

Between safeguarding supply and promoting sustainable development: which role for the EU in South America's "lithium triangle"? Insights from the case of Bolivia

Policy paper, April 2024



Summary

This policy paper aims to give an overview of **the debate around lithium extraction in Bolivia, the perspectives of local communities and the relevance of these issues for EU policy makers and private actors**. The paper concludes with policy recommendations in the context of the EU's agenda with regard to the supply of critical raw materials, EU-Latin America relations and renewed interest from EU investors in Bolivia's lithium value chain. In doing so, this briefing sheds a critical light on the role of both EU and Bolivian actors at this possible turning point for the future development of lithium projects in Bolivia.

The strategic importance of the “lithium triangle” for the EU

Access to critical raw materials (for renewable energy technologies, but also for other strategic industries such as defence and space) has become a top policy priority for the European Union. In March 2024, the EU member states approved the **Critical Raw Materials Regulation¹ (CRMR)**. With this regulation, the EU aims to diversify supply from third-countries and boost mining (as well as refining and recycling) projects within the EU. The law contains a specific list of critical raw materials, among which lithium is one of the most important, especially because of its use in rechargeable batteries. While the CRMR contains incentives to promote domestic lithium mining, today the EU still remains largely dependent on third countries for its lithium supply.

Although Australia is currently the biggest producer of lithium worldwide, the countries with most lithium resources are located in the so-called “**lithium triangle**” of South America, comprising parts of Argentina, Bolivia and Chile. Argentina comes fourth in terms of current world production², but holds the second largest amount of resources in the world, after Bolivia. In the EU, around 80 percent of lithium imports comes from Chile³.

Contrary to for example Australia, where most lithium is found in hard rock deposits, in the case of the South American countries **lithium is mostly extracted from brine** originating from salt lakes and plains high in the Andes (*salares* in Spanish). This can either be done through evaporation in basins or through so-called direct extraction. While extraction and refinement into lithium carbonate typically take place in the South American producing countries, the further steps upstream in the value chain (battery production, EV production) are largely controlled by China.

¹ Civil society analysis and recommendations for the implementation of the CRMR available at: <https://eeb.org/library/limiting-environmental-damage-human-rights-abuses-and-indigenous-peoples-rights-violations-civil-society-guidelines-for-the-implementation-of-the-eu-critical-raw-materials-regulation/>

² Based on World Economic Forum, 2023. Available at <https://www.weforum.org/agenda/2023/01/chart-countries-produce-lithium-world/>

³ Based on European Commission, 2020. Available at https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/chile/eu-chile-agreement/agreement-explained_en



Exploration works for lithium extraction in the Uyuni salt flat. (© Wies Willems - Broederlijk Delen)

Environmental, social and governance concerns regarding lithium extraction in Bolivia

Bolivia has reportedly the largest amount of lithium resources in the world (21 million tons)⁴, located for the largest part beneath the *salares* around Uyuni in the Potosí department. However, in terms of actual production the country today doesn't rank among top producers, contrary to Chile, and also far behind Argentina. The reasons why Bolivia has so far not been able to develop its *resources* into profitable *reserves*⁵ at the same scale as its neighbouring countries are various, but relate mostly to **poor political governance and a lack of know-how**. The discourse of the Bolivian government, betting on lithium as a way out of poverty and debt⁶, contrasts starkly with the poor concrete results so far.

⁴ Based on U.S. Geological Survey, Mineral Commodity Summaries, January 2022. Available at <https://pubs.usgs.gov/periodicals/mcs2022/mcs2022-lithium.pdf>

⁵ The term “resources” in this context refers to the naturally occurring amount of a certain mineral, while “reserves” refers to the share of these “resources” that can be profitably extracted.

⁶ In March 2024, the Bolivian government has pitched the idea of lithium-linked bonds to Wall Street investors: <https://www.rumbominero.com/bolivia/bolivia-evalua-uss-1-000-millones-wall-street-bonos-litio/>

Plans to extract Bolivia's lithium date back more than fifteen years. In 2008⁷ government officials, scientists and a delegation of the peasant movement FRUTCAS (*Federación Sindical de Trabajadores Campesinos del Sudoeste*) participated in a study visit to Chile, to learn about the country's experiences with lithium extraction in the Atacama desert. Subsequently, in 2010, the government elaborated a national strategy for the industrialization of its evaporite resources, which in 2014 was integrated in a new mining law.

In 2017 the Bolivian state lithium company YLB (*Yacimientos del Litio Bolivianos*) was created and construction began of an industrial plant to produce potassium chloride. In 2018, the German renewable energy company ACI Systems signed a contract for the construction of a lithium hydroxide plant, as well as the construction of an electric vehicle batteries factory, but this agreement was later canceled in 2019: regional organizations protested fiercely to demand more royalties from mining, but also against the general economic and operational conditions of the agreement, which were seen as very favourable to the German company. ACI Systems would have a monopoly on the commercialization of Bolivian lithium in Europe, the commitment with ACI would be valid for 70 years (despite ACI having only 49% of the shares) and the German company would hold control over the management of the company.

In 2021, Bolivia started to explore the less fresh water-intensive direct lithium extraction as an alternative to the evaporation method (which according to geologists is less suitable in the case of Bolivia – as the lithium deposits are less “pure” than for example in Chile and rainfall is higher) and the government preselected six companies to support the development of this technology. In 2023, several agreements (together worth of 2,8 billion USD) were signed with Russian and Chinese investors to construct industrial plants for the direct extraction of lithium. The companies involved are Catl, Brunp and Cmoc (CBC) from China, Citic Gouan (also China) and Uranium One (Russia). These agreements cover various *salares*: Salar de Uyuni, Salar Coipasa and Salar Pastos Grandes.

Even though the Bolivian experiment has so far failed to produce significant results, these latest developments indicate renewed interest from foreign investors. The industrial lithium carbonate plant, initially projected to produce 15.000 tons of lithium carbonate per year, was eventually inaugurated on 15 December 2023, but in 2024 it will be operating at just 20 percent of its production capacity (yearly output is currently even less than 1.000 tons).

In November 2023, a delegation of Broederlijk Delen and its partner organization Centro de Documentación e Información Bolivia (CEDIB) visited the lithium exploration sites in the Uyuni region and participated in meetings with representatives of indigenous communities living near these sites (in the villages of Colcha K, Soniquera, Mallku Villamar and Pastos Grandes). These communities self-identify as belonging to the indigenous *Lípez* nation. The *Lípez* seek recognition from the Bolivian state as ancestral peoples who hold the right to self-determination and want to co-decide on the development of lithium projects on their lands⁸. Based on this visit, we can identify four clusters of environmental, social and governance (ESG) concerns related to lithium extraction in the area, from the perspective of local communities.

Impacts on water sources and fragile ecosystems: the impact of mining on water sources and biodiversity in the *salares* is mentioned both by communities and specialized NGOs (such as

⁷ This overview has been reconstructed on the basis of research and analysis by CEDIB (*Centro de Documentación e Información de Bolivia*) and the publication *El litio en Bolivia: una evaluación preliminar* (Juan Carlos Zuleta Calderón, 2022).

⁸ More background available at <https://climatetrackerlatam.org/historias/el-sueno-de-lipez-ser-nacion-y-decidir-sobre-el-litio-en-bolivia/>

Wetlands Internationals) as the main concern related to lithium extraction in the area, particularly in the case of evaporation⁹, a method which requires 2 million litres of lithium-rich water to produce one ton of lithium (communities say they are already experiencing water-related impacts). Moreover, Bolivia is experiencing already severe consequences of the climate crisis, with heatwaves, wildfires and (especially in the highlands) chronic water shortages. The arid area of the *salares* is characterized moreover by unique ecosystems such as *bofedales* (wetlands), parts of which are also protected areas under the RAMSAR Convention¹⁰, with a rich biodiversity (including different threatened species such as the Andean flamingo and vicuña). Representatives from local communities stressed that they were worried about future generations and questioned information from the government stating that “there is enough water”. While not opposing lithium mining completely, they stressed that “extraction must be done in harmony with the environment”.

Impacts on livelihoods of communities: communities in the area make a living out of economic activities such as livestock farming (especially llamas), quinoa planting and tourism (the salt flats around Uyuni are one Bolivia’s major touristic hotspots). Several representatives stressed the importance of conserving the ecological value of the area in order to be able to continue their way of living.

Transparency and access to information: the lack of information and transparency surrounding plans for lithium extraction and contracts with companies was also a common thread in conversations with community representatives – especially with regard to the implications of different extraction technologies (evaporation versus direct extraction), hydrogeologic studies and monitoring of water impacts, the redistribution of royalties from mining, the nature of agreements with foreign investors and the role of the state company YLB in both lithium extraction and production of lithium carbonate. They remarked that the government and companies now seemed to be in a hurry to take projects forward as soon as possible, at the expense of social and environmental questions, in order to profit from high lithium prices that might fall in the future.

The right to free, prior and informed consent (FPIC): related to the lack of access to information, communities denounce that they have not given their free, prior and informed consent to lithium extraction and the construction of industrial plants on their lands, despite this right being explicitly recognized by international human rights instruments (ILO Convention 169, UN Declaration on Rights of Indigenous Peoples) and the Bolivian Constitution. More generally, they demand stronger participation as an indigenous nation in decision-making processes around the extraction of natural resources on their territories.

⁹ Briefing available at <https://www.wetlands.org/publication/briefing-on-lithium-mining-in-the-andes-of-south-america-no-to-water-mega-mining/>

¹⁰ <https://rsis.ramsar.org/ris/489?language=en>



Andean flamingos are one of the vulnerable species living in the unique ecosystem of the Bolivian salt flats. (© Wies Willems – Broederlijk Delen)

EU interests in Bolivia's lithium value chain

Several recent developments indicate **renewed interest of EU actors in Bolivia's lithium resources**. These must be understood within the larger context of the EU's efforts to further strengthen political and economic ties with Latin America, in order to become less dependent from China (and Russia) and to diversify the EU's supply of critical raw materials from third countries.

For example, the **Global Gateway** Investment Agenda for the region, presented during the EU-CELAC summit in Brussels (July 2023), mentions lithium exploration in Bolivia as one of the country projects examples, with the French government and the Interamerican Development Bank as (potential) investment partners¹¹. The EU has also already signed strategic partnerships in the context of the Critical Raw Materials Regulation with neighbouring countries Chile and Argentina.

Furthermore, at the end of November 2023 a so-called **'Team Europe' delegation** visited Bolivia, consisting of representatives from European companies and investors active in the lithium value chain, and accompanied by representatives of EU institutions and embassies of EU member states¹². Following this visit, in February 2024, representatives of YLB and the Bolivian Ministry of Hydrocarbons and Energy visited Brussels and Paris, with the objective to

¹¹ https://international-partnerships.ec.europa.eu/document/download/6c325cfa-c0eb-44d0-ac57-f122d21b42c8_en?filename=EU-Bolivia-partnership_en.pdf

¹² <https://www.mhe.gob.bo/2023/11/27/inversionistas-europeos-llegan-al-pais-para-evaluar-opportunidades-de-negocios-en-el-sector-del-litio/>

disseminate an international call for proposals launched by the state-owned company, for the development of the evaporite resources in seven Bolivian salt flats¹³.

According to official statements by YLB, so far 38 companies from different countries (including France, Germany and Ireland) expressed interest in developing lithium projects as a response to this second call for proposal (after a first call resulted in the agreements with Chinese and Russian investors)¹⁴. The Bolivian Ministry of Hydrocarbons and Energy and the EU also announced¹⁵ that they will be working together on financing the development of industrial lithium projects through INTPA (the EU Commission Directorate-General responsible for the EU's international partnerships and development policy). Finally, another concrete result of YLB's European charm offensive is a memorandum of understanding¹⁶ with the French *Bureau de Recherches Géologiques et Minières (BRGM)* to study the hydrogeology of the salt flats and the potential impact of lithium extraction on water sources. A meeting around the same topics was held with scientists from the University of Leuven (Belgium). This last point makes it clear that the Bolivian government itself has not developed, in more than fifteen years, sufficient capacity for interdisciplinary and integrated hydrogeological and environmental research.

It remains to be seen how these engagements from EU actors will materialize, certainly in the rapidly evolving technological, economic and geopolitical context of the energy transition, and an uncertain political and economic context - and hence unpredictable investment climate - in Bolivia (presidential elections are planned for 2025). It is clear, however, that **the EU, several member states and EU companies are stepping up their efforts to increase their leverage in Bolivia's lithium sector** and to catch-up with Russian and Chinese investors. A first question is whether these efforts will be too little, too late in the context of the global race for critical raw materials, also taking into account technological and economic evolutions which could cause a fall of lithium prices on the international market (and hence leave Bolivia – as well as EU investors - with empty hands). A second question is how EU political and private actors should navigate the delicate balance between on the one hand securing supply of critical raw materials, and on the other hand genuinely contributing to sustainable development in the Andean country.

While the answer to the first question is hard to predict, the second question relates **to policy coherence and concrete measures that the EU can take to ensure greater coherence in its political and commercial relations with Bolivia**, and ensure that private actors comply with relevant policy frameworks regulating the extraction of (critical) raw materials and EU trade with Latin America. This point is particularly relevant in the light of the EU's Multi-annual Indicative Programme 2021-2027 (MIP), which constitutes the framework for development cooperation between the EU and Bolivia¹⁷. The MIP has two priority areas: 1) Environment, Climate Change and Inclusive Economic Development (including water management); and 2) Governance and Human Rights.

¹³ <https://www.ylb.gob.bo/resources/img/2024/27022024-1.pdf>

¹⁴ <https://www.ylb.gob.bo/resources/img/2024/08032024.pdf>

¹⁵ <https://www.abi.bo/index.php/component/content/article/36-notas/noticias/economia/47647-bolivia-y-la-union-europea-elaboran-estrategia-para-financiar-proyectos-de-litio-y-energias-renovables?Itemid=101>

¹⁶ [ylb.gob.bo/resources/img/2024/29022024-1.pdf](https://www.ylb.gob.bo/resources/img/2024/29022024-1.pdf)

¹⁷ https://www.eeas.europa.eu/bolivia/european-union-and-bolivia_en?s=159

Policy recommendations for a coherent approach towards protecting human rights and the environment

While Bolivia's lithium plans remain surrounded by a lot of uncertainty and opaqueness, it seems that this could be a make-or-break moment for the future of the country's lithium sector. EU actors along the value chain have the leverage and responsibility to ensure that extraction is done in a way that respects the rights of local communities, minimizes environmental impacts and contributes to sustainable development. Based on the above context analysis and insights from our visit to the area, Broederlijk Delen and its Bolivian partner organization CEDIB want to share the following recommendations with EU policy makers and private actors involved in investments and/or political and technical cooperation around lithium extraction in Bolivia, as well as to the Bolivian government and the state company YLB.

- In line with international frameworks such as the UN Guiding Principles on Business and Human Rights and OECD Guidelines for the Extractive Sector, investors and companies have the responsibility to identify, address, communicate and remedy risks throughout the value chains of raw materials. The EU and member states must adopt and implement strong binding instruments that oblige companies to respect these international standards, including doing **human rights and environmental due diligence** throughout the whole lithium value chain, and providing remediation in case of harms. Due diligence obligations for companies putting batteries on the EU market are already contained in the new EU Batteries Regulation¹⁸. Also the Corporate Sustainability Due Diligence Directive (CSDDD), though drastically limited in both company and material scope throughout the political negotiations, will oblige large EU companies to do due diligence on the whole upstream part of their value chain and ensure civil liability in some cases for failure to do due diligence. It is crucial however that EU countries adopt stronger national corporate accountability laws that go beyond CSDDD, in line with civil society demands, and that implementation of due diligence obligations is not outsourced to auditing and certification initiatives¹⁹.
- The exclusion of a specific reference to the internationally recognized **right to free, prior and informed consent of indigenous communities (FPIC)** in the final version of the Critical Raw Materials Regulation, due to resistance of some EU member states, is a major shortcoming: the final text only refers to the weaker notion of “meaningful consultation”. As a country with a large indigenous population, upholding FPIC is critical for the protection of human rights in Bolivia. Companies and investors must respect this right in the context of lithium exploration and extractive projects, and the Bolivian government must guarantee FPIC is ensured, in line with the provisions of its own Constitution and international instruments on the Rights of Indigenous Peoples, such as ILO Convention 169.
- At the same time, the Bolivian government, companies and EU actors must also ensure **transparency and access to information** for communities on planned projects and public

¹⁸ [Regulation \(EU\) 2023/ of the European Parliament and of the Council of 12 July 2023 concerning batteries and waste batteries, amending Directive 2008/98/EC and Regulation \(EU\) 2019/1020 and repealing Directive 2006/66/EC \(europa.eu\)](#)

¹⁹ For more background, see civil society analysis and recommendations for the implementation of the CRMR available at: <https://eeb.org/library/limiting-environmental-damage-human-rights-abuses-and-indigenous-peoples-rights-violations-civil-society-guidelines-for-the-implementation-of-the-eu-critical-raw-materials-regulation/>

policies related to the matter – as well as serious mechanisms for dialogue with civil society and representatives of communities, in line with amongst others the Escazú Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean, to which Bolivia is a state party.

- At the level of environmental protection, policy makers, investors and companies should respect **the precautionary principle**: several aspects of the complex hydrology and ecology of the *salares* remain uncertain. There is a need for thorough, impartial impact studies regarding the possible negative (and irreversible) impacts of lithium extraction (either by evaporation or through direct extraction) on water sources and fragile ecosystems. This is even more urgent in the light of recent research highlighting the specific sensitivities of the region to lithium mining²⁰.
- Finally, the EU should **take measures to reduce its own demand** for (critical) raw materials such as lithium, through policy measures guided by a sufficiency perspective. A paradigm shift in mobility systems²¹, for example, could go a long way in decreasing the need for new extractive projects and preventing the destruction of nature. Setting limits to our consumption of primary raw materials is a crucial part of the systemic change that Broederlijk Delen and its partner organizations in Bolivia are advocating for.

Contact for more information

Wies Willems

Policy Officer for Natural Resources

Broederlijk Delen

Wies.Willems@broederlijkdelen.be

+32 (0)485 679 619

²⁰ Based on <https://www.mining.com/dry-andes-more-sensitive-to-lithium-mining-than-previously-thought-study/>

²¹ For more background, see <https://www.climateandcommunity.org/more-mobility-less-mining>