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# Developing Green Value Chains: Collaborating for a Mutually Beneficial EU-Africa Partnership

by Theophilus Acheampong

Nexus[25] Shaping Multilateralism

Reducing carbon emissions entails a fundamental shift in energy production and consumption. It requires significantly more mineral products, such as copper and lithium, to manufacture low-carbon and mobility products. However, accessing the critical raw materials (CRMs) and related cleantech products needed to keep global warming under the 1.5°C threshold is increasingly challenging.[1] Mineral and cleantech supply chains have become highly geopolitical, especially after the Covid-19 pandemic and the Russia-Ukraine war.[2] Green or cleantech value chains comprise raw materials sourcing such as lithium and cobalt; component manufacturing such as solar cells, turbine blades and battery cells; integrating components into clean technologies; and recycling and circular economy. At the moment, the EU is largely dependent on China for its CRMs supply, with the latter being responsible for 100 per cent of the EU's supply of heavy rare earth elements, 71 per cent of gallium, 40 per cent of natural graphite and 62 per cent of vanadium, among others.[3]

Thus, a stronger collaboration with Africa on CRMs could be mutually beneficial by helping the EU with

[1] United Nations website: *Net Zero Coalition*, https://www.un.org/en/node/134483.

[2] Melanie Müller, "The 'New Geopolitics' of Mineral Supply Chains: A Window of Opportunity for African Countries", in *South African Journal of International Affairs*, Vol. 30, No. 2 (2023), p. 177-203, https://doi.org/10.1080/10220461.2023.2226108.

[3] Council of the EU website: *An EU Critical Raw Materials Act for the Future of EU Supply Chains*, https://europa.eu/!WgTCVv.

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ISSN 2532-6570

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ISSN 2532-6570
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alternative supplies while supporting African industrialisation. With its significant endowments of CRMs, the African continent has become a hotbed of ongoing geopolitical contestations on economic diplomacy. Traditional partners such as the United States, Europe, and China, as well as new actors from the Gulf (United Arab Emirates, Saudi Arabia and Qatar), Turkey and India,[4] are all seeking access to these prized resources. At the same time, many African governments see the renewed global demand for CRMs as a starting point to boost their national and regional CRMs processing capabilities. The expectation is that local processing will help drive innovation and productivity, thereby meeting age-old aspirations of industrialisation in Africa.[5] Despite several attempts since the decolonisation period (1950s–1970s), Africa is the least industrialised region globally while having almost 20 per cent of the global population and land area.[6] The continent's contribution to economic output is about 3 per cent of global GDP and 2 per cent of world manufacturing value added.[7] Africa largely remains a primary raw materials exporter to the world, including key Asian economies such as China, where most of its CRMs are further processed into value-added products such as precursor cells and batteries for electric vehicles (EVs).[8] The African continent accounts for about 30 per cent of the world's mineral reserves and 12 per cent and 8 per cent of the world's oil and natural gas reserves.[9] In addition, Africa also has 40 per cent of the world's gold, about 90 per cent of chromium and platinum, and the largest reserves of cobalt, diamonds, platinum and uranium. Sub-Saharan Africa alone is reported to have over 30 per cent of the volume of critical minerals needed for the green energy transition.[10]

African countries want to leverage these resources to address their energy and industrialisation needs, creating much needed jobs, productivity enhancements and structural change. They want to avoid the risk of the centuries-long extractivist practices, whereby African raw materials have

[4] Maddalena Procopio and Corrado Čok, "Beyond Competition: How Europe Can Harness the UAE's Energy Ambitions in Africa", in *ECFR Policy Briefs*, June 2024, https://ecfr.eu/?p=123736.

[5] African Union, *10 Things Africa Must Do to Accelerate Industrialization and Economic Diversification in Africa*, 14 November 2022, https://au.int/en/node/42375.

[6] Theophilus Acheampong and Prince Asare Vitenu-Sackey, "Industrialisation in Africa: Leading Countries and Reasons for Their Success", in *APRI Short Analyses*, 10 October 2024, https://afripoli.org/industrialisation-in-africa-leading-countries-and-reasons-for-their-success.

[7] UN Industrial Development Organization (UNIDO), *Factsheet: Africa. Highlights from the International Yearbook of Industrial Statistics 2023*, December 2023, https://www.unido.org/sites/default/files/unido-publications/2023-12/documents_Yearbook_2023_UNIDO_IndustrialStatistics_Yearbook_2023_Africa.pdf.

[8] Theophilus Acheampong, "From Mines to Markets: How Africa and Europe Can Become Green Industry Partners of Choice", in *ECFR Policy Briefs*, April 2024, https://ecfr.eu/?p=121258.

[9] UN Environment Programme (UNEP) website: *Our Work in Africa*, https://www.unep.org/regions/africa/our-work-africa.

[10] Wenjie Chen, Athene Laws and Nico Valckx, "Harnessing Sub-Saharan Africa's Critical Mineral Wealth", in *IMF Country Focus*, 29 April 2024, https://www.imf.org/en/News/Articles/2024/04/29/cf-harnessing-sub-saharan-africas-critical-mineral-wealth.

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been mined and exported by foreign companies with little local value addition, and with little regard for environmental, social and governance (ESG) standards.

### *The added value of strengthening EU-Africa's ties on cleantech supply*

Africa provides unique advantages to help increase and diversify the EU's CRMs supply while the EU supports the continent's development and industrialisation efforts. On the one hand, the continent is uniquely placed at the centre of the world, with many potential African CRM supply countries having two to three weeks shipping times to Europe. The EU sources 63 per cent of its aluminium from Guinea, 35 per cent of its tantalum from the Democratic Republic of the Congo (DRC) and 41 per cent of its manganese from South Africa.[11]

Many African countries are highly likely to continue with measures such as raw ore export bans to assert more beneficiation and in-country value addition. Against this backdrop, there is an opportunity to further increase and deepen ties with Africa as a friend-shoring partner of choice. This could be done by European private sector companies with funding and support from European financial institutions to set up mining ventures and processing facilities in the continent. While Europe's financial and technical support for initiatives such as the Lobito Corridor railway project[12] is welcome, the commitments of the EU and its member states to funding mining and processing ventures in Africa are still insufficient. Helping build a railway line is a good entry point for the EU, but it does not necessarily make Brussels a preferred partner of choice as compared to other geopolitical actors. The EU can do more beyond infrastructure and logistics. Beijing, through State-funded initiatives like the Belt and Road Initiative involving the Chinese private sector, is investing in both mining ventures and value addition, as well as railways and other logistical infrastructure.[13]

European leaders must bear in mind that for Africa, true added value in its relations with Europe or any other geopolitical partner means moving away from simply exporting primary commodities to using them for local production and manufacturing of components such as solar cells, turbine blades, battery cells and semiconductors to be sold on the continent, leveraging the African Continental Free Trade Area (AfCFTA), as well exports to other markets.

### *Africa's development priorities: Electricity provision and financing*

Industrialisation and integration of Africa into global green value chains

[11] Council of the EU website: *An EU Critical Raw Materials Act*, cit.

[12] European Commission DG for International Partnerships, *Connecting the Democratic Republic of the Congo, Zambia, and Angola to Global Markets through the Lobito Corridor*, 24 October 2023, https://international-partnerships.ec.europa.eu/node/2801_en.

[13] Lobito Corridor Investment Promotion Authority, *Confronting the China Challenge in Africa: The Lobito Corridor*, 17 April 2024, https://www.lobitocorridor.org/post/confronting-the-china-challenge-in-africa-the-lobito-corridor.

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cannot happen without electricity. In order words, there cannot be proper cleantech supply chains in Africa if the fundamental prerequisite of the electricity needed for mining and processing into value-added products like EVs is not available. Without electricity provision to drive industry, Africa will only still end up exporting the raw mineral ores to China, Europe and other places that have the factor endowments such as cheaper electricity to turn them into useful products.

The foremost priority for many African countries is getting the needed investments to upgrade the existing and to build new energy systems. The continent faces pervasive energy deficits and industrialisation challenges despite its abundant energy and mineral resources. Without increasing the production of energy from multiple sources, economic growth will stall, and so will the associated trickle-down to the micro-levels that are needed to reduce poverty and inequality. To that extent, the EU can and should assist African countries in attracting the necessary investments to develop context-specific energy pathways leveraging renewable energy – solar, wind, hydrogen and natural gas, among others. The deployment of high renewable energy shares is constrained by the "transition speed, cost and technology mix" for individual African countries.[14] Also, legacy resources like natural gas and hydropower are needed to balance the grid from the intermittencies associated with renewable sources like solar and wind, especially for industries like steel and aluminium production that require non-stop operations.

Much like Africa, EU policymakers, especially with the aftershocks of the Russian-Ukraine war, recognise that multiple sources of energy supply are needed to meet trilemma goals of security of supply, affordability and sustainability.[15] It is within this context that the EU has included natural gas and nuclear energy in its taxonomy under the Complementary Delegated Act (CDA)[16] which is a key component of the Union's sustainable finance agenda. On the back of this, the EU must support African countries, especially those with significant endowments, to use natural gas for domestic power generation to meet household energy demand and industrial needs. The CDA provides a means for EU financial institutions to continue financing natural gas to power projects, albeit with stricter environmental requirements.[17] To

[14] Yacob Mulugetta et al., "Africa Needs Context-Relevant Evidence to Shape Its Clean Energy Future", in *Nature Energy*, Vol. 7, No. 11 (November 2022), p. 1015-1022 at p. 1015, DOI 10.1038/s41560-022-01152-0.

[15] Yana Popkostova, "Europe's Energy Crisis Conundrum. Origins, Impacts and Way Forward", in *EUISS Briefs*, No. 2/2022 (January 2022), p. 2, https://www.iss.europa.eu/node/2689.

[16] European Commission DG Finance website: *EU Taxonomy: Complementary Climate Delegated Act to Accelerate Decarbonisation*, https://finance.ec.europa.eu/node/849_en.

[17] For example, gas power plants would be categorised as green if "direct GHG emissions of the activity are lower than 270g $CO_2$e/kWh of the output energy, or annual direct GHG emissions of the activity do not exceed an average of 550kg $CO_2$e/kW of the facility's capacity over 20 years". See European Commission, *Commission Delegated Regulation (EU) 2022/1214 of 9 March 2022 Amending Delegated Regulation (EU) 2021/2139 as Regards Economic Activities in Certain Energy Sectors and Delegated Regulation (EU) 2021/2178 as Regards Specific*

attract investment, new projects must introduce measures such as carbon capture and storage to reduce their carbon intensity – that is, the $CO_2$ emissions per kilowatt hour (kWh) of electricity produced.

Furthermore, the EU could also advocate rechannelling the unused International Monetary Fund's (IMF's) Special Drawing Rights (SDRs) into financing climate action in Africa, emphasising the development of the continent's nascent green value chains. Climate finance flows to Africa were a mere 30 billion US dollars in 2020, just 11 per cent of the annual target and only 3 per cent of global climate finance.[18] To close this financing gap, the EU could lobby other advanced economies to rechannel approximately 73 billion US dollars of unused SDRs[19] to low- and middle-income countries, several of whom are in Africa, for climate action.

These funds could be provided to regional multilateral development banks such as the African Development Bank (AfDB) to finance climate action, including green value chain projects on the continent. They would serve as catalytic financing for new renewable energy and cleantech investments on the continent, enabling domestic innovation and productivity gains. EU member states such as France and Spain as well as institutions such as the European Bank for Reconstruction and Development (EBRD) are already in such discussions at the global level, but efforts could be doubled to ensure that rechannelling of SDRs becomes a reality by 2025. The longer this is delayed, the more difficult it becomes for African countries to integrate into global cleantech value chains due to domestic and external debt vulnerabilities.

Also, the EU Commission and European financial institutions such as the European Investment Bank (EIB) could help African countries with technical assistance in designing and launching new financing instruments such as green bonds and other ESG instruments. For example, sustainability-linked bonds (SLBs), a financing tool used at the sovereign level by Chile[20] and other countries, have key performance criteria that have to be met (such as gender criteria). It is worth noting, however, that this ESG funding still adds to African countries' existing debt burdens.[21]

*Public Disclosures for those Economic Activities*, http://data.europa.eu/eli/reg_del/2022/1214/oj. See also EU Platform on Sustainable Finance, *Response to the Complementary Delegated Act*, 21 January 2022, https://finance.ec.europa.eu/system/files/2022-01/220121-sustainable-finance-platform-response-taxonomy-complementary-delegated-act_en.pdf.

[18] Akinwumi Adesina, "Mobilising Private Sector Financing for Climate and Green Growth in Africa", in *NewAfrican*, 30 May 2023, https://newafricanmagazine.com/29682.

[19] Stephen Paduano, "SDR Rechanneling and ECB Rules. Why Rechanneling SDRs to Multilateral Development Banks Is Not Always and Everywhere Monetary Financing", in *FDL Policy Notes*, No. 7 (May 2023), https://findevlab.org/?p=30845.

[20] Environmental Finance: *Environmental Finance's Bond Awards 2023: Sustainability-linked Bond of the Year: Republic of Chile*, https://www.environmental-finance.com/content/awards/environmental-finances-bond-awards-2023/winners/sustainability-linked-bond-of-the-year-republic-of-chile.html.

[21] Carlos Lopes, "The African Debt Dilemma: Unpacking the Three Unfavourable Factors", in *ODI Expert Comments*, 10 June 2024, https://odi.org/en/insights/the-african-debt-dilemma-unpacking-the-three-unfavourable-factors.


ISSN 2532-6570

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ISSN 2532-6570


### *Engaging across regional and bilateral levels*

In engaging with African partners – be them national governments, regional institutions and local actors – the EU should refrain from a one-size-fits-all policy prescription to embrace a nuanced and multifaceted approach. Brussels, for example, should work with regional economic blocs such as the African Union, Southern African Development Community, Common Market for Eastern and Southern Africa and others – to promote greater regional cooperation across CRMs value chains beyond the rhetoric. This should emphasise joint regional research and innovation, policy and market alignment, and regional processing infrastructure.

African governments, policymakers and civil society are increasingly advocating for more regional value chains/corridor development approaches to cleantech value chains on the continent. For example, the DRC, South Africa, Zambia and Zimbabwe could use their mineral resources and proximity to create a battery manufacturing opportunity, such as making the precursor cells needed for EVs. Local actors, including civil society, also advocate for more ESG considerations in projects, further driven by higher EU ESG standards.

### *Looking ahead*

Developing clean industrial capacities with real added value would benefit Africa by addressing the many interconnected "nexus" challenges of energy access, poverty and limited industrial development capacities. Cleantech and industrial capacities using renewable energy such as solar and geothermal would drive the expansion of renewable energy infrastructure, providing access to affordable and reliable electricity for many on the continent. Africa could move up the value chain by developing industries that locally process CRMs and make component parts for domestic and export markets, creating a more diversified and resilient continental economy. From the EU's perspective, this would also mean less vulnerability or dependence on China for cleantech supply chains for Europe.

*24 October 2024*

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