POLICY BRIEF

# Enhancing Value Addition in Mineral–Rich Developing Countries – Recommendations from the Latin American Experience

2025

**Fernanda Ballesteros**, Country Manager, Natural Resource Governance Institute – NRGI (Mexico)
**Talia Contreras Tapia**, Program Officer, Natural Resource Governance Institute – NRGI (Mexico)
**Susannah Fitzgerald**, Governance Officer, Natural Resource Governance Institute – NRGI (UK)
**Thomas Scurfield**, Senior Economic Analyst, Natural Resource Governance Institute – NRGI (UK)
**Luisa Sierra**, Director, Instituto de Desarrollo Energía y Ambiente – IDEA (Mexico)

05

Accelerating Climate Action and the Just Energy Transition

# Abstract

Historically, mineral–rich developing countries have extracted and exported minerals with minimal processing, limiting their benefits. Enhancing local and regional value addition can contribute to their economic development, help distribute benefits more equitably and create opportunities for diversification. It is also a strategic necessity for all countries, including those in the Global North. Greater processing and manufacturing in low– and middle–income countries reduces supply disruptions, diversifies production and enhances global resilience.

Increasingly, global initiatives recognise the need for greater participation of Global South countries in mineral value chains. Multi–stakeholder efforts, such as the UN Secretary General's Panel on Critical Minerals for Energy Transition, emphasise the need to move up the value chain to achieve economic equity and stability.

However, turning this approach into viable and beneficial value addition projects that foster more inclusive economies requires clear and realistic strategies based on economic feasibility and cost–benefit analysis, robust industrial policy and participatory approaches. Developing and implementing such strategies and policies requires public resource allocation and institutional capacity building.

Latin America faces challenges in refining, processing, and manufacturing its rich transition minerals resources. As a result, much of the value generated benefits foreign economies more than local communities. Additionally, socio–environmental conflicts and governance gaps disproportionately impact marginalised groups, including women and indigenous communities. Addressing these challenges requires clear policy priorities, strong socio–environmental protections, and enhanced policy tools and expertise.

This policy brief outlines key strategies to promote equitable value addition, drawing on recent Latin American examples. It provides recommendations for G20 countries to support realistic and beneficial value–addition policies by facilitating technical assistance to strengthen strategic planning capacities in low– and middle–income mineral–producing countries; advocating for deeper community inclusion, strong governance and socio–environmental protection; and committing financing to value addition projects that deliver local benefits. Regional cooperation in Latin America is crucial to foster resilient value chains, while elevating the region's influence in strategic sectors and global sustainability efforts.

# Diagnosis

The expectation of a transition mineral boom has reinforced the trend among mineral–producing countries, including in Latin America, to capture more economic benefits through value addition.[1] There is growing global recognition that these processes must be equitable, as mineral value chains have historically distributed gains and burdens unevenly. However, as access and proximity to mineral deposits play only a minor role in a country's value addition prospects, not all projects will be viable or beneficial. Without deliberate policies combined with regional cooperation and targeted financial and technical assistance, value addition efforts risk deepening inequalities between and within countries.

Ensuring equitable and sustainable mineral extraction and processing is a shared global necessity, not only to benefit low– and middle–income countries, but also to secure stable mineral supply and diversified value chains for the energy transition.[2] The UN Secretary General's Panel on Critical Energy Transition Minerals (UN Panel) aims to unify global leadership and resources to support Global South producer countries.[3] The G20 Rio de Janeiro Leader's Declaration noted the UN Panel's work and called for 'sustainable and responsible supply chains for energy transitions, including for critical minerals'. Stronger G20 cooperation is needed to align efforts with the UN Panel's principles. South African President, Cyril

[1] Economic Commission for Latin America and the Caribbean (ECLAC). *Critical Minerals for the Energy Transition and Electromobility: Economic Development Opportunities and Socioenvironmental Challenges.* December 8, 2024. https://www.cepal.org/en/insights/critical-minerals-energy-transition-and-electromobility-economic-development-opportunities.

[2] Diene, Papa Daouda, David Manley, Silas Olan'g, and Thomas Scurfield. *Triple Win: How Mining Can Benefit Africa's Citizens, Their Environment, and the Energy Transition.* Natural Resource Governance Institute (NRGI), November 2, 2022. https://resourcegovernance.org/publications/triple-win-mining-africa-environment-energy-transition; International Energy Agency (IEA). *Global Critical Minerals Outlook 2025*. May 21, 2025. https://www.iea.org/reports/global-critical-minerals-outlook-2025.

[3] Kaimal, Suneeta. "Value Addition, Governance and Global Responsibility: A Roadmap for Equitable Mineral Supply Chains." Natural Resource Governance Institute (NRGI), February 4, 2025. https://resourcegovernance.org/articles/value-addition-governance-global-responsibility-roadmap-equitable-miningeral-supply.

Ramaphosa, has emphasised that greater value addition in mineral–producing countries is a priority[4] – an approach that merits broader G20 support.

The discussion on equitable value addition is crucial for Latin America, a region with significant reserves of copper, nickel, molybdenum and graphite,[5] and home to the 'Lithium Triangle' (Argentina, Bolivia and Chile). Mexico and Brazil also combine strong mining activity with industrial capacities. However, Latin American countries remain limited in processing and manufacturing their own minerals. As of 2020, less than 10% of the copper mined in Latin America was used to manufacture semi–finished or finished goods locally.[6] If this trend persists, the region may miss out on the benefits of the copper wire and cable market, projected to reach a global market value of $267 billion by 2030.[7] Similarly, despite producing around 20% of global lithium in 2022,[8] Chile had no significant role in battery or electric vehicle (EV) manufacturing, industries valued at $287 billion that same year.[9]

Despite growing calls for more equitable value chains, Global North consumer countries and China – themselves competing to domesticate value chains – still dominate the global agenda and its benefits. The voices and needs of low– and middle–income countries should have a central role. For Latin America, regional cooperation can help develop integrated value chains and increase bargaining

[4] World Economic Forum. "Davos 2025: Special Address by Cyril Ramaphosa, President of South Africa." January 21, 2025. https://www.weforum.org/stories/2025/01/davos-2025-special-address-cyril-ramaphosa-president-south-africa/.
[5] In 2022, Chile was the largest producer of mined copper in the world (23.7%) and Peru was the second largest (10.2%). Among lithium producers, Chile ranked second (30.2%), Argentina fourth (4.8%) and Brazil fifth (1.7%). Chile also ranked second in molybdenum production (17.4%), Peru fourth (12.7%) and Mexico fifth (6.3%). Economic Commission for Latin America and the Caribbean (ECLAC). "Critical Minerals for the Energy Transition and Electromobility: Economic Development Opportunities and Socioenvironmental Challenges." December 8, 2024. https://www.cepal.org/en/insights/critical-minerals-energy-transition-and-electromobility-economic-development-opportunities.
[6] International Copper Association. "Stocks and Flows." 2025. Accessed May 19, 2025. https://internationalcopper.org/sustainable-copper/about-copper/cu-demand-long-term-availability/stocks-flows/.
[7] Allied Market Research. *Copper Wire and Cable Market Outlook – 2030*. July 2021. https://www.alliedmarketresearch.com/copper-wire-and-cable-market-A12418.
[8] U.S. Geological Survey. "Lithium". *Mineral Commodity Summaries 2025*, 110–111. Reston, VA: U.S. Geological Survey, 2025. https://pubs.usgs.gov/periodicals/mcs2025/mcs2025-lithium.pdf.
[9] UN Conference on Trade and Development (UNCTAD). *Technical Note on Critical Minerals: Supply Chains, Trade Flows and Value Addition*. UNCTAD/DITC/MISC/2023/14. Geneva: UNCTAD, 2023. https://unctad.org/system/files/official-document/ditcmisc2023d1_en_0.pdf.

power, avoiding marginalisation in an increasingly fragmented geopolitical landscape.

Yet, Latin America lags behind other regions in advancing coordinated mineral strategies. While the EU has adopted the Critical Raw Materials Act (2024) and Africa has launched the Africa Minerals Strategy Group (2024) and the African Union's Green Minerals Strategy (2025), Latin American efforts remain unaligned. Bridging this gap will require identifying complementary capabilities, aligning industrial strategies and overcoming complex political, economic and technical challenges.

Importantly, value addition in Latin America should be pursued only when it is economically viable and environmentally sustainable. Investing public resources in uncompetitive processing facilities without sufficient energy, infrastructure or market access risks creating fiscal burdens and underutilised assets.[10] Moreover, without robust safeguards, value addition projects risk replicating the socio–environmental harms often associated with extractive industries such as deforestation, toxic waste, air pollution, carbon emissions, water stress and soil and water contamination. These impacts seriously affect the health, livelihoods and traditional economic activities of nearby communities, often leading to loss of land, lack of compensation, labour migration and increased exposure to violence – disproportionately affecting women,[11] Indigenous peoples and other vulnerable groups.[12] The closure of two copper smelters in Chile (2023–2024) due to environmental and public health concerns,[13] highlights the urgency of

[10] Scurfield, Thomas, Matthieu Salomon, and Silas Olan'g. *Six Keys to Unlocking Equitable Value Addition in Mining*. Natural Resource Governance Institute, November 7, 2024. https://resourcegovernance.org/publications/six-keys-unlocking-equitable-value-addition-mining.

[11] Natural Resource Governance Institute (NRGI). *Fostering Gender Just Energy Transitions in Mineral and Fossil Fuel-Producing Countries*. October 2024. https://resourcegovernance.org/publications/primer-fostering-gender-just-energy-transitions-mineral-fossil-fuel-producing-countries;

[12] Salazar Ramírez, Hilda, and Maritza Rodríguez Flores. *Miradas en el territorio Cómo mujeres y hombres enfrentan la minería: Aproximaciones a tres comunidades mineras en México*. Heinrich Böll Stiftung, 2015. https://mx.boell.org/sites/default/files/miradas_en_el_territorio.pdf

[13] Cambero, Fabian. "Chile's Codelco Shuts Ventanas Smelter in Move Towards Sustainable Mining." *Reuters*, May 31, 2023. https://www.reuters.com/sustainability/chiles-codelco-shuts-ventanas-smelter-move-towards-sustainable-mining-2023-05-31/.

integrating strong environmental governance and inclusive stakeholder engagement into value chain strategies.

Increasing equitable value addition in Latin America therefore faces complex challenges. This policy brief outlines recommendations to address: 1) lack of strategic planning and implementation capacity; 2) weak protections for communities, nature and governance; and 3) insufficient financial resources and Latin American cooperation. We highlight both the complexities and the opportunities to support realistic and beneficial value addition policies through G20 action.

# Recommendations

## 1. Promote comprehensive, evidence–based strategies and stronger planning capacities

Value addition strategies should have clear objectives aligned with national development goals and be grounded in economic viability, market outlooks, cost–benefit analyses and technological readiness. Trade–offs with alternative development paths should also be considered.

Proximity to markets and existing industrial bases offer potential advantages. Mexico's automotive industry could enable a transition to EV manufacturing, but this requires integrated planning, policy alignment, technology investment and workforce upskilling. Governments should also tailor fiscal, industrial and trade

policies to specific value chains and minerals. Chile, for instance, mandates domestic supply for lithium processing,[14] while favouring copper exports.[15]

Assessing these variables requires strategic planning capacities that low– and middle–income mineral–producing countries often lack. The G20 could support these countries by facilitating technical assistance for designing, implementing and monitoring comprehensive value addition strategies. The South Africa government intends to address value addition within the Energy Transition Working Group.[16] Given the range of interventions needed to advance equitable value addition, a dedicated subgroup on Critical Mineral Supply Chains in the Global South could be established, in coordination with relevant Working Groups in both the Sherpa and Finance tracks. This new subgroup could work with the multi–stakeholder High–Level Expert Advisory Group proposed under the UN Panel's Actionable Recommendation 1 to develop a framework for supporting planning capacities and interagency coordination – including at the regional level – and offer tools for cost–benefit analysis, regulatory design and demand forecasting to identify value–added opportunities.

Assistance should also aim to enhance equity in value addition projects in mineral–rich countries. G20 efforts should prioritise creating opportunities for women's participation in mining–related STEM fields, high–skilled manufacturing and leadership, through targeted training programmes and regional knowledge hubs. These efforts must be supported by enabling conditions, including equal pay, investment in care services, safeguards against violence and gender–sensitive consultations to inform inclusive project design.

[14] Chile government requires producers to sell a portion of their output at preferential prices to local processors, aiming to develop a domestic battery supply chain. Chile's lithium governance involves significant state oversight, including efforts to renegotiate contracts and foster downstream industries, which contrast with the approach to cooper. Corporación de Fomento de la Producción (Corfo). "Corfo abre concurso para selección de proyecto de Valor Agregado de Litio en Chile." May 2, 2025. https://www.corfo.cl/sites/cpp/sala_de_prensa/nacional/02_05_2025_valor_agregado_litio

[15] International Copper Association. *The Impacts of Copper Mining in Chile*. April 4, 2018. https://sustainablecopper.org/wp-content/uploads/2018/05/ICA-Summary-Document-The-Impacts-of-Copper-Mining-in-Chile-FV-04.04.2018.pdf.

[16] G20 Energy Transitions Working Group. *Issue Note: Energy Transitions Working Group*. December 2024. https://g20.org/wp-content/uploads/2024/12/Issue-Note_Energy-Transitions-WG.pdf.

The G20 can help countries to address technological capacity gaps and access risks related to export controls and geopolitical tensions. Proposed restrictions by countries like China on mineral processing and battery technologies may impact Latin America's ambitions. To mitigate these risks, the G20 should promote cooperation for technology access and support innovation systems linking public research and local firms.

## 2. Prioritise community inclusion, governance and socio–environmental protection

Equitable value addition requires environmental sustainability, inclusion of marginalised groups and mining–affected communities, and strong transparency and accountability. If managed irresponsibly, value chain expansion can exacerbate exclusion, environmental degradation, social conflicts and governance challenges, as seen in aluminium processing in Brazil, lithium in Argentina and Chile, and copper in Chile.[17]

Effectively managing these risks requires robust environmental safeguards and inclusive community involvement. Participatory environmental monitoring, used in Argentina, Bolivia and Peru,[18] could guide countries like Mexico in strengthening consultation processes.[19] The G20 could support regional efforts to provide guidelines for engaging local communities in monitoring, training, funding, and addressing institutional gaps in current participatory mechanisms.

Governments must embed the 'do no harm' principle into value addition strategies to ensure that environmental and social wellbeing are not compromised. Through the proposed subgroup, the G20 could advocate for recognising environmental and social costs alongside economic benefits. It could

[17] Pickles, Sophia. *Value Addition in the Context of Mineral Processing*. Heinrich Böll Foundation, November 15, 2023. https://www.boell.de/sites/default/files/2023-12/e-paper_value-addition-in-the-context-of-mineral-processing_endf2.pdf.
[18] UN Development Program (UNDP). "Participatory Environmental Monitoring Committees in Mining Contexts,". July 10, 2019. https://www.undp.org/publications/participatory-environmental-monitoring-committees-mining-contexts.
[19] Natural Resource Governance Institute (NRGI). *Mejoras en la gobernanza de la minería en México: impacto ambiental y social*. November 2024. https://resourcegovernance.org/sites/default/files/2024-11/Mejoras_gobernanza_mineria_Mexico_impacto_ambiental_social_NRGI.pdf.

urge companies and consumer–country governments to adopt strong environmental, social, and governance standards[20] and enforce anti–bribery laws and mandatory human rights and environmental due diligence. While such laws currently face threats in the US and EU,[21] the G20 could encourage sustainable practices and transparency by supporting the Extractive Industries Transparency Initiative and the Escazú Agreement.

## 3. Commit to financing and encourage regional cooperation

The G20 could play a key role in helping low– and middle–income mineral producers access financing for value–addition projects that deliver local benefits. Recommendations such as reviewing blended finance tools and enhancing G20–enabled financial frameworks remain timely.[22] In line with the UN Panel's objectives of identifying funding, the proposed subgroup could help tailor financial instruments to equitable value addition. Development finance and jointly funded investment platforms – with backing from G20 members, international financial institutions and the private sector – could support strategic, high–standard projects.

Revisiting trade rules that currently limit policy space for local processing, technology transfer and market access could further promote equity in mineral value chains.[23] G20 support for robust social and environmental standards –

[20] *Priorities for the United Nations High-Level Expert Advisory Group on Critical Energy Transition Minerals*. January 2025. https://resourcegovernance.org/sites/default/files/2025-02/Priorities-for-UN-High-Level-Expert-Advisory-Group-on-Critical-Energy-Transition-Minerals.pdf.

[21] The White House. "Pausing Foreign Corrupt Practices Act Enforcement to Further American Economic and National Security Interests", 10 February 2025. https://www.whitehouse.gov/presidential-actions/2025/02/pausing-foreign-corrupt-practices-act-enforcement-to-further-american-economic-and-national-security/; European Coalition for Corporate Justice. "EU Commission's Omnibus proposal is full–scale deregulation designed to dismantle corporate accountability", 26 February 2024. https://corporatejustice.org/news/press-release-eu-commissions-omnibus-proposal-is-full-scale-deregulation-designed-to-dismantle-corporate-accountability/

[22] Moerenhout, Tom, Pranati Chestha Kohli, Siddharth Goel, Saon Ray, Nandakumar Janardhanan, and Simon Hoiberg Olsen. *Securing Critical Minerals Supply Chains for the Clean Energy Transition*. Think20 (T20) India, 2023. https://t20ind.org/research/securing-critical-minerals-supply-chains-for-the-clean-energy-transition/.

[23] Pai, Sandeep, Ian Barlow, Kanika Chawla, and Chinmayi Shalya. "Roadmap for South–South Collaboration on Critical Minerals Value Chain." *Council for Critical Minerals Development in the Global South*, January 6, 2025. https://www.transitionmineralscouncil.org/post/roadmap-for-south-south-collaboration-on-critical-minerals-value-chain.

discussed above – could help attract investment in high–impact value addition projects in Latin America.

The G20 could catalyse Latin American cooperation, particularly in strategic sectors like lithium and battery manufacturing.[24] Previous proposals for G20 support in fostering regional cooperation[25] remain unrealised, while fragmented regulations, short–term political cycles and limited institutional capacity continue to hinder progress. In today's geopolitical context, deeper regional collaboration is both timely and strategic. The G20 should foster technical and environmental coordination, shared infrastructure, and aligned industrial policies in Latin America – guided by careful analysis of where and when such cooperation is viable and beneficial. Supporting existing platform – such as the Permanent Technical Dialogue Forum on lithium value addition[26] and the MINSUS initiative[27] – can also amplify regional impact.

# Conclusion

Equitable local value addition could benefit low– and middle–income countries, while enhancing the resilience and sustainability of global critical mineral supply chains. The G20 has a key role in driving this shift toward more inclusive and sustainable value chains. In Latin America, where cooperation remains

[24] Mario Castillo, Ingrid Garcés, and Rodrigo Furtado Messias, *Perspectivas de desarrollo de las cadenas de valor relacionadas con el litio en Chile y América del Sur*, Economic Commission for Latin America and the Caribbean (ECLAC) , 2024, https://repositorio.cepal.org/server/api/core/bitstreams/7c55f70e-9192-4a8e-85c2-25e392bd349e/content.

[25] Zoghbi, Eduarda, Lilly Lee, Pranati Kohli, Vicente Loyola, and William Tobin. *Creating Value for the Critical Minerals Supply Chain in Latin America*. T20 Brasil, December 2024. https://www.t20brasil.org/media/documentos/arquivos/TF02_ST_01_Creating_Value_for66cccad4ace46.pdf; Arango, Felipe, and Marta Salomon. *Securing Electric Mobility with Responsible Extraction of Critical Minerals in Latin America*. T20 Brasil, December 2024. https://www.t20brasil.org/media/documentos/arquivos/TF02_ST_01_Securing_electric_m66cce05414201.pdf.

[26] Economic Commission for Latin America and the Caribbean (ECLAC). "Foro Permanente de Diálogo Técnico del Litio." 2024. https://d7.cepal.org/en/node/63059.

[27] Economic Commission for Latin America and the Caribbean (ECLAC). *Cooperación regional para la gestión sustentable de los recursos mineros en los países andinos*. 2024. https://www.cepal.org/es/cooperacion-cepal-alemania/proyectos/minsus.

fragmented, stronger regional coordination is essential to elevate the region's role in strategic sectors and global sustainability efforts.

## T20 South Africa Convenors

The Institute for Global Dialogue (IGD)

The South African Institute of International Affairs (SAIIA)

The Institute for Pan-African Thought and Conversation (IPATC)

.



For publication enquiries, please contact t20@t20southafrica.org

Website: www.t20southafrica.org