



# 10<sup>th</sup> INTERNATIONAL WORKSHOP ADVANCES IN CLEANER PRODUCTION

“TEN YEARS WORKING TOGETHER FOR A SUSTAINABLE FUTURE”

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## **Bolivia’s Lithium Frontier: Can Cleaner Technologies Harness a Mineral Development Boom?**

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### **Abstract**

In 2014, Bolivia’s President Morales announced a state investment of \$995 million to develop the world’s largest lithium reserves, located in Bolivia’s Salar de Uyuni. Lithium production is promoted as enabling development in this impoverished, indigenously populated country which has historically suffered terrible environmental and social impacts from mineral exploitation. Lacking expertise and capital to sustainably produce lithium, Bolivia’s plans for lithium industrialization through vertically integrated mineral development and public-private partnerships with foreign corporations, include a desire to harness the most environmentally appropriate technologies. We discuss the debate on cleaner production for lithium, challenges of Bolivia’s lithium industrialization, and investigate how the desire for clean technologies has cultivated unusual partnerships between state enterprises and foreign-owned private corporations. We consider this model for developing remote mineral reserves for advanced technologies that are necessary for the global transition from a fossil fuel to low carbon economy, and for addressing sustainable development goals. Lithium is vital for energy storage, renewable energy and the electric vehicle industry. To meet rising lithium demand, with minimal environmental and social impacts, novel approaches to international resource extraction partnerships transcending ideological biases will be needed, and their efficacy evaluated. Our research aims to pave the way to such an evaluative framework, using Bolivia’s lithium as a central case. Key research issues for developing the framework and initial criteria of evaluation are proposed.

**Keywords:** *lithium, Bolivia, extraction, public-private partnerships*

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