Multilateral Cooperation on Global Lithium Supply

Joint Investment in lithium refinement and DLE technology in Chile, Bolivia, Argentina

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Strategic Background

- **Lithium in the Green Transition:** The U.S. and EU already collaborate extensively on environmental policies transitioning away from fossil fuel use.[1] Demand for lithium, an essential ingredient in batteries used for transportation electrification, is expected to increase by 90% if Paris climate goals are to be reached.[2] Around 60% of identified lithium is found in Chile, Bolivia, and Argentina, together known as the Lithium Triangle.[3]
- **Security of Lithium Supply:** Chinese companies currently account for 72% of global lithium refinement capacity.[4] This high concentration risks global supply as the supply chain is vulnerable to geopolitical disruptions and trade limitations.[5]
- **Environmental Degradation and Economic Exploitation:** Current industry standard lithium extraction techniques are environmentally harmful.[6] Heavy water use threatens to exacerbate existing drought conditions in the High Andes,[7] worsening conditions for local and indigenous communities who reap few benefits from lithium extraction.[8]

Policy Proposal and Benefits

1. Create EU/U.S. Joint Lithium Council

- Direct investment from the Global Gateway Program and Inflation Reduction Act to target mutually strategic lithium refinement projects in Lithium Triangle countries; Offer policy recommendations based on evolving supply chain priorities.
  - ***Increases*** global lithium production to meet Green Transition needs;
  - ***Diversifies*** U.S./EU lithium supply chains, reducing market reliance on China;
  - ***Reclaims*** value chain for resource-rich developing countries in South America, creating jobs and developing value-added export industry.

2. Promote Direct Lithium Extraction (DLE) Technology for Sustainable Mining Accessibility

- Invest in local partners developing highly efficient low-pollution DLE technology.
  - ***Boosts*** productivity of lithium extraction to support growing refinement industry;
  - ***Mitigates*** the negative impacts of mining on local water supply and indigenous communities;
  - ***Creates*** an opportunity for trilateral cooperation and local implementation of low-pollution technology.

[1] Justin Worland, "How Climate Change Became Central to U.S.-Europe Relations," TIME, March 8, 2023, https://time.com/6261102/ursula-von-der-leyen-us-europe-climate-change/.

[2] "The Role of Critical Minerals in Clean Energy Transitions – Analysis" (International Energy Agency), accessed March 23, 2024, https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions.

[3] Stefan Ellerbeck, "Lithium: Here's Why Latin America Is Key to the Global Energy Transition," World Economic Forum, January 10, 2023, https://www.weforum.org/agenda/2023/01/lithium-latin-america-energy-transition/.

[4] Daniel Quiggin and Richard King, "Cobalt Refining Power Gives China an Advantage in the Race for EV Battery Dominance," Resource Trade, July 4, 2023, https://resourcetrade.earth/publications/critical-metals-ev-batteries.

[5] "The Role of Critical Minerals in Clean Energy Transitions."

[6] March Zheng, "The Environmental Impacts of Lithium and Cobalt Mining," Earth.Org, March 31, 2023, https://earth.org/lithium-and-cobalt-mining/.

[7] Fred Pearce, "Why the Rush to Mine Lithium Could Dry Up the High Andes," Yale E360, September 19, 2022, https://e360.yale.edu/features/lithium-mining-water-andes-argentina.

[8] Samar Ahmad, "The Lithium Triangle: Where Chile, Argentina, and Bolivia Meet," Harvard International Review, January 15, 2020, https://hir.harvard.edu/lithium-triangle/.