Collaboration for Critical Raw Materials: Activities of the Working Group on Transforming the Extractive Industries for Sustainable Development

23 April 2024
Development crisis: three traps

Low growth & productivity

Low institutional and governance capacity

High inequality

Latin America & the Caribbean

From 2014 to 2023, the region grew by only 0.8% on average

Source: Based on Comisión Económica para América Latina y el Caribe (CEPAL), Revista CEPAL, Nº 141 (LC/PUB.2023/29-P), Santiago, 2024. In Salazar-Xirinachs, J. M. “Repensar, reimaginar, transformar: los “qué” y los “cómo” para avanzar hacia un modelo de desarrollo más productivo, inclusivo y sostenible José Manuel Salazar-Xirinachs”
Driving sectors for inclusive and sustainable growth

(1) Geographic rearrangement of production
(2) Energy transition: renewable energy, green hydrogen, lithium
(3) E-mobility
(4) Circular economy
(5) Bioeconomy: sustainable agriculture, genetic resources, bioindustrialization
(6) Pharmaceutical and life sciences industries
(7) Medical devices industry
(8) Export of modern or ICT-mediated services
(9) Advanced manufacturing
(10) Gender equality and the care society
(11) Sustainable water management
(12) Sustainable tourism
(13) Digital governance
(14) Food security

Source: Economic Commission for Latin America and the Caribbean (ECLAC), Investment and cooperation opportunities for Latin America and the Caribbean and the European Union (LC/TS.2023/78), Santiago, 2023.
<table>
<thead>
<tr>
<th>Mineral</th>
<th>Share of Global Reserves, 2022 (percentage)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lithium</td>
<td>47%</td>
</tr>
<tr>
<td>Copper</td>
<td>36.6%</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>35%</td>
</tr>
<tr>
<td>Silver</td>
<td>34.5%</td>
</tr>
<tr>
<td>Graphite</td>
<td>23.8%</td>
</tr>
<tr>
<td>Tin</td>
<td>20.6%</td>
</tr>
<tr>
<td>Iron</td>
<td>18.8%</td>
</tr>
<tr>
<td>Rare Earths</td>
<td>16.7%</td>
</tr>
<tr>
<td>Nickel</td>
<td>15.7%</td>
</tr>
<tr>
<td>Bauxite and alumina</td>
<td>15%</td>
</tr>
<tr>
<td>Lead</td>
<td>14.7%</td>
</tr>
<tr>
<td>Zinc</td>
<td>13.9%</td>
</tr>
<tr>
<td>Gold</td>
<td>13%</td>
</tr>
<tr>
<td>Cobalt</td>
<td>6%</td>
</tr>
</tbody>
</table>

**Source:** Economic Commission for Latin America and the Caribbean (ECLAC), based on statistical data from the U.S. Geological Survey, Mineral Commodity Summaries (2023).
Latin America and the Caribbean: raw materials trade balance, by material group, 2000-2021 (in current US$ millions)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on UN COMTRADE statistical data and CEPALSTAT Environmental Indicators: CEPAL’s Databases and Statistical Publications.
Latin America and the Caribbean: evolution of the balance of trade in goods, by technological intensity, 2000–2021
(Billions of current dollars)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), based on UN COMTRADE statistical data and CEPALSTAT Environmental Indicators: CEPAL’s Databases and Statistical Publications.
Latin America: natural resource exports and poverty, 2000–2021
(Percentages)

Source: Economic Commission for Latin America and the Caribbean (ECLAC), on the basis of “Statistics and indicators: demographic and social”, CEPALSTAT.
Note: The population of Latin America living in poverty is measured as a percentage of the total population. Natural resource exports cover biomass, fossil fuels and minerals as a percentage of GDP.
Socio-environmental tensions are rising

• Ecuador → referendum prohibited mining activity in the Chocó Andino and oil extraction in the Yasuní YTT.

• Panamá → protests & court ruling led to cancelling copper project contract responsible for 1% of global production (First Quantum).

• Guatemala → discussion on mining moratorium, protests over mining impacts on cross-border river.

• Lithium Triangle (Argentina, Bolivia, Chile) → disputes over water use and impacts on fragile ecosystems.

• Brazil → soil sinking in Maceió due to salt mine operations (city in the Northeast).

Environmental conflicts by category recorded in the Environmental Justice Atlas (EJAtlas) (Number of conflicts)


Note: Data as of 14 February 2022.
Challenges to specializing in natural resources

- Engineering, capabilities for complex network of providers, investment in I+D; education gaps.

- Green vs non-green copper → opportunity for the region to build smelters/refineries to diversify global supply (require agreement with market stocks to create indexes, ensure traceability and certification).

- Regional steel industry in crisis → difficulty to compete with low foreign prices, despite lower CO₂ emissions.

- US Inflation Reduction Act (IRA); EU Green Industrial Plan; EU Critical Raw Materials Act; “Made in China”2025 → minimum domestic content, protective measures, subsidy race, antidumping coordination, etc.

*Latin America has a reduced fiscal space, limited investment attraction potential and bound by existing trade agreements.*
ECLAC’s - Permanent Technical Dialogue Forum on Innovation, Technological Development, and Value Addition to Lithium in The Triangle Countries (Argentina, Bolivia, and Chile) and Mexico.

Biennial action plan:

i) Articulate a vision of technological and productive regional integration around lithium.

ii) Identify mechanisms for coordination and options for horizontal cooperation and exchange of experiences and knowledge.

iii) Promote cooperative and complementary research among the parties.

iv) Identify possibilities for value addition and regional value chains.

Studies being published soon:

1) Direct Lithium Extraction (DLE) methods;
2) Conceptual model: integral salt flats monitoring.
3) Opportunities of insertion of Chile & South America in lithium related value chains.
Highlighted initiatives & collaboration opportunities

- European Raw Materials Alliance (ERMA) & European Battery Alliance (EBA) → multistakeholder initiatives to mobilize investments.
- Expert Group on Resource Management (EGRM), UNFC/UNRMS → regional methodological coordination on a rolling basis.
- ECA/Afreximbank → DRC and Zambia Special Economic Zone dedicated to lithium-ion battery precursors.
- Renegotiation of trade agreements (Modernization of EU-Chile agreement included clause to allow Chile to offer preferred prices for domestic value addition initiative).
- MoUs on critical minerals with support to technology transfer and value addition (EU & Chile; EU & Argentina).

UN Framework & SG Panel on Critical Minerals for the Energy Transition.
Thank you!
Natural Resources Division, ECLAC

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