



Equitable Critical Energy Transition Mineral Value Chains: How the G20 Can Help Shape a Holistic Framework for Benefit Sharing for the Global South

2025

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Accelerating Climate Action and the Just Energy Transition



Abstract

Critical energy transition minerals (CETMs) are vital for clean energy technologies, but their life cycle is associated with substantial environmental, social, and governance risks. These risks disproportionately affect local communities and countries in the Global South, where much of CETM extraction takes place. Despite bearing the burden of environmental degradation, displacement, and socio-cultural impacts, these communities and countries often reap minimal economic benefits. Recent partnerships and discourse focus on securing supply chains and mitigating geopolitical risks, with little attention to equitable benefit sharing.

The CETMs value chain generates disproportionate environmental and social burdens for local communities, especially in the Global South, while economic benefits often bypass these resource-producing regions. To promote a just and equitable energy transition, it is imperative to reimagine benefit sharing mechanisms for CETMs that go beyond mere compensation for losses to include long-term benefits.

The policy brief recommends a holistic framework for benefit sharing for equitable CETMs in the Global South integrating economic, social, and environmental dimensions across the value chain – from extraction to processing, manufacturing, disposal and recycling. The South Africa-led G20 must lead action on (1) economic diversification and local value addition through knowledge, technical, financial and institutional support; (2) a standardised yet flexible benefit sharing model for equitable distribution of economic, environmental, and social benefits with local communities across the entire value chain of CETMs; (3) transparent supply chains by endorsing a credible global mining standard and traceability mechanism that integrates benefit sharing parameters in the CETMs value chain; (4) regional and Global South cooperation to support trade negotiation, in-built mechanisms for greater benefit sharing in agreements, investor-state dispute resolution etc.; (5) a global fund for just transition in mining; and (6) a people-first approach and accompanying implementation mechanisms to safeguard interests and participation of indigenous communities.

Keywords: Critical Energy Transition Minerals, Benefit Sharing, Global South, G20, CETMs Value Chain, Transparency, People-first Approach

Diagnosis

CETMs are essential for clean energy technologies, yet they entail significant environmental, social and governance risks, especially for local communities. The economic benefits of CETMs do not always reach the producer countries and communities, especially in the global south, that face these risks. This calls for adequate benefit sharing mechanisms for mineral-producing countries in accordance with a responsible and equitable transition. While many international partnerships and initiatives focus primarily on supply security and geopolitical risks,¹ few initiatives go beyond a passing mention of responsible sourcing and developing just and equitable value chains.

The skewed balance of burden and benefit around minerals

Despite the scale and importance of the mining industry, it has been able to generate very few benefits for the host communities and countries in the global south, especially in terms of end products or value addition.² Burdens and benefits arising out of the mineral value chains are often distributed inequitably. Certain population groups, such as Indigenous people, women and children, get negatively impacted, disproportionately. With the evolving nature of the industry-community relationship and the shift in governance structures, local communities have emerged as important stakeholders from whom a social licence to operate is as important as a regulatory licence from governments.³

¹ A Bastida, "The case for global cooperation concerning the sustainable management of mining and minerals," in *Routledge Handbook of the Extractive Industries and Sustainable Development*, ed. N. Yakovleva and E. Nickless (London: Routledge, 2022), 191-207.

² A Acosta, "Extractivism and neo-extractivism: two sides of the same curse," in *Beyond Development: Alternative Visions from Latin America*, eds. M Lang, D Mokrani (Quito: Rosa Luxemburg Foundation, 2013), 61-86.

³ J Pmo & D Slocombe, "Exploring the origins of 'social license to operate' in the mining sector: Perspectives from governance and sustainability theories," *Resources Policy* 37, 3 (2012): 346-357, <https://doi.org/10.1016/j.resourpol.2012.04.002>; K Moffat, J Lacey, A Zhang, S Leipold, "The social licence to operate: a critical review," *Forestry: An International Journal of Forest Research* 89, 5 (2016): 477-488, <https://doi.org/10.1093/forestry/cpv044>.

Historically, mining projects have been promoted for creating national-level benefits.⁴ Today, CETMs projects find a similar justification in 'global level benefits' due to their use in climate change mitigation technologies, even if it causes local environmental and social externalities.⁵ The host countries and communities need to be compensated for direct losses, eg, for land and habitat, and losses that cannot be 'compensated' easily; eg, for loss of natural capital, opportunity cost, and sociocultural impacts. Sometimes, compensation, instead of avoiding harm, normalises the loss of natural resources.⁶ Thus, benefit sharing entails going beyond 'compensation' to long-term 'benefits', including participation in processing and value-addition industry, resource recovery and recycling, while maintaining the ESG safeguards.

Reducing inequities and strengthening benefit sharing from CETMs

Benefit Sharing Agreements, usually signed between communities and companies (sometimes even governments), have become common in mining regions in some countries. The prevalent benefit sharing models include investment and community funds, employment, skill and capacity development, preferential and local procurement, value addition, infrastructure, tax and non-tax revenue payments, and social services like community health. The main types of such mechanisms are state-controlled, mandatory company-led, voluntary company-led, community-owned and controlled, or partnership initiatives.⁷

⁴ M Ericsson and O Löf, "Mining's Contribution to Low- and Middle-income Economies," in *Extractive Industries: The Management of Resources as a Driver of Sustainable Development*, eds. T Addison and A Roe (Oxford: Oxford Academic); ICMM, *Role of Mining in National Economies: Mining Contribution Index* (London: ICMM, 2022).

⁵ N Bainton, D Kemp, E Lèbre, J R Owen & G Marston, "The energy-extractives nexus and the just transition," *Sustainable Development* 29 (2021): 624-634, <https://doi.org/10.1002/sd.2163>.

⁶ J Penca, "Biodiversity Offset Mechanisms and Compensation for Loss from Exceptional to Popular: Rediscovering Environmental Law," *Journal of International Wildlife Law & Policy* 27, 3 (2024):137-160, <https://doi.org/10.1080/13880292.2024.2375862>

⁷ E Wilson, "What is Benefit Sharing? Respecting Indigenous Rights and Addressing Inequities in Arctic Resource Projects," *Resources* 8, 2 (2019): 74.

These benefits are now legally mandated by law in several jurisdictions.⁸ In other cases, these are promoted through international regulation,⁹ guidelines and frameworks of international financial institutions and banks. More recently, benefit sharing, along with value-addition and diversification, has also been recognised as one of the Guiding Principles by the UN Secretary General's Panel on CETMs, which calls for recognising communities as 'equal partners and entitled to a share in benefits'.¹⁰

Reimagining benefit sharing in CETMs value chain

While voluntary and mandatory benefit sharing arrangements exist, there are few instances of actual delivery of benefits to those affected,¹¹ exacerbated by lack of transparency and equity.¹² Going forward, mining of CETMs must address equitable growth, which calls for reimagining benefit sharing. Resource security for clean energy transition should not merely relocate environmental and social externalities from fossils to other minerals or from one jurisdiction to another. A significant share of the global mining activities is undertaken in lands that are either biodiversity rich or are providing livelihood to indigenous communities.¹³ New benefit sharing mechanisms need to be people-centric and inclusive by

⁸ See A Readhead, V Tarus, T Lassourd, E Madzivanyika, & B Schlenther, *The future of resource taxation: 10 policy ideas to mobilize mining revenues*. (International Institute for Sustainable Development & African Tax Administration Forum, 2023)

⁹ See for example, 169 ILO Convention on Indigenous and Tribal Peoples

¹⁰ United Nations, *Resourcing the Energy Transition: Principles to Guide Critical Energy Transition Minerals Towards Equity and Justice* – Report of the UN Secretary General's Panel on Critical Energy Transition Minerals, 2024.

¹¹ Liz Wall & F H McKenzie, "Time for an Outcome Evaluation? The Experience of Indigenous Communities with Mining Benefit Sharing Agreements," in *The Lives of Extraction: Identities, Communities and the Politics of Place*, Eds. F Calvão et al. (Leiden: Brill, 2023), 98; F Vanclay & A M Esteves, *Handbook of Social Impact Assessment and Management* (Glos: Edward Elgar Publishing, 2024).

¹² E Wall & R Pelon, "Sharing mining benefits in developing countries", *The Experience with Foundations, Trusts, and Funds. Extractive Industries and Development Series*, #21. (Washington, D.C.: The World Bank, 2021)

¹³ M Annandale, J Meadows, P Erskine, "Indigenous forest livelihoods and bauxite mining: A case-study from northern Australia," *Journal of Environmental Management* 294 (2021):113014 ; C Kennedy, B Fariss, J Oakleaf, S Garnett, A Fernández-Llamazares, J Fa, S Baruch-Mordo & J Kiesecker, "Indigenous Peoples' lands are threatened by industrial development; conversion risk assessment reveals need to support Indigenous stewardship," *One Earth* 6 (2023): 1032-1049, <https://doi.org/10.1016/j.oneear.2023.07.006> ; J Burton, D Kemp, R Barnes & J Parmenter, "Mapping critical minerals projects and their intersection with Indigenous peoples' land rights in Australia," *Energy Research & Social Science* 113 (2024):103556, <https://doi.org/10.1016/j.erss.2024.103556>.

paying attention to energy transition related benefits, rights of Indigenous and other communities, across the entire mineral value chain.

One of the purposes of benefit sharing mechanisms is to help retain a part of the economic benefits in the region where mining occurs,¹⁴ for example through the promotion of local value chains. The distribution of mining-related benefits is seen as distributive justice, but the issues in CETMs value chain need a more expansive and innovative approach where 'benefits' like technology and expertise are also shared.¹⁵

As equitable sharing of burdens and benefits across the CETMs value chain is fundamental to a just energy transition – especially in the Global South – a South Africa-led G20 (representing 70% of the world's GDP and 80% of global energy-related CO₂ emissions), has a critical role in shaping a holistic framework to address this challenge.¹⁶

Recommendations

A holistic framework for benefit sharing for equitable CETMs value chains in the global South must be based on the guiding principles of the UN Secretary-General's Panel on CETMs and should integrate economic, social, and environmental dimensions across all stages of the supply chain – from extraction to processing, manufacturing, disposal and recycling.

¹⁴ P Söderholm & N Svahn, "Mining, Regional Development and Benefit-Sharing," *Resources Policy* 45 (2015): 78-91, <https://doi.org/10.1016/j.resourpol.2015.03.003>.

¹⁵ R Zhou & D Brown, "Epistemic justice and critical minerals—Towards a planetary just transition," *The Extractive Industries and Society* 18 (2024): 101463, <https://doi.org/10.1016/j.exis.2024.101463>.

¹⁶ IRENA, "G20+ Countries Hold the Key to the Global Renewable Target by 2030," *IRENA*, March 17, 2025, accessed March 20, 2025, <https://www.irena.org/News/pressreleases/2025/Mar/G20-plus-Countries-Hold-the-Key-to-the-Global-Renewable-Target-by-2030>.

1. Economic diversification through local value addition

Economic diversification must be retained as the centrepiece for mineral-rich countries in the Global South. This diversification should foster the transformation of the production system to a low-carbon one in key sectors (ie, public transit, industrial and energy consumption in housing and urban planning). The G20 should consider establishing a Centre of Excellence to provide knowledge support for downstream processing, refining, and manufacturing industries to foster local value addition in the mining sector and also move beyond to other related sectors. Measures could include providing technical, financial, policy and knowledge services to extend support to local centres in different countries and regions.

2. Develop a benefit sharing community development and revenue-sharing model

G20 should lead in creating a standardised yet flexible benefit sharing model for equitable distribution of economic, environmental, and social benefits with local communities across the entire value chain of CETMs. Such a model would integrate mining with development policies at local and national levels to ensure that local communities and regions that bear the burden of mining impacts are the real beneficiaries of mining projects. An example is the Africa Mining Vision, which is supported by legal instruments and institutions, e.g., African Minerals Development Centre, coordinating the implementation to enhance inclusive growth.

3. Ensure transparent supply chains by endorsing a global mining standard

The G20 forum should endorse a credible global mining standard and traceability mechanism that integrates benefit sharing parameters in the CETMs value chain.

Compliance with this standard and annual reporting against this framework must be a prerequisite for the trade of minerals. Certification mechanisms, such as the Consolidated Mining Standards Initiative, which is currently under development and factors in responsible mining practices, traceability initiatives and sourcing standards, can strengthen transparency while preventing corruption and human rights violations and can facilitate corporate accountability. Such a global standard can also reduce the complexity and lower the implementation barriers, making the assurance process effective and practical for companies. However, such standards need scrutiny, participation and endorsement from credible actors and forums, such as the UN or G20.

4. Foster regional cooperation for fair trade in mineral value chains

The G20 forum should be leveraged to strengthen regional cooperation between the African Union and other member countries. Collective negotiation on trade agreements for CETMs will ensure that producer countries have greater leverage in global markets while creating attractive conditions for private investment. A space to address investor–state dispute related concerns of the Global South can help avoid the challenges posed by ISDS under existing treaties. Agreements between producer and supplier countries must have in-built mechanisms for greater benefit sharing, responsible and fair trade, empowered artisanal and small-scale miners and equitable resource rents.

5. Establish a G20–led global fund for just transition in mining

The G20 should establish a global fund for just transition in mining to support social protections for communities, re–skilling programmes, and sustainable development of mining along with support for clean energy transition and transformation to a low–carbon economy. The instrument could also contribute to financial assurance mechanisms for mine closure and rehabilitation of

abandoned mines in order to reduce the environmental burden on mining sites. It could be resourced through initial contributions from Official Development Assistance, followed by international capital markets. One option is through green bonds and sustainability-linked bonds, which can attract international investors with proceeds earmarked for clean energy development, infrastructure, education, or other social sector goals in mining regions. By linking bonds to the CETMs, resource-rich countries can potentially unlock large-scale financing. The G20's role would be crucial in promoting such bonds, boosting investor confidence through eliminating financial risks and providing a standardised model. Such initiatives need to be accompanied by efficient monitoring measures to track the social and environmental impacts of projects.

6. People-first approach and accompanying implementation mechanisms

The G20 should ensure that Indigenous communities have mechanisms to protect their rights and meaningfully participate in mining decisions. Dedicated funding must be earmarked in each project to support legal advisors, independent experts, and community consultations during Free, Prior, and Informed Consent processes, allowing Indigenous people to make informed choices. Financial support must cover logistics for training and capacity-building for managing the impacts, ensuring Indigenous voices are heard and respected. Such an inbuilt safeguard mechanism can also strengthen joint decision-making for equitable benefit sharing, and for empowering Indigenous people-led environmental monitoring.

T20 South Africa Convenors



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