

Can Escazú Turn Mining Green in the Lithium Triangle? Lofty Promises Meet a Thirsty Industry in the Desert

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As it emerges from its COVID-19 recession, China has already seen an early resurgence in key industrial sectors. This is particularly true for industries linked to renewable energy generation, driven by President Xi's quest for carbon neutrality. Chinese demand for lithium from Latin America is picking up, built on a foundation of Chinese investment in the sector in Argentina, Bolivia, and Chile.

Chinese investment in South American mining—and related socio-environmental concerns—are nothing new. China now has decades of experience in the sector, most notably in Peru. However, lithium mining is particularly difficult to oversee environmentally, as the extraction process involves drastic groundwater depletion, laying the literal groundwork for environmental conflicts with local stakeholders over this vital resource in one of the world's most water-scarce areas.

Moreover, Latin American countries as well as China have made ambitious new commitments to environmental performance, commitments that require greater transparency and deeper involvement by affected communities. Living up to these new commitments in a sector fraught with environmental conflicts will be crucial to determining whether this promised boom will benefit Latin American nations and communities as well as Chinese investors. It is vital for all of these parties to learn and apply the lessons from past Chinese mining booms in the region—particularly China's history of copper mining in Peru—to ensure socially inclusive and environmentally sustainable development in this crucial sector.

China's Entrance into the Lithium Triangle

Chinese demand drove the LAC commodity boom of the 2000s (Ray et al. 2015; Jenkins, Dussel Peters and Mesquita Moreira 2008). Now, China is at the forefront of driving new raw materials development, this time for renewable energy transitions (Wells 2020). Renewable energy goals have driven booming Chinese demand for lithium, crucial for energy storage for intermittent energy generation like solar and wind power. In South America, that demand has brought new Chinese investors to the "lithium triangle"—the largest lithium deposit in the world, overlapping the boundaries of Argentina, Bolivia, and Chile. While COVID-19 slowed output in lithium triangle countries (LTCs), the sector is expected to rebound in 2021 as China's growing demand returns to its pre-pandemic pace (Tang, Ong, and Tan 2021).

Tempering growth expectations are environmental concerns, particularly regarding water use. The evaporative process of extracting lithium from the brine waters under the LTCs' *salares* requires pumping and evaporating groundwater: as much as two million liters per ton of lithium produced. This water-intensive process—labeled "water mining" due to the much greater amount of water than lithium extracted—creates a serious threat for local livelihoods and conservation in one of the world's most water-scarce areas (Gajardo and Redón 2019). So it is no surprise that concerns about water use have followed Chinese investors in all three LTCs (Vásquez 2020).

Chinese investors entered the Chilean market in 2018, when Tianqi Lithium Corp purchased a 24 percent stake in the Chilean mining firm Sociedad Química y Minera (SQM) (De La Jara 2018). In buying into SQM, Tianqi has inherited significant environmental challenges. Since 2016, SQM has been in dispute with the Superintendence of the Environment and local communities over water use (Guzmán 2020; Jerez, Garcés, and Torres 2021).

In 2019, Bolivia secured a deal with Chinese investor Xinjiang TBEA Group Co Ltd to develop Bolivia's lithium and meet two important conditions for Bolivia's long-term economic goals: forming a joint venture with majority Bolivian ownership through state-owned Yacimientos de Litio Boliviano (YLB) and committing to develop a local lithium processing plant (Jemio 2020). These conditions allowed this deal to survive when a similar German investment deal was canceled amid concerns over benefits for the local economy.¹ However, civil society groups, including peasant and worker organizations, are less optimistic, demanding publication of the project's environmental impact, which may affect local livelihoods through competition for clean water (Jemio 2020).

The Argentine Cauchari-Olaroz project—operated by Minera Exar, which is jointly owned by Canadian Lithium Americas, Chinese Ganfeng Lithium, and Argentine SOE Jujuy Energía y Minería Sociedad del Estado (JEMSE)—is still under construction, delayed in mid-2020 due to COVID-19 but already restarted and expected to open in 2022.² As required, Minera Exar conducted community assemblies to communicate expected environmental and social aspects of the projects, but interviews with community members has shown that this process failed to address expected water use, a primary concern of local stakeholders (Marchegiani, Morgera, and Parks 2020)

New Framework for a New Boom

The new wave of Chinese investments confronts a changing governance landscape, with local and international stakeholders demanding higher levels of transparency and accountability, particularly due to overlapping concerns about environmental protections and the rights of indigenous peoples. Two recent policy achievements have responded to these issues and promote more inclusive environmental policymaking: China's acceptance in 2019 of human rights recommendations after its third Universal Periodic Review (UPR), and the entry into force of the Escazú Agreement on April 22, 2021. These agreements will expand stakeholders' expectations of inclusion in future project decisions, and raise expectations for social and environmental performance.

During China's third UPR, Latin American countries and civil society organizations voiced concern regarding China's treatment of indigenous peoples' rights and environmental protections (UNGA HRC 2018c). The UPR summary cited specific violations of legal obligations and human rights standards for protection of indigenous peoples by Chinese mining companies in Ecuador and Bolivia (paragraphs 15–16). The UN Human Rights Council's final recommendations for China included: ensuring development projects meet international standards, establishing a legal framework to protect human rights abroad, completing due diligence for “companies operating in high-risk or conflict areas,” and developing an assessment framework for human rights and environmental impacts of Chinese companies operating abroad (UNGA HRC 2018b). In March 2019, China accepted each of these recommendations and reported that the first and last of these were already being implemented (Koop and Soutar 2019; UNGA HRC 2018a).

In April 2021, the Escazú Agreement entered into force with ratifications from 12 states, including Argentina and Bolivia. Peru remains

¹ “Bolivia Scraps Joint Lithium Project with German Company,” Deutsche Welle, November 4, 2019, <https://www.dw.com/en/bolivia-scraps-joint-lithium-project-with-german-company/a-51100873>.

² “Cauchari-Olaroz,” Lithium Americas, <https://www.lithiumamericas.com/cauchari-olaroz/>.

a signatory, and Chile has yet to sign.³ This innovative agreement establishes access rights to environmental information and environmental justice and requires broad and inclusive public participation in decision-making processes. The ratifying states have committed to heightened transparency and accountability standards, and earlier, more robust public consultation with specific provisions for vulnerable populations, including indigenous peoples. This new agreement will compel Chinese firms to greatly expand their decision-making process beyond prior consultation, incorporating public input from much earlier stages.

These new commitments pose challenges for young institutions tasked with their implementation. Argentina's Ministerio de Ambiente y Desarrollo Sostenible was created in 2015, Bolivia's Ministerio de Ambiente y Agua in 2009, and Chile's Ministerio del Medio Ambiente in 2010. In addition, effective management will require collaborating with ministries of energy, mining, social development, and culture, as well as local governments. This implies a steep learning curve for managing complex projects with Chinese investors unfamiliar with the local context and an increasing number of diverse stakeholders. As relative newcomers to LTCs, Chinese investors would be wise to incorporate lessons from the much longer history of Chinese mining in neighboring Peru.

Past Lessons from Chinese Mining in Peru

Peru has the longest history in the region hosting Chinese mining investors. In 1992, Chinese state-owned conglomerate Shougang purchased Hierro Peru, the nation's largest iron producer, paving the way for a second wave of Chinese investment after 2007. Chinese investments in the Peruvian copper sector expanded simultaneously with the country's development of social and environmental safeguards and conflict management institutions.

Three years before Shougang arrived, Peru signed the 1989 Convention 169 of the International Labor Organization, asserting the rights of local indigenous communities to "prior consultation" in new projects affecting the ecosystems they rely on. The next year, Peru mandated environmental impact assessments (EIA) (De Echave et al. 2009). But these measures alone were not enough to prevent mining-related conflicts.

In the early 2000s, as a response to the social movements against the Yanacocha gold mine, the Ministry of Energy and Mining (MINEM) mandated that information workshops be held in the areas of extraction during the EIA process (Arce 2014). Since then, it has become the norm that "social license" should be acquired before the operation (Bebbington et al. 2018). In 2011, Peru passed its prior consultation law (Law 29785; Supreme Decree 001-2012-MC, article 23) and consolidated the norm of popular consultation and participation (Paredes 2015).

In this context, the second wave of Chinese mining investors entered the country, starting with Zijin's purchase of Rio Blanco and Chinalco's purchase of Toromocho in 2007, and climaxing with a USD 7005 million purchase by a Chinese consortium led by MMG of the Las Bambas project in 2014. However, the Rio Blanco project was fiercely rejected by the local agricultural communities (Sanborn and Torres 2013) and stays undeveloped until this day; the Toromocho project has relatively peaceful relations with the locals, but also encountered problems due to community displacement of the town of Morococha; and the Las Bambas mine, among the nation's top producers, faces constant confrontation with local communities because of social and environmental issues (Leyva 2018).

These conflicts are irreducibly complex, but among their causes are two aspects of the still-evolving national regulatory framework. First, prior consultation did not include veto power for local communities but served to explain away criticisms (Jaskoski 2014; Li 2015). Second, EIA evaluation

³ Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean (Escazú Convention), adopted March 4, 2018, entered into force April 22, 2021 (C.N.195.2018 and C.N.196.2018), https://treaties.un.org/Pages/ViewDetails.aspx?src=TREATY&mtdsg_no=XXVII-18&chapter=27&clang=_en.

authority was traditionally under the authority of MINEM (which faces considerable conflicts of interest as the body tasked with expanding the country's mining frontier) until it was transferred to the newly formed Ministry of Environment, and even so, loopholes remain in EIA procedures to avoid public transparency and consultation (Leyva 2018).

Recognizing the persistence of these social and environmental conflicts, the Peruvian state has developed rigorous institutions with direct mandates for conflict prevention and mitigation. In 2012, the Prime Minister's Office formed the National Office of Dialogue and Sustainability (which later became the Secretariat for Social Management and Dialogue) under the Presidency of the Council of Ministers (PCM), which provides cross-ministry coordination regarding social conflicts (Dargent et al. 2017). Since 2014, the Ombudsman's Office has monitored and published monthly reports on civil conflicts, and has also established an Office for the Prevention of Civil Unrest and Governance and the Office of Environment, Public Service, and Indigenous People. Facing a new surge of mining conflicts in 2020, the PCM formed a high commission for dialogue and development in the southern mining corridor.⁴ These steps are promising, but much work remains to establish a long-term and institutionalized conflict management mechanism.

Applying Peru's Lessons to China's LTC Lithium Investments

If managed well, Chinese investment may bring a much-needed boost to the LTCs' lithium sector, providing local capital inflows and facilitating sustainable energy transitions worldwide. However, in light of new environmental commitments by both China (through its acceptance of UPR recommendations) and LTC governments (through the Escazú Agreement), environmental performance will be more important now than ever in ensuring benefits for investors, communities,

and LTC nations. A fair and sustainable utilization of this rich natural resource needs participation from all stakeholders: international norm building, civil society participation, central government capacity, and investor cooperation.

LTC governments will need to learn from Peru's example of building institutional capacity in reaction to conflicts, in order to more proactively build mechanisms that will institutionalize transparent, inclusive planning for sustainable investment. For example, the Bolivian case, in which the EIA has not yet been published for the Xinjiang TBEA-YLB collaboration, demonstrates the need to dramatically strengthen transparency efforts by government as well as investors, and to do so much earlier in the project planning process. This case also demonstrates the crucial role for civil society in holding local governments and Chinese investors accountable to their commitments.

For the new boom to yield net benefits, China will also need to implement the promises it made during the UPR process. For example, the Chilean buy-in demonstrates that there is room for improvement on Chinese due diligence regarding Tianqi Lithium Corp's buy-in of SQM despite the latter's ongoing water dispute, as well as Chilean enforcement of its own water use limits.

These improvements are not simply matters of law enforcement but of genuine, inclusive planning and oversight. The Argentine case, in which required community consultations appear to have circumvented one of the most important local issues—water—shows the value of ensuring that the region's heightened commitments have tangible impacts for investors and stakeholders alike.

⁴ "PCM diseña un modelo de gobernanza para el Corredor Vial Sur enfocado en el territorio y de la mano con las comunidades," Gobierno de Perú, Presidencia del Consejo de Ministros, <https://www.gob.pe/institucion/pcm/noticias/76410-pcm-disena-un-modelo-de-gobernanza-para-el-corredor-vial-sur-enfocado-en-el-territorio-y-de-la-mano-con-las-comunidades>.

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