

ON THE PATH TO COP29: ISSUES WITH CRITICAL ENERGY TRANSITION MINERALS

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“A world powered by renewables is a world hungry for critical minerals”,
UN Secretary-General António Guterres

Abstract:

Delivering the decarbonisation needed for the Paris Agreement depends not only on easy access to technologies but also on the availability of the necessary resources for a green transition. At COP28, UN Secretary-General António Guterres underlined that “the extraction of critical minerals for the clean energy revolution – from wind farms to solar panels and battery manufacturing – must be done in a sustainable, fair and just way”. The UN Chief proposed the Panel on Critical Energy Transition Minerals for the first time in the history of the Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change to discuss and set up common and voluntary guiding principles for extractive industries.

This viewpoint examines how the theme – “global guidance to manage the critical resources for energy in a sustainable, fair and just way” – will evolve under the auspices of COP29 Presidency. What are the positions of the industrialised countries on ensuring a sustainable supply of critical minerals for the low-carbon energy transition ahead of COP29? Why and to what degree might those positions be different from developing countries and where do they coincide? How might those differences and commonalities influence the outcomes of COP29?

Keywords: COP28, COP29, critical minerals, energy transition, just and fair transition, UN Panel on Critical Energy Transition Minerals, value-added supply chains

На пути к COP29: проблемы с минералами, критически важными с точки зрения энергетического перехода

Аннотация: Обеспечение декарбонизации, необходимой для реализации Парижского соглашения, зависит не только от доступа к технологиям, но и от наличия необходимых ресурсов для перехода к «зелёной» экономике. На COP28 Генеральный секретарь ООН Антониу Гутерриш подчеркнул, что «добыча критически важных минералов для революции в области чистой энергии – для ветряных электростанций, солнечных панелей и аккумуляторов – должна осуществляться устойчивым и справедливым образом». Глава ООН впервые в истории Конференции сторон (COP) Рамочной конвенции Организации Объединённых Наций об изменении климата предложил создание Группы экспертов по критически важным для энергетического перехода минералам с целью обсуждения и разработки универсальных и добровольных руководящих принципов для добывающих отраслей.

В настоящей статье рассматривается, как данная тема – «глобальное руководство по управлению критически важными ресурсами для энергетики устойчивым и справедливым образом» – будет развиваться под эгидой COP29. Каковы позиции промышленно развитых стран по обеспечению устойчивых поставок критически важных минералов для перехода к низкоуглеродной энергетике в преддверии COP29? Почему и в какой степени эти позиции могут отличаться от позиций развивающихся стран и где они совпадают? Как эти различия и сходства могут повлиять на результаты COP29?

Ключевые слова: COP28, COP29, Группа экспертов ООН по критически важным минералам для энергетического перехода, критически важные минералы, цепочки поставок с добавленной стоимостью, устойчивый и справедливый переход, энергетический переход

An energy system powered by clean energy technologies appears to be a key element to limiting global warming to 1.5 degrees Celsius. The essential components of the system are critical energy transition minerals such as copper, lithi-

um, nickel, cobalt, manganese, graphite and rare earth elements. Every clean technology from wind turbines and solar PV plants to electric vehicles and battery storage requires a sufficient, reliable and affordable supply of those minerals.

The importance of critical minerals in a decarbonising energy system has arisen in the policy agenda of many governments and international formats in recent years. One sees IRENA with its first Collaborative Framework on Critical Minerals for Energy Transition¹ established in 2022; IEA with its inaugural Critical Minerals Review 2023² and the first ever-international summit on critical minerals; UNECE with its inaugural 2024 guidebook on critical minerals for sustainable energy transition³, and many others.

The fact that UN Secretary-General António Guterres proposed the Panel on Critical Energy Transition Minerals for the first time in the history of the Conference of the Parties (COP) – the formal meeting of the UN Framework Convention on Climate Change parties – in Dubai at COP28 made the issue truly global. The UN has recognised that delivering decarbonisation needed for the Paris Agreement depends not only on easy access to technologies but also on the availability of the necessary resources for a green transition.

It seemed that world leaders agreed that the UN should act as a neutral broker to discuss and set up common and voluntary guiding principles for extractive industries and ultimately to ensure a sustainable expansion of critical minerals supply chains. However, the final decisions of COP28 regarding climate technology transfer such as *Decision 9/CP.28 “Enhancing Climate Technology Development and Transfer through the Technology Mechanism”*⁴ and *Decision 10/CP.28 “Linkages between the Technology Mechanism and the Financial Mechanism”*⁵ did not have any official reference to the support and investment into sustainable critical minerals supply chains as a base for the spread of green technologies. This makes any rhetoric, statements and announcements less viable and consistent in a long-term perspective.

In the Letter to Parties and Constituencies ahead of COP29⁶, H.E. Mukhtar Babayev, COP29 President-Designate, underlined the two pillars of the COP29 Vision such as enhancing ambition and enabling action and pathways to deliver those

pillars through the New Collective Quantified Goal on Climate Finance, Article 6, workable Loss and Damage Fund, updated Nationally Determined Contributions, National Adaptation Plans and other instruments. The omission of critical mineral issues in the official COP29 agenda was somewhat predictable since this is still an area where there is an enormous need for convergence on mutual interests between developed and developing countries.

The main idea of UN Secretary-General António Guterres’ statement at COP28 was that “the extraction of critical minerals for the clean energy revolution – from wind farms to solar panels and battery manufacturing – must be done in a *sustainable, fair and just way*.”⁷ The way various stakeholders define “*sustainable, fair and just*” will be a new issue about which developed and developing nations would have to come to terms in the nearest future.

So far, COP29 Presidency contributed to this discussion within its capabilities and powers by convening two High-Level Energy Transition Dialogues in May 2024 and in June 2024. Those dialogues aimed at discussing how to achieve the energy pledges from COP28, part of what is known as the UAE Consensus, including the 2030 commitments to triple global renewable power capacity, double energy efficiency improvements, etc., where critical minerals have become only accompanying but not the priority topic. The issue was raised⁸ by H.E. Dr Amani Abou-Zeid, African Union Commissioner for Infrastructure and Energy, and the theme was presented as the environmentally harmful extraction conditions that prevail on the African Continent.

UN Trade and Development has long been proving through its research that “Africa’s vast deposits of minerals critical to the global energy transition, such as cobalt, copper and lithium, can power a sustainable energy future.”⁹ However, no one can see a country from Africa or Latin America playing a major role in manufacturing or trading cathodes or battery materials. There are numerous calls for developing countries to fully capitalise on their mineral wealth, but they remain low in the value chains.

“*Fair and just*” means transitioning away from the systematic exploitation of developing countries embodied in the production of basic raw materials. In practical terms, it appears to mean educating the workforce, creating jobs, diversifying economies, and boosting revenues based on processing and refining critical minerals rather than supplying a raw basis to other technological centers.

¹ “IRENA Members Pave Way for New Cooperation on Critical Materials”, International Renewable Energy Agency (IRENA), published March 22, 2022, <https://www.irena.org/news/articles/2022/Mar/IRENA-Members-Pave-Way-for-New-Cooperation-on-Critical-Materials>.

² “Critical Minerals Market Sees Unprecedented Growth as Clean Energy Demand Drives Strong Increase in Investment”, International Energy Agency, published July 11, 2023, <https://www.iea.org/news/critical-minerals-market-sees-unprecedented-growth-as-clean-energy-demand-drives-strong-increase-in-investment>.

³ UNECE, Critical Minerals for the Sustainable Energy Transition. A Guidebook to Support Intergenerational Action (Geneva: UNECE, 2024), <https://unece.org/sites/default/files/2024-04/RMYMG%20-%20Critical%20Minerals%20for%20Sustainable%20Energy%20Transition%20-%20A%20Guidebook%20to%20support%20Intergenerational%20Action.pdf>.

⁴ United Nations, “Report of the Conference of the Parties on its Twenty-Eighth Session, Held in the United Arab Emirates from 30 November to 13 December 2023”, 2023, United Nations, p. 44, https://unfccc.int/sites/default/files/resource/cp2023_11a01_adv.pdf#page=44.

⁵ United Nations “Report of the Conference of the Parties on its Twenty-Eighth Session, Held in the United Arab Emirates from 30 November to 13 December 2023”, 2023, p. 2.

⁶ Mukhtar Babayev. “Letter to Parties and Constituencies”, COP29 Azerbaijan Operating Company, published July 17, 2024, <https://cop29.az/en/news/letter-to-parties-and-constituencies>.

⁷ António Guterres. “Secretary-General’s Remarks to G77+China COP28 Leaders’ Summit [as delivered]”, United Nations, published December 2, 2023, <https://www.un.org/sg/en/content/sg/statement/2023-12-02/secretary-generals-remarks-g77china-cop28-leaders-summit-delivered>.

⁸ “COP29 High Level Dialogue: AU Commissioner Highlights Unlocking Finance for Energy in Africa”, African Union, published June 28, 2024, <https://au.int/en/pressreleases/20240628/cop29-high-level-dialogue-au-commissioner-highlights-unlocking-finance-energy>.

⁹ Rebeca Grynspan. “UNCTAD’s 60th Anniversary Pre-event: Maximizing Africa’s Potential”, UNCTAD, published June 4, 2024, <https://unctad.org/osgstatement/unctads-60th-anniversary-pre-event-maximizing-africas-potential>.

In this sense, the Democratic Republic of the Congo's experience is often used as a successful showcase of how the country raised the mineral's unit price from \$5.8 per kilogram at extraction to \$16.2 per kilogram¹⁰ after processing. However, it is important to underline that though the majority of mines for cobalt are located in the DRC, DRC-owned companies account for less than 5% of production, according to the International Energy Agency¹¹.

The main concerns of the developed countries surrounding the critical minerals have always been about increased demand for these minerals deeply intervening with commodity dependence and exacerbating geopolitical tensions. This dependence covers not only extracting raw materials but also material processing and producing high-tech components by the geopolitical rivals of the developed countries. At the moment, China dominates the downstream battery supply chain, including processing of the battery minerals, cathode and anode material production, and battery cell and EV production. According to IEA¹², China holds 85% of battery cell production capacity and 90% of cathode and 98% of anode material production capacity globally. Over half of global processing for lithium and cobalt occurs in China. The country dominates the entire graphite anode supply chain end-to-end. China also produces two-thirds of the world's EVs.

At the recent First High-Level Minerals Security Partnership (MSP) Forum¹³ launched by the US, EU and other partners, the developed countries in attendance emphasised a dialogue on policies that contribute to diversification and resilience of supply chains together with being committed to high environmental, social and governance standards.

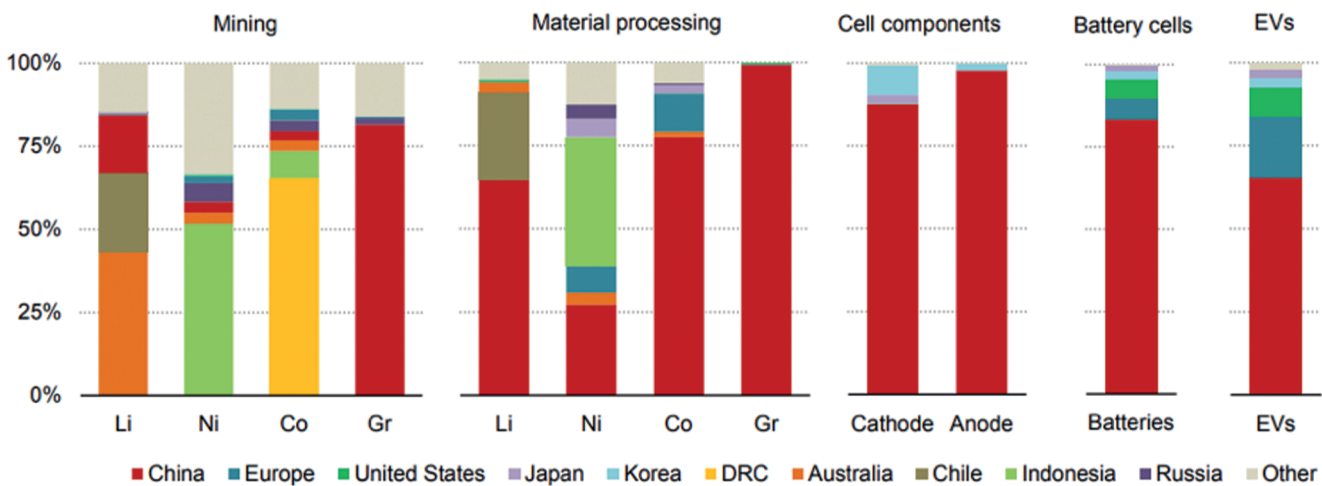
Higher ambition of developing countries to better participate in the value chain of critical minerals processing and refining, combined with local ownership, could change the mapping of the critical minerals market with new geographical allocations of processing and refining sites and bring new aspects to the alignment and harmonisation of existing norms, standards and initiatives in this market.

Ditte Juul Jørgensen, Director-General for Energy of the European Commission and one of the co-chairs of the UN Panel on Critical Energy Transition Minerals, emphasised that this panel would help develop principles “to ensure a fair and transparent approach globally and for local communities in the entire value chain, upholding the highest sustainability and human development standards”¹⁴.

For local communities, all this can become viable only if there is a successful delivery of finance, technology and capacity-building that would enhance the place and the role of

China dominates the downstream and midstream global EV battery supply chain

Geographical distribution of the global EV battery supply chain, 2023



IEA. CC BY 4.0.

Source: Global Critical Minerals Outlook 2024, International Energy Agency

¹⁰ United Nations Conference on Trade and Development, Technical Note on Critical Minerals. Supply Chains, Trade Flows and Value Addition (Geneva: UNCTAD, 2023), https://unctad.org/system/files/official-document/ditcmisc2023d1_en_0.pdf.

¹¹ “Global Critical Minerals Outlook 2024”, International Energy Agency, published 2024, <https://iea.blob.core.windows.net/assets/ee01701d-1d5c-4ba8-9df6-abeaac9de99a/GlobalCriticalMineralsOutlook2024.pdf>.

¹² “Global Critical Minerals Outlook 2024”, International Energy Agency.

¹³ “Statement on the First High-Level Minerals Security Partnership (MSP) Forum Event”, European Commission, published July 18, 2024, https://policy.trade.ec.europa.eu/news/statement-first-high-level-minerals-security-partnership-msp-forum-event-2024-07-18_en.

¹⁴ “UN Secretary-General Appoints Panel on Critical Energy Transition Minerals”, United Nations, published April 26, 2024, <https://www.un.org/sg/en/content/sg/personnel-appointments/2024-04-26/critical-energy-transition-minerals-panel>.

the developing countries in the value chain. Developing new mines or processing or refining plants will always require significant amounts of time, capital and technical expertise, and if one speaks about the African continent, Development Finance Institutions (DFIs) would need to reassess risk perceptions and hedge the risks for those ready to unlock the capital. Strengthening the manufacturing capacity in the regions where only a raw material extraction base exists is likely to make processing and refining products more expensive for the end consumers while local communities would definitely get a more just share of the market.

The desire of local markets for “just and fair” critical minerals energy transition is so high, that trying to increase the amount of local value addition, developing countries apply export restrictions on raw critical minerals. In the middle of 2023, Namibia banned the export of lithium ore, and Zimbabwe banned raw lithium exports. Thus, the African countries are forcing the raw materials consumers either to search for new markets to import what they desperately need for the energy transition or to invest into more value-added production chains locally.

The examples prove that one of the stated objectives by UN Secretary-General’s Panel on Critical Energy Transition Minerals – “Ensure countries and local communities endowed with these minerals fully benefit economically, including through local value addition”¹⁵ would certainly need the right policy mix with accessible finance, clear benefits for the private sector and even a change in trade regimes to develop local value addition.

The other objective – “Strengthen international cooperation including through the alignment and harmonisation of existing norms, standards and initiatives and agree on areas for enhanced multilateral action”¹⁶ appears to be more plausible for implementation since a lot of discussions on this matter are already under way. In November 2023¹⁷, the International Council on Mining and Metals (ICMM), the Copper Mark and the Mining Association of Canada announced the process of consolidating their individual standards into one globally responsible mining standard with a multi-stakeholder oversight system.

In this sense, the UN Panel on Critical Energy Transition Minerals is considered to be the party that acts as a bridge between the developed and developing nations and steer the process to a consensus regarding any normative gap. At the moment, the Panel unites 24 government actors, including countries of the Global South.

COP29 can become the right place to further foster an international and multi-stakeholder dialogue on this matter since diversification and resilience of critical minerals supply chains is one of the factors for tripling global renewable power capacity and COPs themselves are the major world forums for any climate-related discussions. However, so far it is clear that if this dialogue happens at COP29, it would mostly be held at the level of states’ pavilions or UN programs’ booths and would not rise high in the official agenda. Hopefully, the more the issue is mentioned by the high-level stakeholders, the better chances are for the topic to have a more formalised place at further COPs.

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¹⁵ “The United Nations Secretary-General’s Panel on Critical Energy Transition Minerals. Terms of Reference”, United Nations, published 2023, https://www.un.org/sites/un2.un.org/files/terms_of_reference_sgs_panel_on_critical_energy_transition_minerals.pdf.

¹⁶ “The United Nations Secretary-General’s Panel on Critical Energy Transition Minerals. Terms of Reference”, United Nations.

¹⁷ “Collaboration Underway to Develop Consolidated Standard for Responsible Mining”, International Council on Mining and Metals (ICMM), published November 28, 2023, <https://www.icmm.com/en-gb/news/2023/convergence>.