP:	Conference of the Parties
DRC:	Democratic Republic of Congo
EAC:	East African Community
EITI:	Extractive Industries Transparency Initiative
ESG:	Environment Social and Governance
EV:	Electric Vehicles
IEA:	International Energy Agency
LCE:	Lithium Carbonate Equivalent
MSP:	Minerals Security Partnership
NMC:	Nickel Manganese Cobalt
PGM:	Platinum Group Metals
SADC:	Southern Africa Development Community
SDG:	Sustainable Development Goals
TFTA:	Tripartite Free Trade Area

KEY CONSIDERATIONS

- Critical minerals are essential enablers of the global energy transition, digital infrastructure and the shift toward sustainable development. Minerals such as lithium, cobalt, nickel, and rare earth elements underpin the technologies needed for achieving international climate goals. As such, they are closely linked to several Sustainable Development Goals, particularly SDG 7 (Affordable and Clean Energy), SDG 9 (Industry, Innovation and Infrastructure), and SDG 13 (Climate Action).
- Critical mineral development also offers a unique opportunity to drive inclusive economic growth, especially in resource-rich but economically vulnerable regions. Globally, the rising demand for minerals essential for green technologies and digital infrastructure presents a pathway to create jobs, enhance industrial diversification, and reduce poverty.
- However, the current global value chain is highly concentrated. Resource-rich nations like the Democratic Republic of Congo (cobalt), Indonesia (nickel), and Chile (lithium) lead in raw material supply, while countries like China, the U.S., and EU members dominate the high-value stages of refining, manufacturing, and innovation.
- The geographic concentration of critical minerals creates significant supply chain vulnerabilities, geopolitical risks, and market distortions, prompting global efforts to diversify sources and promote regional value addition, especially in the Global South.
- Equally, geographic concentration of critical minerals creates notable opportunities for resources rich countries to contribute to the diversification of supply chains by offering alternative supply options and collaborating with resource consuming countries on exploration, mining technology and innovation and down-stream value addition
- The Global South countries are increasingly asserting resource nationalism, with new policies demanding greater State participation, value addition, and environmental oversight. Their strategic importance lies in both reserves and their efforts to diversify global supply amid rising demand.
- The policy frameworks, international best practice standards, and strategic partnerships between various countries are promising for harnessing critical minerals for inclusive growth and sustainable development but remain fragmented and uncoordinated resulting in regulatory gaps and uneven progress for the Global South.
- The concern is that the pace of clean energy expansion may outstrip supply chain reform efforts. Therefore, without strategic coordination and policy reform, the Global South risks becoming locked into a new form of resource dependency, missing out on the opportunities of the critical minerals market, external exploitation, echoing historical patterns.
- Parliamentarians can therefore address the multilateral gaps and advocate for comprehensive global governance framework for critical minerals. Further, Parliamentarians should consider exercising effective parliamentary diplomacy to ensure development of a legally binding framework on international critical mineral governance

and facilitating regular meaningful public involvement in its policy development, law making and oversight of government and private sector compliance in the mining sector.

1. BACKGROUND

Critical minerals refer to mineral resources that are economically essential, have a high risk of supply disruption, and are difficult to substitute. These include but are not limited to elements such as lithium, platinum group metals (PGM), cobalt, nickel, copper, graphite, and rare earth elements.[1] The specific minerals considered "critical" or "strategic" may vary by country, depending on the criteria each nation uses. These minerals are vital to strategic sectors, such as clean energy, defence, telecommunications, and advanced manufacturing.[2] Therefore, also vital for economic development, industrial advancement, job creation and national security.[3]

Critical minerals are therefore essential to achieving global sustainability goals, particularly in supporting the clean energy transition and climate mitigation efforts. Minerals like lithium, nickel, and graphite are indispensable for renewable energy technologies, such as solar panels, wind turbines, and energy storage systems, directly contributing to SDGs 7 (Affordable and Clean Energy), SDG 9 (industrial innovation) and SDG 13 (Climate Action).[4] The extraction and processing of critical minerals presents significant opportunities and risks. Opportunities to establish responsible mining practices and harness the multiplier effect of mining to foster research and development, beneficiation at source, infrastructure development, regional partnerships and skills and capacity building.

Conversely, the extraction and processing of critical minerals has geopolitical implications, and can have adverse environmental and social impacts, including ecosystem degradation, water use conflicts, and human rights concerns in mining communities. This is largely due to the high demand of critical minerals and the market concentration of critical minerals.

As a starting point, it is important to note that the demand for critical minerals has risen sharply due to the global energy transition and efforts to combat climate change.

As a starting point, it is important to note that the demand for critical minerals has risen sharply due to the global energy transition and efforts to combat climate change. As countries strive to meet climate targets under the Paris Agreement and the Sustainable Development Goals (SDGs), the demand for critical minerals is accelerating. For example, lithium and cobalt are key for lithium-ion batteries, while rare earth elements are crucial for permanent magnets used in wind turbines and electric motors. Also, technologies, such as electric vehicles (EVs), solar panels, and wind turbines rely heavily on these materials.[5] To illustrate the accelerated demand, in 2024, global lithium carbonate equivalent (LCE) demand reached approximately 850,000 tons, representing a 44% year on- -year increase.[6] The International Energy Agency (IEA) projects that demand for minerals used in clean energy technologies could grow four to six times by 2040 under a net-zero emissions scenario.[7] Cobalt demand has grown rapidly alongside the rise of lithium-ion batteries, particularly those

[1] IEA (2023).
[2] Ibid.
[3] Ibid.
[4] IEA (2021).
[5] Ibid.
[6] SMM (2025).
[7] Ibid.

using nickel, manganese, cobalt (NMC) chemistry. In 2024, global cobalt consumption exceeded 200,000 tonnes, marking a 14% year on year increase, the strongest annual growth in recent history.[8]

While the demand for critical minerals is increasing sharply, the supply chain remains highly concentrated, as the minerals are mined in certain regions and countries. For example, in terms of cobalt, the Democratic Republic of Congo (DRC) supplies over 70% of global cobalt and holds half of known global reserves with an estimated 6 million tonnes in total. Other significant producers are Indonesia, Russia and Australia, although at much lower volumes, with collectively less than 2.5 million tonnes of known reserves.[9] The largest producer of lithium is Australia, with major reserves also found in Chile, Argentina, Boliva, China, Brazil and Zimbabwe.[10] China dominates rare earth elements reserves and controls more than 85% of global capacity.[11] The United States is the second largest producer, however, with less than 2% of global reserves. The top producers of other critical minerals, such as bauxite, are Guinea, Australia and China. Minerals such as chromium's top producer is South Africa, with more than 40% of production globally, followed by Turkey and Kazakhstan.[12]

A key consideration is that market concentration happens at both the extraction or mining and at the processing and refining stages where the raw ores are turned into useable forms. For example, mining of cobalt is highly concentrated in the DRC with 70% of global supply. However, the processing takes place in China, with an estimated 75% of the raw ore. Therefore, the DRC and China dominate different parts of the supply chain.[13] The Global South countries are leading in terms of critical mineral and metal reserves. However, these countries are limited in terms of processing and refining capacity. Processing and refining of critical minerals are highly concentrated in a few key regions, primarily East Asia, with China dominating.

China is a key role player in critical minerals, as it dominates the entire market concentration of most critical minerals. China processes over 60% of lithium globally, 100% of graphite (battery-grade graphite), and over 85% of rare earth elements. In terms of nickel, China and Indonesia combined control over 65% of processing capacity.[14] Therefore, China alone accounts for most refined cobalt, graphite, rare earths and nickel.[15]

This geographic concentration creates supply chain vulnerabilities which are susceptible to disruptions from political instability, natural disasters or export bans. For example, China placed restrictions on graphite and gallium in 2023, which limited access for battery supply chains.[16] It also enables countries with monopoly on critical minerals to use the dominance to extract political or economic concessions and have geopolitical leverage. For example, China's 2010 rare

[8] Cobalt Institute (2025).
[9] IEA (2025).
[10] Ibid.
[11] Ibid.
[12] Ibid
[13] Ibid.
[14] Ibid.
[15] Ibid.
[16] Global Policy Watch (2023)

earth embargo on Japan which was interpreted as targeted political coercion, as the embargo was effected after an incident in which a Chinese ship captain was detained in Japan.[17] At the time, Japan was reliant on China for nearly 90% of rare earth elements.

The market concentration also causes risks due to the limited market competition. There are a few suppliers, which can lead to price volatility and cartel-like behaviour or reduced innovation in the market. There are also environmental and social risks, as the concentration of critical minerals in countries with weaker environmental regulations or human rights concerns can exacerbate negative impacts, such as forced labour or pollution.[18]

As a result, governments are prioritising critical mineral strategies, exploring domestic production, diversifying sources, and forming international alliances to reduce dependency and enhance resilience. This is mostly achieved through regulatory frameworks, and public-private partnerships to which countries, particularly the Global South countries, are increasingly integrating local value addition and moving beyond suppliers of raw critical minerals and metals.

Also, countries are aligning critical mineral development with sustainable development by adopting responsible mining practices standards, transparent governance, and integrating circular economy approaches, such as recycling and reuse.[19]

2. INTERNATIONAL PERSPECTIVES

Critical minerals are strategically important not only for advancing technological innovation and energy transition, but also for enabling inclusive growth and sustainable development. If governed equitably, critical mineral value chains can stimulate industrialisation, local beneficiation, create green jobs, and generate public revenues to support infrastructure, education, and health in resource-rich countries, especially in Africa and Latin America.[20] However, to translate mineral wealth into inclusive development, countries must address challenges like environmental degradation, community exclusion, and value-chain dependency by promoting local beneficiation, transparent governance, and responsible extraction practices.[21]

Currently, there is no single binding international regulatory framework for the governance of critical minerals. However, multiple global initiatives, strategic alliances, and standards frameworks are shaping international cooperation, transparency, and sustainability in the critical minerals sector. Across all the initiatives, the central aim is focused on addressing the risk of the concentrated market of critical minerals. Below are frameworks which highlight global efforts to manage critical mineral trade, environmental risks, and geopolitical dependencies through coordinated but decentralised mechanisms.

[17] King (2013).
[18] Herrington (2021).
[19] World Bank (2020).
[20] UNCTAD (2023).
[21] UNEP (2023).

2.1. Minerals Security Partnership

The Minerals Security Partnership (MSP) is an international initiative launched in 2022 by the United States and a coalition of partner countries, including Australia, Canada, Japan, South Korea, the UK, and the EU, aimed at securing sustainable, responsible and resilient supply chains for critical minerals.[22] It emphasises high environmental, social, and governance (ESG) standards, ensuring that the development of critical mineral supply chains align with climate and sustainable development goals. It also promotes partnerships with resource-rich developing countries, particularly in the Global South, to support value addition and local development.[23] It does this through providing technical assistance, mobilising public and private investment and ensuring benefit sharing in the Global South. The central aim is to reduce global dependency on concentrated supply sources, particularly from China. By coordinating efforts among governments and the private sector, the MSP is strategically positioned to address the dual challenge of meeting rising mineral demand while promoting inclusive, sustainable development in resource-rich countries. The MSP is not a regulatory body, but an intergovernmental alliance with aligned investment and policy goals.

2.2. OECD Guidelines for Multinational Enterprises

The OECD Guidelines for Multinational Enterprises provide a comprehensive framework for responsible business conduct, particularly relevant in the context of critical mineral supply chains. These guidelines provide standards that cover issues such as human rights, environmental protection, labour rights, and due diligence in sourcing. They are especially important for ensuring that companies engaged in mineral extraction and processing contribute positively to host country development.[24]

Importantly, the **OECD Due Diligence Guidance for Responsible Supply Chains of Minerals** (Due Diligence Guidance) is a complementary guidance document to the OECD Multinational Enterprises. The Due Diligence Guidance is a sector specific guide to companies involved in sourcing and trade of minerals from conflict affected and high-risk areas (CAHRAs), to avoid contributing to conflict or human rights abuses through responsible sourcing and supply chain due diligence.[25] The high demand critical minerals are frequently extracted from CAHRAs, notably cobalt, tin, tungsten, tantalum and gold (collectively known as 3TG), along with lithium and rare earth elements. As a result, the Due Diligence Guidance plays a critical role to address the key critical minerals from CAHRA's to ensure inclusive growth and sustainable development in the resource rich jurisdictions. For example, the guidance can be used to address sourcing and trading of minerals in the DRC with cobalt,[26] Great Lakes Region in Central Africa with 3TG,[27] Myanmar with Lithium[28] and Democratic People's Republic of Korea and Myanmar with rare earth mineral extraction.[29] While some of the countries, particularly the DRC, engage with the OECD

[22] U.S. Department of State (2022).
[23] U.S. State Department (2023).
[24] OECD (2023).
[25] OECD (2016).
[26] Amnesty International (2016); Sovacool (2019).
[27] Lezhnev & Van den Brink (2015).
[28] Global Witness (2023)
[29] Chen et al., (2022)

Due Diligence Guidance, its implementation globally has been partial and uneven, as it is often constrained by its voluntary nature, governments' limited institutional capacity, corruption, conflict and weak enforcement mechanisms.

2.3. EU Critical Raw Materials Act (CRMA)

The Critical Raw Materials Act, adopted in 2024 and promulgated on 23 May 2024, establishes a legal framework to strengthen the EU's strategic autonomy in sourcing essential raw materials. The Act identifies 34 critical raw materials, including 17 designated as strategic, which are essential for sectors such as clean energy, digital technologies, defence, and space.[30] To reduce dependence on external suppliers, particularly China, the CRMA sets 2030 targets: sourcing at least 10% of annual EU consumption from domestic extraction, 40% from processing within the EU, and 25% from recycling, while limiting reliance on any single third country to 65% of supply for strategic materials.[31]

The Act empowers the EU Commission to identify Strategic Projects, both within and outside the EU, for materials like lithium, cobalt, nickel, rare earths, and graphite. Additionally, the CRMA introduces mandatory supply chain risk assessments, stress testing, strategic stockpiling, a joint procurement mechanism, and national exploration programmes. It also emphasises sustainability, promoting circularity and environmental protection through strict certification standards.[32] Currently, the Commission has selected 60 Strategic Projects, 47 announced in March 2025, with 13 more added in June 2025 to meet its targets and ensure long-term supply resilience.[33] The global implications are that the Act encourages partnerships with developing countries and, although EU specific, it indirectly sets international compliance benchmarks.

2.4. Global Battery Alliance (GBA)

The Global Battery Alliance (GBA) is a public-private- partnership founded at the World Economic Forum in 2017 and formally incorporated as a not-for-profit- organisation in Belgium in 2022, uniting over 150 organisations including governments, non-governmental organisations (NGOs), industry leaders, and academia. Its vision is to establish a sustainable, circular, and socially responsible battery value chain by 2030.[34] The GBA's flagship initiative, the Battery Passport, creates a digital twin for every battery, capturing authenticated lifecycle data on material provenance, carbon footprint, human rights performance and environmental indicators, enabling transparency and sustainability benchmarking across the industry.[35] In June 2024, the GBA launched a second wave of pilot programmes involving 11 consortia, led by major battery manufacturers representing over 80 % of the global market to develop rulebooks and Minimum Viable Products that offer ESG scoring at the product level, covering metrics such as greenhouse gas emissions, child and forced labour, Indigenous rights, biodiversity and circular design.[36] The

[30] European Commission (2024a).
[31] Ibid.
[32] Global Policy Watch (2024).
[33] Reuters (2025).
[34] Global Battery Alliance (2025a).
[35] Umicore (2023); Global Battery Alliance (2024b).
[36] Global Battery Alliance (2024b).

GBA organises its work around core pillars namely circularity, low carbon- economy, and human rights. It further promotes collaborative global standards and due diligence, including through its Critical Minerals and Energy Access & Circularity initiatives.[37] The GBA is voluntary yet widely adopted as a transparency tool in the EV and battery sector.

2.5. International Energy Agency Critical Minerals Security Program

The International Energy Agency's (IEA) Critical Minerals Security Programme, launched in 2022, builds on its energy market security expertise to help governments and stakeholders mitigate supply risks of key materials essential to clean energy transitions.[38] As part of the programme, the IEA convened a first of- its- -kind emergency preparedness exercise in December 2024, designed to strengthen diversification, expedite the development of critical minerals projects in varied geographies and simulate crisis response strategies.[39] It also underpins enhanced market monitoring and the annual *Global Critical Minerals Outlook* (2025), which assesses investment, supply constraints, and policy gaps across a broader suite of energy related strategic minerals.[40] The programme complements policy recommendations from the IEA's landmark Critical Minerals and Clean Energy Summit (September 2023), which proposed six priority actions, including supply diversification, recycling shift, improved transparency, and international collaboration to ensure secure and sustainable supply chains.[41] While the programme is not regulatory, it acts as a global technical and policy advisor on secure and sustainable mineral supply chains.

3. REGIONAL FRAMEWORKS

This section highlights the regional frameworks and agreements that embed the African agenda for industrial growth, regional integration and equitable development to ensure that critical minerals drive sustainable and inclusive development outcomes across the Continent.

3.1. African Mining Vision and African Minerals Governance Framework

Adopted by African Union member states in 2009, the AMV promotes transparent, equitable, and optimal exploitation of mineral resources to support socio-economic transformation across the Continent. It lays the foundation for inclusive mineral value chains, local beneficiation, and industrialisation aligned with Agenda 2063 and the SDGs.[42] Complementing the AMV, the African Minerals Governance Framework (2017) and the African Minerals & Energy Resources Classification System (AMREC/PARC) provide technical tools for standardised resource reporting and accountability throughout the mineral life cycle.[43]

[37] Umicore (2023); Global Battery Alliance (2025a).
[38] IEA (2025a).
[39] Ibid.
[40] IEA (2025b).
[41] IEA (2023).
[42] African Union (2009).
[43] AUC (2017); SAIIA (2023).

3.2. African Minerals Strategy Group and Global South Council

Established in January 2024, the African Minerals Strategy Group (AMSG) is a collaborative grouping of about 16 African nations,[44] formed to coordinate regional efforts around exploration, value addition, and governance of critical minerals.[45] In September 2024 it joined the Council for Critical Minerals Development in the Global South, aligning with South–South partnerships to ensure equitable value chains, capacity building, and give collective voice at international forums like the Conference of the Parties (COP) and G20.[46]

3.3. African Continental Free Trade Area and Tripartite Free Trade Area

The African Continental Free Trade Area (AfCFTA) is a flagship initiative of the African Union launched in 2021, designed to create a single continental market for goods and services across 54 African countries. It aims to reduce tariffs, eliminate non-tariff barriers, enhance the movement of people and capital, and foster economic integration and industrialisation. With a combined market of over 1.4 billion people and a GDP of more than $3.4 trillion, the AfCFTA is the largest free trade area globally by membership. It is central to Africa's agenda for inclusive growth, sustainable development, and structural transformation.[47]

The **Tripartite Free Trade Area (TFTA)** is a regional free trade agreement that combines three major African Regional Economic Communities: COMESA (Common Market for Eastern and Southern Africa), EAC (East African Community), and SADC (Southern African Development Community). Launched in 2015, the TFTA covers 29 African countries and aims to harmonise trade policies, promote regional infrastructure development, and deepen economic integration across eastern and southern Africa. It serves as a building block for the AfCFTA, helping to consolidate regional trade frameworks and address overlapping memberships.[48]

The AfCFTA and TFTA represent key regional trade frameworks with the potential to transform Africa's critical minerals sector into a driver of inclusive growth and sustainable development. By reducing tariffs, harmonising trade regulations, and improving market access, these agreements facilitate intra-African trade in raw and processed minerals, enabling mineral-rich countries to participate more effectively in regional and global value chains.[49] Both frameworks offer opportunities to shift from exporting raw materials to value addition and industrialisation, promoting job creation, technology transfer, and infrastructure development. For example, AfCFTA's rules of origin and investment protocols can support the growth of regional beneficiation hubs for cobalt, lithium, and rare earths, thus helping countries like the DRC and Zambia capture more value domestically.[50] Meanwhile, the TFTA, which integrates COMESA, EAC, and SADC, provides a foundation for regional cooperation on infrastructure and regulatory convergence, crucial for sustainable and transparent mineral governance.

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[44] 16 founding member nations are: Botswana, Burundi, Chad, Democratic Republic of Congo, Guinea-Bissau, Liberia, Malawi, Nigeria, Sierra Leone, Somalia, South Africa, South Sudan, Tanzania, Uganda, Zambia and Zimbabwe.
[45] Council for Critical Minerals Development (2024).
[46] Ibid.
[47] African Union (2020).
[48] UNCTAD (2021).
[49] UNECA (2021); World Bank (2020)
[50] Ibid.

However, for these trade agreements to contribute meaningfully to the SDGs, implementation must prioritise environmental safeguards, community rights, and equitable benefit-sharing, especially in artisanal and small-scale mining (ASM) sectors that often face exclusion. Thus, the AfCFTA and TFTA are not merely trade liberalisation tools, but platforms for leveraging Africa's mineral wealth toward inclusive, climate-resilient development.

3.4. ECOWAS Strategic Minerals Feedstocks and SADC Regional Mining Vision

The Economic Community of West African States (ECOWAS) launched the Strategic Minerals Feedstock Initiative to develop regional value chains for critical minerals, such as lithium, manganese, bauxite, and rare earth elements. It prioritises the domestic processing of these resources to support emerging sectors like battery manufacturing, renewable energy, and electric vehicles, reducing reliance on raw material exports.[51] By doing so, it aims to create skilled jobs, encourage technology transfer, and boost intra-African trade through alignment with the AfCFTA. Additionally, the initiative promotes ESG compliance, ensuring that extraction supports local communities and environmental sustainability. It also builds regional cooperation among ECOWAS member States to pool infrastructure and expertise, helping smaller economies participate in high-value markets.[52]

The **Southern African Development Community (SADC) Regional Mining Vision**, aligned with the AMV, promotes a mining sector that is integrated into local economies, socially inclusive, environmentally responsible, and supportive of diversified economic development. It encourages the beneficiation and industrialisation of critical minerals like cobalt, nickel, and copper and resources abundant in SADC countries like South Africa, Zambia, Zimbabwe, and the DRC. The Regional Mining Vision (RMV) also addresses gender equity, ASM formalisation, and environmental management, aiming to redistribute mining benefits more equitably (SADC, 2021). Through regional coordination, the Regional Mining Vision (RMV) supports the development of shared infrastructure, harmonised regulations, and collective negotiation frameworks to strengthen Africa's position in global mineral supply chains.[53]

3.5. Agenda 2063 and Accelerated Industrial Development for Africa

Agenda 2063, the AU's long-term vision, places mineral-driven industrialisation at its core. Accelerated Industrial Development for Africa (AIDA), developed alongside the United Nations Industrial Development Organisation (UNIDO) which is responsible for promoting inclusive and sustainable industrial development (ISID) in developing and transitioning economies, emphasises leveraging critical minerals for value addition, poverty reduction, and South–South industrial partnerships, particularly through technology transfer and joint ventures among Global South nations.[54] Complementing this, the AIDA framework, developed with UNECA and UNIDO, emphasises building domestic processing capacity, fostering joint ventures, and enabling South–South technology exchange.[55]

[51] ECOWAS (2023).
[52] UNECA, 2023).
[53] SADC (2021)
[54] AUDA-NEPAD (2023).
[55] UNECA (2022).

At the 2024 UN Environment Assembly, African leaders, including those from Senegal, DRC, and Burkina Faso, advocated for equity in global mineral supply chains, specifically calling for local beneficiation, value retention, and stronger ESG safeguards in line with multilateral climate and development goals.[56] Domestically, countries such as Zimbabwe and Namibia have implemented export bans on unprocessed lithium and other critical minerals to promote domestic value addition.[57]

3.6. EU-Africa Critical Raw Materials Alliance

The EU–Africa Critical Raw Materials Alliance is a strategic partnership designed to ensure a secure, diversified, and sustainable supply of critical raw materials for the European Union, while promoting inclusive growth and industrial development in African countries. Anchored in the EU's *Critical Raw Materials Act*, (see section 2.3. of this paper above) the alliance focuses on joint investments in mineral exploration, processing, infrastructure, and governance across key African States, such as Zambia, Namibia, South Africa, and the DRC. By supporting local beneficiation and ESG-compliant value chains, the alliance aims to reduce Europe's reliance on single suppliers and foster green industrialisation in the Global South.[58] It aligns with broader frameworks like the Global Gateway and Africa-EU Green Energy Initiative, offering African partners access to finance, technology, and regulatory cooperation.[59] While the alliance promises mutual benefits, critics caution that it must avoid extractive imbalances by ensuring fair value-sharing, transparency, and support for domestic capacity-building in line with the Africa Mining Vision.[60]

The EU–Africa Critical Raw Materials Alliance enables inclusive growth by supporting local processing, job creation, and capacity-building in African mineral-rich countries. It promotes sustainable development by embedding ESG standards, transparent governance, and investment in green infrastructure across critical mineral value chains.

4. CRITICAL MINERALS AND SUSTAINABLE DEVELOPMENT

Critical minerals, such as lithium, cobalt, graphite, and rare earth elements, are essential enablers of the global energy transition and the shift toward sustainable development. These minerals underpin the technologies needed for achieving international climate goals, including EVs, solar panels, and battery storage systems. As such, they are closely linked to several SDGs, particularly SDG 7 (Affordable and Clean Energy), SDG 9 (Industry, Innovation and Infrastructure), and SDG 13 (Climate Action). Their importance has grown exponentially as countries accelerate their efforts to decarbonise their economies under the Paris Agreement framework.

Despite their promise, critical minerals present a complex sustainability challenge. Many resource-rich regions, particularly in Africa, face environmental degradation, social injustices, and governance deficits associated with mineral extraction. For example, the DRC supplies over 70% of the world's cobalt, yet the sector is often marked by poor labour conditions and limited

[56] The Guardian (2024).
[57] WSJ (2024).
[58] European Commission (2023)
[59] Ibid.
[60] OECD (2024).

community benefits.[61] Moreover, as mentioned, the current global value chain is heavily skewed, as Africa supplies the raw materials while countries like China, the U.S., and EU members dominate the high-value stages of refining, manufacturing, and innovation.[62]

Addressing these challenges requires deliberate and inclusive policy actions. African institutions and governments have increasingly advanced a developmental agenda that seeks to transform critical minerals into engines of local value creation and sustainable industrialisation. Frameworks such as the AMV, African Green Minerals Strategy, and the AfCFTA advocate for local beneficiation, regional integration, fair contracts, and stronger environmental and social standards.[63] This reflects Africa's push not only to ensure responsible extraction but also to capture greater economic value domestically.

Global cooperation and private sector accountability are essential to achieving these goals. Key actors include African regional bodies like the African Union and SADC, as well as international initiatives such as the Minerals Security Partnership, the EU-Africa Critical Raw Materials Alliance, and Extractive Industries Transparency Initiative (EITI). Equally, multinational corporations must commit to ESG standards while supporting technology transfer and capacity building in host countries.[64] Ultimately, for critical minerals to drive inclusive and sustainable development, Africa must transition from being merely a supplier of raw materials to a full participant in the global green economy.

5. INCLUSIVE GROWTH THROUGH CRITICAL MINERAL DEVELOPMENT

Critical mineral development offers a unique opportunity to drive inclusive economic growth, especially in resource-rich but economically vulnerable regions. Globally, the surge in demand for minerals like lithium, cobalt, and rare earth elements, which are essential for green technologies and digital infrastructure, presents a pathway to create jobs, enhance industrial diversification, and reduce poverty.[65] Inclusive growth demands that benefits from mineral wealth are broadly shared across society, particularly with local communities and marginalised groups who are often disproportionately affected by mining activities.

However, realising inclusive growth through critical minerals is challenged by several factors. These include limited local beneficiation capability weak governance frameworks, corruption, environmental degradation, and social conflicts linked to land rights and displacement.[66] The lack of infrastructure and skills in many mineral-rich countries, especially in Africa, hampers the transition from exporting raw materials to developing value-added industries, thus limiting the economic multipliers and job creation potential. Moreover, global value chains tend to concentrate high-value activities in developed countries, which further marginalises resource-producing nations.[67]

[61] UNCTAD (2023); Amnesty International (2023).
[62] IEA (2023).
[63] African Union (2009); UNECA (2023); AfCFTA Secretariat (2021).
[64] OECD (2023); EITI (2023).
[65] World Bank (2023); IEA (2023).
[66] UNDP (2022); Amnesty International (2023).
[67] UNCTAD (2023).

Addressing these challenges requires concerted policy and investment actions. African countries, through frameworks like the AMV and the AfCFTA, are prioritising industrialisation strategies that encourage local processing, technology transfer, and sustainable supply chain integration.[68] Strengthening governance, increasing transparency through initiatives like the EITI, and enforcing environmental and social safeguards are essential to ensure that mineral wealth contributes to poverty reduction and social equity.[69] Additionally, partnerships with global actors, including international development agencies and private sector investors, are key to mobilising finance and technical expertise.

Main role players in fostering inclusive growth through critical mineral development include national governments, regional bodies, such as the African Union and SADC, multinational corporations, civil society organisations, bodies representing the mining industry, and international institutions like the World Bank and the IEA. Africa's agenda stresses the need to move beyond extraction to become an active participant in global value chains, leveraging its mineral endowment for sustainable industrial development, job creation, and economic resilience.[70] This vision aligns with the Continent's broader development goals under Agenda 2063, aiming for economic diversification and social inclusion.

6. GOVERNANCE AND POLICY FRAMEWORKS

Effective governance and robust policy frameworks are essential to ensuring that critical minerals contribute to sustainable development, environmental protection, and inclusive economic growth. Globally, there is increasing recognition that without transparent and accountable governance, the mining of minerals such as lithium, cobalt, nickel, and rare earth elements can exacerbate inequality, environmental harm, and geopolitical tensions.[71] Key international frameworks such as the OECD Due Diligence Guidance for Responsible Mineral Supply Chains and the EITI have established standards to promote responsible sourcing, traceability, and fair revenue management in mineral value chains.

However, challenges persist, particularly in resource-rich developing regions. Weak institutional capacity limited regulatory enforcement, and lack of community consultation have allowed corruption, illegal mining, and human rights abuses to persist in many mining jurisdictions.[72] Moreover, global disparities in value capture remain stark, as mentioned. While African nations supply a large share of critical raw materials, the refining, processing, and technological application largely occur in advanced economies, depriving African countries of industrial benefits.[73]

Africa's policy response has been proactive in recent years. The AMV provides a continental policy framework that emphasises equitable benefit sharing, value addition, environmental sustainability, and community participation.[74] Supporting initiatives like the African Minerals

[68] African Union (2009); AfCFTA Secretariat (2021).
[69] EITI (2023).
[70] UNECA (2023); World Bank (2023).
[71] OECD (2023); EITI (2023).
[72] Amnesty International (2023); UNDP (2022).
[73] IEA (2023); UNCTAD (2023).
[74] African Union (2009).

Governance Framework, African Green Minerals Strategy, and the Africa Mineral and Energy Resources Classification (AMREC) aim to strengthen regional cooperation, harmonise standards, and boost institutional capacity.[75] Additionally, the AfCFTA provides a trade framework to develop regional mineral value chains and facilitate intra-African trade in processed mineral products.[76]

Moving forward, a coordinated multi-level governance approach is essential. National governments must strengthen domestic legal frameworks and improve contract transparency. Regional bodies, such as the African Union, SADC, and ECOWAS, should promote harmonised standards and facilitate value-sharing mechanisms. At the international level, multilateral cooperation through platforms like the EU-Africa Raw Materials Partnership, the Minerals Security Partnership, and South–South cooperation agreements can help address capacity gaps, share best practices, and ensure Africa plays a central role in global mineral governance.[77] To ensure long-term development, policies must prioritise environmental safeguards, equitable benefit distribution, and industrial transformation, placing African development needs at the centre of the global critical minerals agenda.

7. PROSPECTS AND CHALLENGES

While there is growing global recognition of the importance of securing critical mineral supply chains, progress remains uneven, and the path forward is mixed. This situation arises from the uncoordinated approach and lack of uniform standards that govern critical minerals, which is, in part, a result of the absence of a binding international legal framework. This results in different countries and regions taking their own approaches, resulting in inconsistent standards, duplication and regulatory gaps.

While there is growing global recognition of the importance of securing critical mineral supply chains, progress remains uneven, and the path forward is mixed.

This is most notable on issues such as environmental and social safeguards, labour and human rights compliance, transparency and circular economy frameworks. The risk for countries in the Global South who are rich in critical minerals is that there will be resource exploitation without fair benefits due to low local value addition, unfair contracts and the "race to the bottom" where, in the absence of standards, countries may lower environmental and labour protections to attract investment. Also, Global South countries risk becoming resource dependent economies vulnerable to price volatility, political interference from powerful nations, and debt trapped from extractive infrastructure deals. The risk is that countries in the Global South will remain raw material suppliers and not benefit from the opportunities of green industrialisation by building domestic supply chains. Therefore, Global South countries navigate a delicate balance between resource nationalism (protecting their long-term interests and sovereignty) and foreign control (attracting investment and expertise). Without fair governance and inclusive frameworks, the

[75] UNECA (2023); AUDA-NEPAD (2023).
[76] AfCFTA Secretariat (2021).
[77] World Bank (2023); OECD (2023).

global push for green energy risks replicating the exploitative patterns of the past, referred to as "green colonialism".[78]

In terms of prospects, there is progress underway through the new policies in the US, EU, Canada, Australia, and Japan to diversify supply chains. There is growing investment in recycling, substitution, and exploration, in addition to the growing number of formations of international alliances (e.g., the Minerals Security Partnership and the Critical Raw Materials Act in the EU).

There is demonstrable impact of the various global initiatives and international strategic alliances on critical minerals, and it is most evident in the growing number of emerging processing hubs across the world. For example, Nigeria and Ghana are advancing domestic beneficiation for lithium and cobalt. Nigeria launched a $100–200 million lithium processing facility in Nasarawa State (with 4,000 t/day capacity) and plans additional plants in Kaduna, in line with export policy reforms requiring in-country processing. Ghana has approved a $200 million lithium carbonate refinery at Tema port with a 30,000 t/year output jointly developed with US partner ReElement.[79]

In Zimbabwe, the government has enacted a lithium beneficiation policy, including a ban on raw lithium exports by 2027, to force value addition domestically. In response, State-owned Kuvimba and Chinese firms like Sinomine, Chengxin, and Huayou are developing several hundred million- dollar lithium processing plants (e.g. lithium sulphate conversion units) at Bikita, Arcadia, and Sandawana-, with combined capacity reaching hundreds of thousands of tonnes per annum.[80]

In Europe, Finland and Estonia host rare earth and nickel refining plants. Estonia's Neo Performance Materials facility near Sillamäe processes rare earths into permanent magnets for EVs, while Finland's Keliber project focuses on lithium hydroxide and nickel sulphate production. These emerging hubs align with the EU Critical Raw Materials Act, aimed at reducing reliance on single-country supply chains.[81]

Equally, Indonesia has rapidly transformed into a global hub for nickel and cobalt refining, primarily through Chinese investment in facilities like the Morowali Industrial Park, which now accounts for over 60 % of global refined nickel production.[82]

Latin America is increasingly establishing downstream processing capacity for critical minerals. In Brazil, Viridis Mining's CRITR facility in Poços de Caldas is being developed as the region's first integrated rare-earth separation and recycling hub, processing ion-adsorption clays into high-purity oxide products with government and private backing.[83] Argentina is ramping up lithium refining through projects like Eramet's Centenario plant, targeting the production of 24,000 tpa of battery-grade lithium carbonate by mid-2025, as part of broader efforts to build a vertically integrated battery supply chain. In Chile, Aclara Resources' Penco and related rare-earth clay projects in Goiás and Minas Gerais (Brazil/Chile) aim to produce separated magnet-grade

[78] Hamouchene, H (2024).
[79] African Mining Week (2025); The African Mirror (2025).
[80] Institute for Security Studies (2025); DiscoveryAlert (2025).
[81] European Commission (2024).
[82] Battery Metals Africa (2024).
[83] Viridis Mining (2025); Reuters (2024).

elements outside China by 2028, supported by regional and international investment.[84] These initiatives mark a turning point for Latin America's role in the global transition to secure, diversified mineral processing.

While international interest and investment for countries in the Global South mineral sector is rising, progress toward inclusive, sustainable, and resilient supply chains requires strategic coordination and international policy reform. The high-level points noted below present key prospects of critical minerals as an enabler of growth and achievement of sustainable development goals.

8. KEY ACTIONS NEEDED FROM GLOBAL COMMUNITY

To ensure critical minerals serve as a catalyst for inclusive growth and sustainable development, the global community must pursue a coordinated and equitable governance approach. The actions required should aim to ensure that the green transition is just, sustainable, and beneficial to both producing and consuming countries.

First, there is an urgent need to develop a legally binding framework that holds States and companies accountable. A United Nations (UN) or OECD backed treaty on critical minerals governance which includes enforceable standards on environmental protection, labour rights and decent work, community consent and land rights, and responsible sourcing and transparency. The UN or OECD are respected global bodies with experience in developing standards, treaties, and monitoring systems, therefore it would give the framework credibility, widespread participation, and mechanisms for enforcement.

Second, promote local processing, refining and manufacturing in producing countries. Implementation of benefit-sharing agreements that guarantee royalties, technology transfer, skills development and infrastructure investment.

Third, harmonise global environmental, social and governance metrics. Empower initiatives such as EITI, Global Battery Alliance and OECD Due Diligence Guidance. This will ensure consistency in ethical sourcing, traceability and corporate accountability across jurisdictions.

Fourth, support formalisation of artisanal and small-scale mining, provide funding and capacity building to integrate ASM into the formal supply economy, and ensure laws which protect miners' rights, especially for women miners. The ASM supports millions of livelihoods but is often criminalised or excluded from formal markets.

Fifth, invest in the circular economy and promote recycling infrastructure. Create global incentive for battery and electronic recycling. This would also support sustainable resource use.

Sixth, support and foster equitable international partnerships. Mutually beneficial agreements based on South-South cooperation, African Mining Vision and/or Latin America's regional battery proposals. This avoids power imbalances and enhances regional bargaining strength.

[84] The Northern Miner (2025); Americas Quarterly (2024).

Seventh, investment in skills and innovation to build a skilled workforce and support research, innovation and technology transfer.

Lastly, protection of indigenous and community rights. Communities often bear the brunt of mining harms without voice or recourse. Therefore, enforcement of consent and community engagement criteria and laws, such as free, prior and informed consent, and creation of grievance mechanisms that are independent and accessible.

9. ROLE OF INDIVIDUAL MEMBERS OF PARLIAMENT (MPs)

Parliamentarians are uniquely positioned to drive good governance within the critical minerals sector. MPs' responsibilities extend across legislation, oversight, advocacy, and community engagement, therefore they can blend legislative action with grassroots engagement. Further, MPs can bridge the gap between national policy and local realities, ensuring mining benefits people and is environmentally sound.

In the legislative role, MP's can participate in debating and amending legislation on critical minerals, mining regulation, environmental standards and benefit sharing mechanisms. MPs can also support and endorse clauses which enhance transparency and local content. Also to support laws that promote civic space and protect whistle-blowers to ensure that communities and NGO's hold stakeholders accountable and share information. Parliamentarians should ensure that proposed legislation is in line with international best practice and the agreements that the country is party to.

Oversight and accountability require MPs to monitor mining activities and invite their constituents to play an active role in holding mining operations publicly accountable. MPs must use parliamentary powers to investigate cases of environmental degradation, community displacement, or labour exploitation. They should hold government and companies accountable and scrutinise regulatory agencies to ensure the entities are functioning optimally without corruption.

Advocacy and public engagement mean that MPs are championing the rights of the community and speaking up against unfair mining deals or operations that harm the environment and communities or that are not beneficial to those most affected. MPs must actively promote ethical standards and advocate for the adoption of ethical standards in supply chains and sustainable mining. MPs can further influence the growth of the mining sector through advocacy of increased exploration, rapid governance processes for the issuance of licenses, supporting junior and small mining companies growth. Equally, MPs must raise awareness of the critical minerals, the long-term impacts of mining and importance of environmental stewardship and land rights.

10. ROLE OF PARLIAMENTS

Parliaments play a central role in shaping the legal and institutional frameworks that govern critical minerals. Through their legislative powers, they enact laws that regulate mining practices, ensure environmental protections, and promote transparency in mineral supply chains. By setting national policies aligned with sustainability and equity goals, parliaments can ensure that

resource extraction contributes not only to economic growth but also to long-term environmental stewardship and social justice.

In their oversight function, parliaments hold governments and companies accountable for how critical minerals are managed. This includes monitoring licensing processes, scrutinising contracts and public revenues, and ensuring compliance with labour, environmental, and human rights standards. Parliamentary committees and inquiries can expose malpractice, corruption, or regulatory failures, thereby safeguarding the public interest and protecting vulnerable communities, particularly in areas directly affected by mining activities.

Parliaments also play a vital role in ensuring inclusive growth by representing the voices of diverse communities. MPs can advocate for local content policies, community benefit-sharing mechanisms, and investments in infrastructure, education, and value-added industries. By engaging with constituents and facilitating public debate, parliaments help to ensure that the economic benefits of the critical minerals boom are widely shared, reduce inequalities, and contribute to national development beyond raw material exports.

Parliaments should exercise effective parliamentary diplomacy in encouraging sister parliaments to ensure development of a legally binding framework on international critical mineral governance, and facilitating regular meaningful public involvement in policy development, lawmaking and oversight of government and private sector compliance in the mining sector. This can be further strengthened by regularly placing such matters on the agendas of multi-lateral parliamentary meetings.

11. CONCLUSION

The goal of multilateralism in the critical minerals sector is to coordinate standards, trade policies, environmental safeguards and supply chain transparency across borders, as the critical minerals supply chains are global. While the various initiatives, agreements and commitments are promising and there is growing coordination, concerning gaps in the sector remain. This is due to the lack of coherent, binding and inclusive coordination or governance in the critical minerals sector, which creates fragmentation and inconsistency in how minerals are extracted, traded, traced, processed and regulated. This has the potential to hinder inclusive growth and sustainable development, specifically for the Global South, as the pace of clean energy expansion may outstrip supply chain reform efforts.

However, domestically, individual countries can harness critical minerals for inclusive growth and sustainable development by ensuring that critical minerals are extracted in an environmentally responsible manner that respects human rights and promotes social responsibility. Also, that the critical mineral value chain includes local economic development by ensuring that there is value addition. Regular and meaningful engagement with local communities and those most affected by mineral developments to ensure that their needs and concerns are addressed is also important, as are building and supporting transparent public-private partnerships which are focused on driving sustainable and inclusive critical mineral development. Lastly, countries can ensure that a clear regulatory framework is established which supports fair and transparent value chains and local value addition.

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