LITIO Y DERECHOS HUMANOS
ARGENTINA BOLIVIA CHILE (ABC)

Lithium and Human Rights in the High Andean Salt Flats of Argentina, Bolivia and Chile

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Trucks loading lithium sulfate in the Salar de Atacama, Chile, 29 July 2024.
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Foreword

In response to the global climate crisis – caused by the intensive use of fossil fuels and the accelerated industrial development visible today – states have committed to promoting a transition towards the use of renewable energy sources to gradually replace these fuels. This has positioned lithium, a mineral with properties conducive to energy storage, as a key resource in the production of rechargeable electric batteries used, for example, in electric vehicles, mobile phones and renewable energy technologies. For this reason, global demand for lithium has grown exponentially in recent years.

In this context, the so-called "Lithium Triangle", which comprises the deposits located in the high Andean salt flats of Argentina, Bolivia and Chile (commonly referred to as ABC), where more than half of the planet's lithium reserves have been identified to date, has gained global importance.

However, these salt flats are the traditional territories of several indigenous peoples. It is estimated that a dozen indigenous peoples – such as the Aymara, Quechua, Lipi or Lipeño, Atacameño or Lickanantay, and Colla – currently live around the high Andean salt flats of ABC, organised into at least 200 communities, descendants from millennia-old civilisations, such as the Tiwanaku and Inca cultures.

The exploitation of lithium in these salt flats, which in the case of the Salar de Atacama in Chile has been going on for four decades, has been promoted by all three states, with the participation of state-owned and private enterprises, funded by both national and transnational capital, without much attention being paid to the adverse impacts of this activity on the peoples and communities that live there, or to the effects on the resources that are inherent to the salt flats, such as water.

This report seeks to highlight the main implications for human rights of lithium development in the high Andean salt flats of ABC, in particular the rights of indigenous peoples and the right to a healthy environment, as well as the associated rights of access to information, participation and access to justice in environmental matters. These are all rights recognised not only in the domestic legal frameworks of the ABC states (in their constitutions or domestic legislation) but also through international treaties that have been ratified by those states.

This report consists of six chapters. The first chapter analyses the development of the lithium industry in the context of the multiple crises currently facing the planet. The second chapter describes and analyses the physical and human geography of lithium development in ABC. The third chapter provides background information on the lithium industry in these three countries, from its establishment in the high Andean salt flats in the 1980s to the present day. The fourth chapter looks at the international human rights standards applicable to lithium mining. It describes and analyses the human rights responsibilities of states, including ABC states and those states in which companies operating in the high Andean salt flats are domiciled, as well as the human rights responsibilities of businesses, including state-owned enterprises, in the context of their activities. It also examines the implications for indigenous peoples' rights and the right to a healthy environment, and the multi-stakeholder certification schemes to which many of the companies exploiting

lithium in the high Andean salt flats have adhered. The fifth chapter describes the current regulatory frameworks and public policies governing lithium development in the ABC states. Finally, the sixth chapter provides an in-depth analysis of the impacts that the lithium industry has had to date on human rights in general, and on the right to a healthy environment and the rights of indigenous peoples in particular.

This report is the result of collaborative research by the *Observatorio Ciudadano de Chile* (OC), the *Centro de Estudios Legales y Sociales de Argentina* (CELS) and the *Postgraduate Programme in Development Sciences of the Universidad Mayor de San Andrés de Bolivia* (CIDES UMSA). It has benefited from the support of the International Federation for Human Rights (FIDH). The editors, in alphabetical order, are: José Aylwin, lawyer and Coordinator of the OC Globalisation and Human Rights Programme; Juan Carlos Cayo, lawyer and member of the OC Globalisation and Human Rights Programme; Sebastián del Pino, lawyer, and former researcher for the OC Globalisation and Human Rights Programme; Sacha Feierabend, doctoral researcher in Social Sciences and member of the FIDH Business, Human Rights and Environment Programme; Manuel Olivera Andrade, biologist, MA in Economic Development, professor-researcher at CIDES UMSA, and Manuel Tufró, doctor in Social Sciences and Director of the CELS Justice and Security Division. The report was reviewed by Marcelo Mendoza, journalist and independent editor, to whom we are grateful for his valuable collaboration.

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We hope that this report will provide background information to the indigenous peoples and communities affected by lithium operations in ABC, enabling them to make decisions and design autonomous strategies to ensure the protection of their rights in the context of ongoing or future lithium operations in their traditional territories. We also hope that it will raise awareness among decision-makers, both in the ABC states and in the national and foreign companies involved in lithium development, of the human rights and environmental impacts these projects have caused and are expected to continue causing if no substantial changes are made. Our intention is to encourage states and companies to take on their responsibilities to remedy the adverse impacts of this development on human rights and the environment, and to prevent any that may occur in the future.

Finally, but no less importantly, we hope that this work will bring these impacts to the attention of the international community, particularly in the states where the lithium companies operating in the high Andean salt flats of ABC are domiciled, as well as the companies that source lithium from this region. We hope that this will encourage them to take the necessary measures to prevent, mitigate and redress such impacts in the future, to ensure that the urgently needed energy transition is truly fair and equitable for all, not just for the few.

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Executive Summary

The world is facing a series of structural challenges, marked by the convergence of economic, environmental, geopolitical, energy, representation and social cohesion crises. This global crisis context highlights the urgent need to take action to respond and reorganise, including by reducing the use of fossil fuels as an energy source and thus reducing the carbon footprint, in order to halt or slow the rise in global temperatures.

So far, the so-called energy transition strategies designed for this purpose involve states, international organisations and companies. These strategies require countless technological innovations. This highlights gaps in technological development across the world's regions, as well as a number of contradictions. A technological transition of such magnitude requires the intensive and massive use of low-cost and highly available raw materials. The energy transition promoted at the global level is intensive in the use of certain natural resources, including lithium, copper, cobalt, nickel and manganese. Paradoxically, it requires the expansion of the traditional areas of exploitation of these minerals, opening up new extraction zones in territories and ecosystems that are highly vulnerable to climate change.

Lithium is an alkali metal, the lightest on the planet, which can be found in rocks as well as dissolved in marine and continental waters. This gives it a set of properties that make it suitable for energy storage and explain its strategic and indispensable use in the production of rechargeable electric batteries. In order to meet the Sustainable Development Scenario targets to achieve commitments under the Sustainable Development Goals (SDGs), a 42-fold increase in lithium production volumes between 2020 and 2040 would be required, according to the International Energy Agency (IEA). Global demand for lithium has grown exponentially in recent years. In 2023, it reached 920,000 tonnes of lithium carbonate equivalent (LCE), with a projected rise to 1,404,000 tonnes by 2025, representing a 52% increase.

Lithium Development in Argentina, Bolivia and Chile

The growing expansion of lithium demand places the so-called "Lithium Triangle", made up of the lithium deposits found in the salt flats of Argentina, Bolivia and Chile (commonly referred to as "ABC"), at the centre of global interest and tensions. The largest lithium deposits in the world are located in this area, with 50% of all identified lithium resources. In 2024, lithium production in ABC (from Argentina and Chile) accounted for 29% of global lithium salts production. The main lithium export destinations include China, the world's largest consumer (approximately 55% of global demand), followed by the United States and Europe.

Lithium in ABC is extracted from the salt flats located in the high Andean area where the three countries intersect. This is an area characterised by extreme aridity, flanked to the west by one of the most barren deserts in the world – the Atacama Desert – and situated at high altitudes, with elevations of over 6,000 metres above sea level due to the

Andes Mountain range, which crosses it from north to south. This area, also known as the "Circumpuneña Region" due to its altitude and geography, has been inhabited for millennia by various interrelated peoples and communities, who over time and through exchange have developed their ways of life in relation to the ecosystems that exist there, which in turn have been decisive in shaping their cultures.

The salt flats are located inside closed basins, in low-lying land, bordered by volcanic mountain ranges. There are 163 salt flats and salt lakes in ABC: 69 in Chile, 56 in Argentina and 38 in Bolivia. These salt plains are located between 2,300 metres above sea level (Salar de Atacama, Chile) and 4,584 metres above sea level (Laguna Pabellón, Argentina), and their surface area ranges from just a few to thousands of square kilometres. The most notable are the Salar de Uyuni in Bolivia (10,582 km2), the Salar de Atacama in Chile (3,418 km^2), and the Salar de Arizaro in Argentina (1,919 km2). These ecosystems are fragile, with specialised biodiversity, and are highly vulnerable to climate change. The delicate balance of these ecosystems is threatened by various factors, including the depletion of water resources and anthropogenic activity, in addition to the decrease in precipitation due to the global climate crisis.

Human settlement in the high Andean region goes back thousands of years. The first inhabitants of the high Andean territory, which today forms part of Bolivia and is the cradle of Andean civilisation, date back to the Paleo-Indian Archaic period (13,000 BC). These populations subsisted on hunting and gathering. Over time, these communities developed agricultural systems for potato, quinoa and corn, and domesticated camelids, consolidating agricultural and livestock-based economies between 3500 BC and 500 AD.

These fragile ecosystems are currently home to a dozen indigenous peoples descended from the Tiwanaku and Inca cultures, divided into more than 200 communities. Until recently their economies were based on camelid livestock farming and agriculture of traditional crops, such as quinoa and corn, activities that were central to their cultures and worldviews. However, in recent decades lithium mining has been expanding. This expansion began more than forty years ago in Chile, through various models of state exploitation, public concessions to private companies and, more recently, public-private partnerships with increased regulation. In 1988, Bolivia announced the arrival of the US company Lithium Corporation (Lithco), through a controversial direct invitation from the government at the time, in violation of several legal provisions. This sparked a period of social unrest, which ended with the departure of the transnational company in 1993. In 2008, the new Bolivian government announced a policy of full state control over lithium resources, establishing a plan for its industrialisation. Despite this, lithium carbonate production, which began in 2013, remains limited. In Argentina, it began in the mid-1990s in the province of Catamarca, and in the last 15 years it has intensified in the provinces of Jujuy and Salta, almost exclusively driven by private capital, both national and transnational.

The importance of the lithium sector varies across the economies of Argentina, Bolivia y Chile, in terms of its impact on exports and tax revenue generation. In exports, Argentina generated approximately USD 631 million in 2024, which represents a 25% decrease compared to the previous year (Dirección Nacional de Promoción y Economía Minera, 2025). In Bolivia, although exports are currently marginal, they are projected to generate around USD 500 million annually by 2030 as a result of the implementation of new industrial projects and strategic agreements with international partners such as China. Chile leads the sector, with exports exceeding USD 8.546 billion in 2022, representing 4% of GDP. This explosive growth

is due to international lithium prices, which exceeded USD 80,000 per tonne in 2022. Additionally, in Chile, growth is supported by the implementation of the National Lithium Strategy, as well as the high quality of the Salar de Atacama reserves.

The significance of lithium in the three countries' tax revenues also varies. In Argentina, mining royalties generated around USD 150 million, mainly distributed among the mining provinces. In Bolivia, revenues remain limited, reaching USD 22.5 million in 2023, of which USD 675,000 came from mining royalties. In Chile, royalties represented more than USD 5.4 billion in 2022, equivalent to 1.8% of GDP and 6.9% of total tax revenues. This variability is not only due to the level of development of the sector, but also to the royalties charged in each country. While in Argentina (depending on the province) and Bolivia royalties are set at 3%, in Chile the contracts include a progressive royalty system ranging from 6.8% to 40% of the lithium sales price, depending on the international price bracket.

State and Corporate Obligations

The three states that make up the so-called "Lithium Triangle" have internal regulatory frameworks for the protection of the environment and the rights of indigenous peoples. These frameworks, whether constitutional and/or legal, are reinforced by international treaties from both the universal human rights system (such as ILO Convention No. 169 on Indigenous Peoples) and the regional system (such as the American Convention on Human Rights and the Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters, known as the "Escazú Agreement"). All three states have acceded to instruments such as the United Nations and American Declarations on the Rights of Indigenous Peoples, which establish standards applicable to investment projects on indigenous lands and territories.

The three countries have also adhered to the *UN Guiding Principles on Business and Human Rights*, Pillar 1 of which establishes that states have an obligation to regulate, supervise and monitor business activities, whether public, mixed or private. This obligation also relates to states' international responsibility over the actions of companies, including their extraterritorial responsibility to ensure that companies domiciled on their territory do not violate human rights when operating outside their borders; the duty to carry out prior consultation processes and protect other rights of indigenous peoples, given the operational context of lithium extraction in ABC; and the duty to protect the right to a healthy environment and the right of access to information, participation and justice in environmental matters. Under Pillar 2, the *Guiding Principles* establish the responsibility of businesses to respect human rights. As part of this, businesses should avoid infringing on the human rights of third parties and address adverse human rights impacts with which they are involved. To this end, enterprises should undertake due diligence processes to identify, prevent, mitigate and account for how they address their human rights impacts. Additionally, the *Principles* establish specific obligations in relation to state-owned or state-controlled enterprises, which are required to take additional steps to protect against human rights abuses. In this regard, the UN Working Group on Business and Human Rights (2016) stresses the need for states to require state-owned enterprises to perform due diligence, to ensure transparency in accountability for environmental, social and human rights performance, and to ensure access to justice. This state responsibility is particularly relevant in ABC, given that in all three countries, in different forms, there are state-owned enterprises or enterprises with public participation involved in lithium mining projects.

Under applicable domestic and international law in all three countries, ABC states must guarantee, and companies must respect, a number of key rights, particularly in the case of indigenous peoples, who may be affected by lithium mining:

- Right to land, territories and natural resources
- Right to a healthy environment
- Right to free, prior and informed consultation and consent, as well as to other participatory mechanisms
- Right to self-determination and to determine development priorities
- Right to benefit sharing and compensation for damages
- Access to information, public participation, and justice in environmental matters.

Impacts of Lithium Mining on Human Rights

The development of the lithium industry in the high Andean salt flats has caused significant adverse impacts on internationally recognised human rights, in particular the right to a healthy environment and the rights of indigenous peoples.

1) Right to a Healthy Environment

The extraction of lithium salts in the ABC salt flats has generated severe impacts on the environment, in particular on water. The dominant technology used so far by the companies that exploit lithium is known as *fractional or conventional crystallisation*, which requires the pumping of saline water or brine from inside the salt flats, and its disposal in open-air ponds or pools, thus taking advantage of the high solar radiation of the Puna and the desert. Research shows that lithium mining is, in practice, "water mining". The evaporation of almost all of the water contained in the brine produces an irreversible and unrecoverable loss of large volumes of water from the aquifer, with serious impacts on the wetland habitats that make up the salt flats. This technology has already been used for four decades in the Salar de Atacama, resulting in severe impacts on the aquifers there.

The phase of extreme desiccation in the Atacama basin coincides with the phase of brine mining and the expansion of potassium, boron and lithium mining operations. A recent study by the University of Chile, based on satellite data, found that, brine extraction by the lithium industry in the Salar de Atacama is causing it to sink at a rate of 1 to 2 centimetres per year. Similar studies show that groundwater levels there have fallen by more than 10 metres in the last 15 years. This has led to a significant loss of vegetation cover in the areas where the Atacameño or Lickanantay communities have developed agriculture and grazing, as well as the disappearance of lagoons within the salt flat.

Environmental impacts have also been documented in Argentina. In the Salar del Hombre Muerto, where the first lithium mining took place in the country, the Atacameño indigenous community filed a lawsuit in 2021 for the damage caused by lithium mining in the area through six projects. The extraction of lithium allegedly caused the disappearance of the Trapiche River's watercourse and wetlands. In March 2024, the provincial Supreme Court issued a ruling ordering the provincial government to refrain from granting new permits in the area until a comprehensive environmental impact assessment has been carried out.

In Bolivia, there are still no field studies that reliably reflect the extent of the environmental risks and impacts in the Salar de Uyuni, where the lithium plants and evaporation ponds are located. This is mainly due to the tight control of the areas of operation by

the central government, which oversees the state-owned enterprise *Yacimientos de Litio Bolivianos* (YLB). This has limited the possibilities for universities and civil society research centres to gather independent data. Nevertheless, local observations and records of impacts have noted: (i) the desiccation, shrinking and gradual disappearance of *bofedales* (peat-forming wetlands), impacting the wildlife associated with these ecosystems (such as vicuñas [camelids] and birds); (ii) the appearance of microplastic residues in the local drinking water; (iii) the constant wave of diarrhoea reported by communal health centres; iv) an increased saline taste in the water consumed by families in the communities surrounding the plants; and v) the deterioration of the landscape and scenic beauty of the salt flat, including dust from the lithium plants and the weakening of the salt crust.

2) Rights of Access to Information, Participation and Justice in Environmental Matter

In different ways, and with varying intensity, the development of lithium extraction in ABC has also affected the rights of individuals and communities to access information, participation and justice in environmental matters. These rights are recognised by all three states through their ratification of the "Escazú Agreement". Particularly in Argentina and Bolivia, the rights of environmental defenders have been seriously affected by the adverse impacts generated by the exploration and exploitation of this mineral, as well as by the policies or regulations adopted by these countries to encourage the development of this industry.

One of the most evident deficits concerns access to information on the environmental and social impacts of lithium projects, especially among potentially affected communities, an issue related to the right to consultation and participation. Also lacking is access to information on the companies interested in developing projects, their background, ownership structures and details of the contracts signed by them with the state. Finally, there is a worrying gap in the capacity of different voices to make their perspectives known in the public debate which is decisive in shaping decisions on lithium development.

With regard to access to justice in environmental matters – except in the case of Bolivia where the Constitution recognises indigenous native peasant justice – judicial systems are not characterised by an intercultural perspective or by facilitating access to justice for indigenous peoples and local communities. Nevertheless, these peoples and communities have made use of the justice systems to defend their rights affected by the lithium industry, with mixed results. In general, legal actions brought in the context of lithium development have been successful only in some cases where projects are already causing environmental impacts, but not as a preventive measure.

In all three countries, there is a trend towards the restriction of civic space, in many cases related to states' interest in promoting the extraction of natural resources, including minerals such as lithium, thus affecting the rights of environmental defenders. In Argentina and Bolivia, there is a risk that the situation of environmental rights defenders and organisations that oppose government-promoted lithium development plans will deteriorate, and that judicial persecution and demobilisation efforts will intensify. This takes place at a time when ABC state and transnational interests in the most important lithium deposits are expanding. In Chile, the situation will depend on the political direction of those who take office in 2026. Given the state's interest in lithium development and the growing awareness and mobilisation of communities in defence of their rights, it is not unlikely that Chile may face a scenario similar to that seen in Argentina and Bolivia.

3) Rights of Indigenous Peoples

The development of lithium in ABC has also led to violations of the rights of indigenous peoples who have inhabited the high Andean salt flats that constitute their traditional territory for millennia. This situation is in blatant contradiction to the international obligations that the three countries have undertaken by adhering to treaties that protect the rights of indigenous peoples, as well as the rights of environmental defenders. It is therefore deeply concerning that these rights are not considered as a fundamental part of lithium development, given the growing interest of states in its exploitation to meet rising international demand.

The rights over their lands and territories of traditional occupation are severely impacted, particularly in the cases of Argentina and Chile, where the lack of recognition and legal titling mandated by ILO Convention No. 169 has facilitated the installation of lithium companies. In addition, the rights most affected by this activity include the rights to participation, consultation, consent and self-determination. They also include the rights to benefit-sharing and compensation for damages.

In practice, except in exceptional cases, lithium operations in the Andean salt flats have not been the subject of consultations with indigenous peoples likely to be directly affected in an appropriate form, in good faith and with the objective of achieving agreement or consent, as required by the ILO Convention. In the few cases where consultation processes with indigenous peoples have been carried out in relation to state-approved lithium operations, appropriate mechanisms to ensure free, prior and informed consent have not been used. This contravenes the provisions of the UN and American Declarations on the rights of indigenous peoples, as well as the jurisprudence of both the universal and Inter-American human rights systems. According to these standards, in cases involving large-scale development or investments projects that would have a major impact on indigenous territories, states must seek the consent of the indigenous peoples who are likely to be directly affected.

Another indigenous right that has been clearly overlooked in the development of lithium exploitation in ABC is the right, recognised under international standards applicable in the three countries, to participate in the benefits derived from the exploitation of minerals located within their territories of traditional use and occupation. Added to this is the absence of compensation and reparation measures for these peoples for the serious damage caused by the mining companies, particularly with regard to the environment and water.

In the case of Argentina, neither the state nor companies consider indigenous communities as rights-holders entitled to participate in the benefits obtained from economic exploitation in their territories or to receive compensation for the resulting social and environmental sacrifices. In Bolivia, although the communities have a high level of political, social and productive organisation, problems persist in their relations with the companies involved in the development of lithium in the Salar de Uyuni. This continues to hinder the realisation of the right to participate in the benefits generated by this industry, as well as to compensation for the damage it causes, rights that are often violated through distortion of and non-compliance with agreements with the communities.

In Chile, until recently the lithium industry developed its operations in the Andean salt flats without considering any form of benefit-sharing or compensation for the damage caused by these operations. It was only in 2016 that a first Impact and Benefit Agreement was concluded between one of the companies involved (Rockwood Lithium, predecessor of US-owned Albemarle), the

Consejo de Pueblos Indígenas de Atacama (Council of Indigenous Peoples of Atacama – CPA) and the 18 indigenous communities that comprise it. The agreement establishes a share in a percentage of the company's sales from its lithium operations in the Salar de Atacama, as well as a mechanism for environmental monitoring of the Salar de Atacama with the participation of the CPA communities. Further benefits for the Atacama communities were included in the 2018 agreement between the *Corporación de Fomento de la Producción* (Production Development Corporation – CORFO) and the *Sociedad Química y Minera de Chile* (SQM), under which the Chilean state agency authorises SQM to continue operating in the Salar de Atacama until 2030. However, this agreement was not the result of a consultation process, and the CPA has since challenged it before national and international justice mechanisms.

Main conclusions

In accordance with international standards applicable to investment projects such as those described in this report, both the states and lithium companies operating in the Andean salt flats have failed to comply with their human rights responsibilities related to business activity.

The ABC states:

- Have failed to adequately protect the people directly affected by lithium operations, in particular the indigenous peoples and communities living there, to ensure that business activities do not violate human rights;
- Have failed to enforce domestic constitutional and legal provisions, as well as international treaties that recognise such rights;
- Have failed to take measures to prevent, investigate, punish and redress human and environmental rights abuses through regulation and/or adjudication;
- Have failed to ensure that state-owned enterprises or enterprises with state participation fully comply with their human rights responsibilities.

These failures extend to the states, mostly in the Global North, where foreign companies operating in the high Andean salt flats are domiciled. These states have failed to comply with their extraterritorial obligations to prevent, through legislative or other measures, companies registered in their territory operating in the high Andean salt flats in ABC from abusing human rights or the environment through their activities.

This also applies to the states that purchase the lithium extracted from the high Andean salt flats, which have not adopted measures to ensure that these rights have not been abused in their supply chain.

In the case of the companies involved in the development of lithium in the high Andean salt flats, although in recent years many of them have made policy commitments to respect human rights and the environment, and in several cases have joined multi-stakeholder initiatives that oblige them to respect these rights, in most cases they:

- Have failed to undertake due diligence processes to identify and prevent adverse impacts on these rights;
- Have failed to undertake processes to enable the remediation of the adverse impacts on these rights they cause or to which they contribute (this is not only evident in the case of private lithium mining companies, but also in state-owned enterprises, or companies with state participation, which have become increasingly central actors in the development of lithium exploitation).

Main recommendations

To ABC states:

- Enforce the existing legal framework, including international treaties they have ratified, that recognise human rights, in particular the rights of indigenous peoples and the right to a healthy environment, so as to ensure their protection in the context of lithium development;

- Adopt measures to effectively supervise lithium companies, including adjudication when they commit human rights abuses;

- Ensure, through identification and titling, the land and territorial rights of indigenous peoples and communities living in the high Andean salt flats, prior to granting authorisation to companies to develop lithium exploration, exploitation and industrialisation operations;

- Adopt the necessary measures to guarantee the rights of these peoples and communities to participation and free, prior and informed consultation, taking into account their right to give or withhold their consent to such operations, thus respecting their right to self-determination;

- Ensure the participation of these peoples and communities in the benefits of lithium exploitation on their lands and territories, guaranteeing that this participation is not understood as a handout intended to buy or distort the will of the communities;

- Adopt the necessary measures to ensure that companies prevent, mitigate and remediate the damage caused by their operations, in particular damage to the environment and the aquifers of the salt flats, which are essential to guarantee their ecological balance, as well as the material and cultural life of the communities;

- Eliminate barriers and adopt measures to ensure transparency and access to information, participation, and justice in environmental matters for the communities directly affected by lithium operations, and for the population in general, as well as the protection of environmental defenders in accordance with the “Escazú Agreement”.

To the states in which lithium companies operating in the Andean salt flats of ABC are domiciled:

- Adopt legislative, administrative or other measures, in compliance with their extraterritorial human rights obligations, to ensure that companies registered in their territory that operate in the high Andean salt flats in ABC do not abuse human rights or the environment in their lithium exploration or exploitation operations;

- The same applies to states that purchase lithium extracted from the high Andean salt flats of ABC, which must take measures to ensure that no human rights abuses have been committed in their supply chain;

- Take into account the provisions of the Preamble of the 2015 Paris Agreement on climate change, which urges states parties, in taking action to address climate change, to “respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities” and “ensur[e] the integrity of all ecosystems, including oceans, and the protection of biodiversity, recognised by some cultures as Mother Earth... noting the importance for some of the concept of ‘climate justice’, when taking action to address climate change”.

To companies involved in lithium development in ABC:

- Adopt a policy commitment to respect human rights and the environment. Companies that have already made such commitments through their own declarations or through adherence to multi-stakeholder labels or other similar initiatives should review their practices to ensure effective compliance with these commitments;

- Include in that commitment the recognition of the rights of human rights defenders and environmental defenders, adopting clear zero-tolerance policies against threats to their work. This commitment should be extended to business partners and subcontractors, including the adoption by them of measures to guarantee these rights, as well as termination of the contract and/or the relationship with these companies in the event of non-compliance;

- Promote due diligence processes to identify and prevent adverse impacts of their operations or investments on these rights, refraining from promoting operations or granting financing that generate such impacts; and remediate the adverse impacts on human rights and the environment they cause or to which they contribute;

- Refrain from developing strategies aimed at manipulating the will of or dividing indigenous peoples and communities in ABC's high Andean salt flats, respecting their own forms of organisation through which they express their will regarding the lithium projects promoted;

- Ensure the participation of peoples and communities in the benefits generated by their activities in cases where they give their free, prior and informed consent to lithium operations on their lands and territories.

In the case of ABC state-owned or state-controlled enterprises or enterprises with public participation, developing lithium projects in the high Andean salt flats, in line with their special responsibility for human rights and a healthy environment, they must, also:

- Take additional steps to ensure that their operations do not infringe human rights, and if they do, ensure remediation.

To the indigenous peoples and communities of the Andean salt flats:

- Strengthen their internal organisational processes in order to present a cohesive response to the growing pressure from ABC states and state-owned or transnational enterprises extracting lithium from the high Andean salt flats that form part of their traditional territories of occupation;

- Promote strategies aimed at raising awareness of their rights in the presence of companies exploring and exploiting lithium in their lands and territories, as well as guiding possible actions to be taken in defence of these rights;

- Promote, when they so consider and define autonomously, alliances with civil society organisations or others, in order to document the human rights and environmental impacts of the lithium industry present in their territories, and advocate for their broader rights.

To the international community:

To international human rights bodies in both the UN and Inter-American systems:

- Monitor the implications of the lithium industry in general, and in the Andean salt flats of ABC in particular, for human rights and the environment, progressively incorporating in their reports and decisions

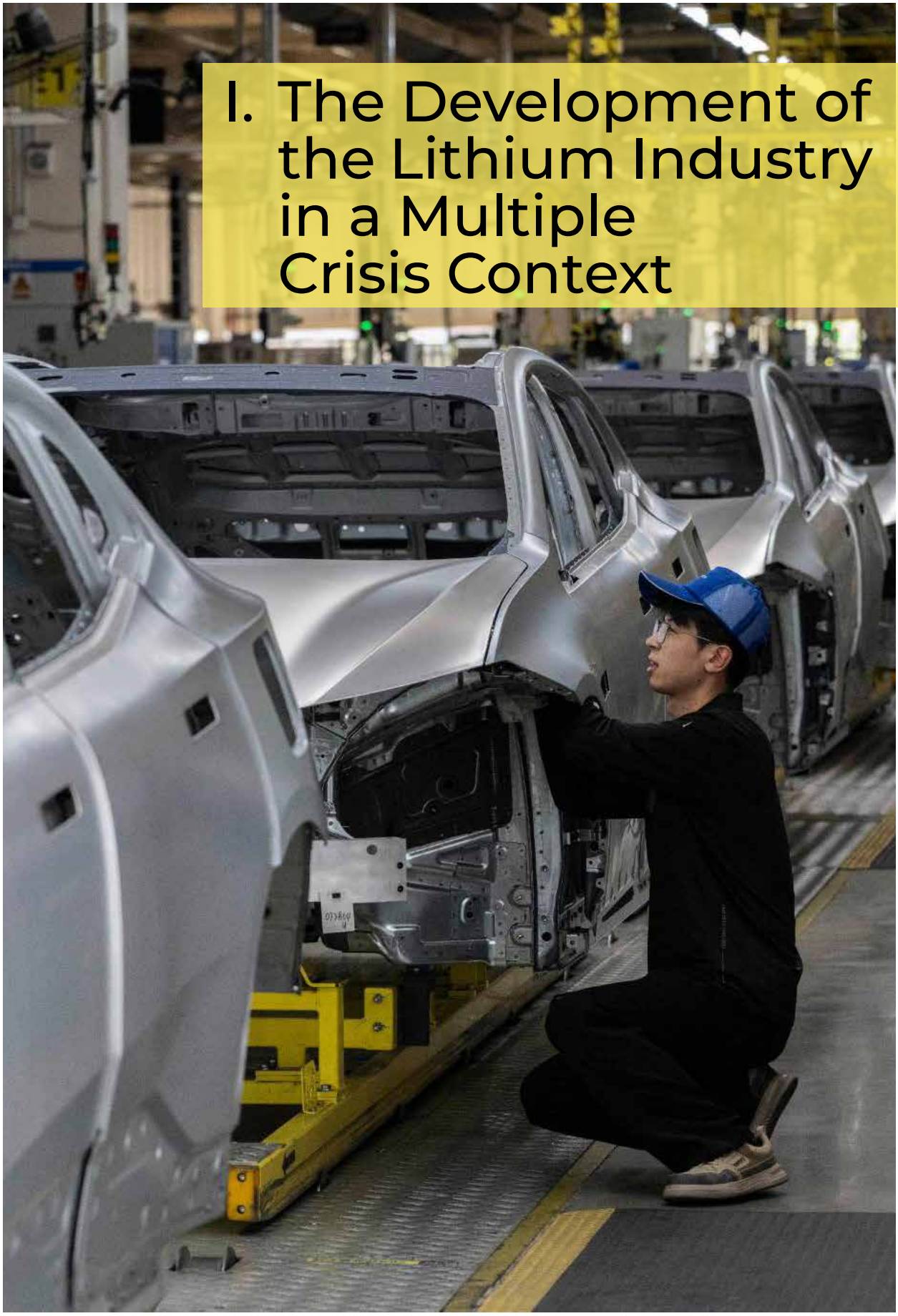
the views of the peoples and communities affected by it;

- Accelerate the process of drafting and adopting binding legal instruments on corporate responsibility in the area of human rights and the environment, in order to move from voluntary principles towards norms that make it possible to make this responsibility effective and enforceable in the event of human rights violations or abuses.

To international environmental organisations concerned with the adoption of measures to address the climate crisis:

- Incorporate a climate justice approach in their strategies, taking into account the vision and voices of the peoples and communities affected by the development of lithium in the Andean salt flats in ABC, in order to make this justice effective.

I. The Development of the Lithium Industry in a Multiple Crisis Context



Electric vehicle plant in China, May 2025.
Photo: Kevin Frayer/Getty Images Asiapac/ Getty Images via AFP

1. Introduction

The planet is experiencing a crisis of multiple, interrelated and interdependent dimensions. This phenomenon, referred to as a "multiple crisis" or "polycrisis", is closely linked to the crisis of the fossil fuel-based mode of production and way of life. In this context, the world faces a series of structural challenges, with the convergence of economic crises (inflation, depression, recession, unemployment), environmental crises (climate change, epidemics, mass biodiversity extinction), geopolitical crises (economic wars between power blocs), crises of representation and social cohesion (erosion of democratic systems), migratory crises (forced displacement due to wars and environmental disasters) and energy crises (depletion of fossil resources, shortages and price increases).[1]

This crisis requires a complete reconfiguration of how societies, the economy and politics are organised globally. However, regions and countries are experiencing this crisis in different ways, with different responses and adaptive capacities. Indeed, while the so-called "developed" countries have historically contributed a significantly higher percentage of greenhouse gas (GHG)[2] emissions than "developing" countries – due to their longer periods of industrialisation – the climate crisis has a greater impact on developing countries. These countries, unlike higher income countries, are at a disadvantage because of the inequalities and obstacles they face in today's dominant global economic context. As a result, the principle of "common but differentiated responsibilities" among these countries to face this crisis is now being considered, with developed countries having greater responsibilities than developing countries.[3]

This is the context of the triple global crisis, which brings together three major interrelated problems: climate change, pollution and biodiversity loss. This crisis is one of the main concerns of intergovernmental organisations, such as the United Nations Environment Programme (UNEP). Attention to the triple crisis recognises that the health of people, biodiversity (wildlife and ecosystems), hydrological cycles and key chemical elements (such as carbon, nitrogen and phosphorus) are interlinked and mutually dependent. While these problems have their own causes and effects, they must be addressed in a coordinated manner to secure a viable future on the planet. Moreover, complete transformation of production and consumption patterns, decoupling human well-being from the massive use of natural resources and environmental impacts, is recognised as a major challenge (UNEP, 2024).

Air pollution is one of the leading causes of premature death, due to cancer and respiratory diseases. According to the *State of Global Air report*,[4] air pollution accounted for 8.1 million deaths worldwide in 2021 (UN, 2024). The pollution crisis is made even more severe by the amplification of harmful effects, in time and space, as a result of the bioaccumulation of toxic chemicals in the food chains of ecosystems, of which humans are a part. In this context, non-metallic minerals and metals together produce about

1 On the concept of multiple or polycrisis and its implications for Latin America, see Brand (2013); and Rojas (2024).

2 Greenhouse gases (GHGs) are gases in the atmosphere, both natural and anthropogenic, that absorb and emit radiation and, in high concentrations, can overheat the planet, i.e. increase the greenhouse effect. The main GHGs in the Earth's atmosphere are water vapour (H_2O), carbon dioxide (CO_2), nitrous oxide (N_2O), methane (CH_4) and ozone (O_3). [Based on the Glossary of the Contribution of Working Group I to the Sixth Assessment Report, IPCC, 2021].

3 China, the US and 28 EU countries emit more than half of the greenhouse gases causing the climate crisis (Oxford Martin School, 2024).

4 The original report is available in English only, by the Health Effects Institute, 2024.

17% of GHG emissions and almost a quarter (24%) of global pollution (UNEP, 2024).

Biodiversity loss is also worrying. Based on available studies, it is estimated that in the last 50 years (1970-2020), the average size of wildlife populations declined by 73% (WWF, 2024). A number of factors are driving this decline, including land-use change, eutrophication of water bodies, indiscriminate hunting, over-fishing, deforestation and the expansion of agricultural and livestock boundaries. According to UNEP (2024), the extraction and initial processing of natural resources are responsible for 90% of water stress and loss of terrestrial biodiversity and 50% of climate impacts.

Global climate change is evident and appears to be irreversible. The World Meteorological Organisation confirmed that 2024 was the warmest year on record, exceeding pre-industrial levels by approximately 1.55°C (WMO, 2025). The primary activities generating GHG emissions, a key driver of climate change, are industry, transport, construction and agriculture. The gradual increase in temperature, due to atmospheric concentration of these emissions, is leading to an increase in the intensity of droughts, water shortages, melting glaciers, rising sea levels, floods, forest fires, biodiversity loss and extreme weather events. According to the *Sixth Assessment Report* (Working Group II) of the Intergovernmental Panel on Climate Change (IPCC), approximately 3.3 to 3.6 billion people (about 40% of the world's population as of March 2025) live in contexts highly vulnerable to climate change. This picture of humanity's future in the face of prospective global climate change casts serious doubt on humanity's chances of adapting to the climate crisis (UNEP, 2024; IPCC, 2023).

This planetary crisis context shows the urgent need for response and reorganisation measures, including reduction in the use of fossil resources as an energy source, thus decreasing the carbon footprint, in order to halt or slow the rise in global temperatures. Such strategies are part of intergovernmental agreements, the first of which was the 1992 United Nations Framework Convention on Climate Change (UNFCCC). Since 1992, 29 Conferences of the Parties (COPs) on climate change have been held.[5] In 2015, during COP21, the so-called "Paris Agreement" was adopted, an international treaty establishing a global framework for combating climate change.

2. Climate Action and Energy Transition

In September 2015, the UN General Assembly adopted the *2030 Agenda for Sustainable Development*, signed by 193 countries. The Agenda sets out 17 Sustainable Development Goals (SDGs) with 169 targets covering the economic, social and environmental spheres, to be achieved by 2030. SDG 13 on "Climate Action" states that in order to limit global warming to 1.5°C above pre-industrial levels, emissions must be reduced by almost half by 2030 (UN, 2023).

The *2015 Paris Agreement* aims to ensure that by the end of the century global temperatures do not rise more than 2°C above pre-industrial levels, and preferably remain at around 1.5°C, generating a series of instruments to address this challenge. In addition to national plans, regional agreements and policies have been developed, such as the "Green Deal" in the European Union (European Commission, 2019). The most industrially developed economic blocs, including China and the Asia-Pacific countries, as well as Latin American countries, have set targets for the transition to renewable energy use in their Nationally Determined Contributions

5 These are annual meetings of the countries that have ratified the UNFCCC, which entered into force on 21 March 1994, ratified by 197 countries.

(NDCs).[6] However, instruments and measures to ensure the effective implementation of energy transition processes in Latin American countries are highly dependent on external financing.

The *Paris Agreement* encourages actions to replace fossil fuel energy sources. In this sense, the energy transition has become one of the key tasks mandated by these international agreements. It should be understood as a set of measures to promote and establish new energy generation, distribution and consumption infrastructures with the aim of achieving a gradual shift in the energy matrix from the use of non-renewable energies, which depend on fossil fuels (such as coal and oil), towards the use of renewable or alternative energy sources, such as wind, hydro, geothermal and photovoltaic energy. This energy matrix shift poses a number of challenges in terms of leveraging financing and strengthening national capacities to effectively implement a transition to renewable energy.

On average, about 30% of the world's electricity consumption relies on renewable sources, but challenges remain in the heating and transport sectors. In 2023, the share of renewables in the global primary energy mix[7] was 13.57%, although in Latin America this share was significantly higher, reaching 33.36% that same year (OLADE, 2024). While the growth of renewable energy installations in South America reached 8.4% between 2022 and 2023, the global average growth was around 13.9% (IRENA, 2024). These differences are due, among other factors, to developing countries' limited access to international investment and financial flows to carry out their energy transitions.

3. The Energy Transition and Expansion of Mining

Dominant global energy transition strategies involve states, international organisations and companies. These strategies require innumerable technological innovations. This highlights gaps in technical progress between regions of the world, as well as a series of contradictions. For example, a technological transition of such magnitude requires the intensive and massive use of raw materials that are low-cost and highly available. Indeed, the energy transition promoted at the global level is intensive in the use of certain natural resources, such as lithium, copper, cobalt, nickel and manganese, among others. Paradoxically, it requires the expansion of the traditional areas of exploitation of these minerals, opening up new areas of extraction in territories and ecosystems that are highly vulnerable to climate change.

Lithium is an alkali metal, the lightest on the planet, which can be found in rocks as well as dissolved in marine and continental waters. This gives it a number of properties conducive to energy storage and to its strategic and indispensable use in the production of rechargeable electric batteries (De la Hoz et al., 2013). These batteries have long been used in the electronics industry (such as in mobile phones and laptops). Their current use, however, is concentrated primarily in the electric vehicle sector and renewable energy technologies. The energy transition specifically calls for the transformation of the transport system towards electromobility, i.e. the transition from the combustion vehicle to the electric vehicle, and is considered a key component of policies to address climate change (Ortiz, 2024). It is estimated that by

6 The Paris Agreement works on a five-year cycle of climate action carried out by countries. Since 2020, countries have been submitting their climate action plans known as Nationally Determined Contributions (NDCs), in which they set out the actions they will take to reduce GHG emissions in order to reach the goals of the Paris Agreement (UFCCC, n.d.).

7 Primary energy is energy that is obtained directly from natural resources, including primary fuels (e.g. crude oil, coal, natural gas) and primary energy flows (such as those obtained from nature: solar, wind, geothermal, etc.) (University of Calgary, n.d.).

2025, 15.1 million electric vehicles will be sold worldwide, representing 16.7% of total light vehicle sales (Dnistran, 2024).

As mentioned above, the energy transition will require the consumption of significant volumes of natural resources. Meeting the targets set by the *Paris Agreement* would require the extraction and processing of more than 3 billion tonnes of minerals and metals (Hund et al., 2020). In the case of lithium, meeting the Sustainable Development Scenario targets aligned with the SDGs would require up to a 42-fold increase in lithium production volumes compared to 2020 (IEA, 2021).

In this context, and given the growing demand for this mineral, the so-called "Lithium Triangle", made up of the lithium deposits found in the salt flats of Argentina, Bolivia and Chile (ABC), is of great interest and importance. Although lithium can be found all over the world, ABC has the largest lithium deposits on the planet, with 50% of all identified lithium resources. Lithium comes mainly from rock and brine sources, in which it is dissolved in water, together with other elements such as potassium, chlorine, sodium, magnesium, sulphur and boron. In ABC, production comes from brine sources, and in 2024, Argentina and Chile together accounted for 29% of the world's lithium salts production. When combined with Australia's hard-rock lithium production, they represented 66% of global production in 2024 (USGS, 2025).

Argentina and Chile also account for 94% of China's lithium salts imports, 91% of United States (US) imports, 73% of European Union (EU) imports and 70% of South Korea's imports (World Integrated Trade Solution, 2021). In 2024, in the case of Chile alone (the largest producer of lithium salts in ABC), 90.5% of exports went to Asia, 5% to Europe and 4.3% to North America, representing USD 2.893 billion in export value (Government of Chile, 2024). These figures explain the growing expansion of mining activities and the intense interest in the salt flats of the Puna and desert regions.

4. Global Lithium Demand and Geopolitical Tensions Along the Value Chain

The development of electric vehicles is expected to be the primary driver of growth in lithium demand (IEA, 2021). Although lithium uses vary depending on location, global end uses are distributed as follows: batteries 87%; ceramics and glass 4%; lubricating greases 2%; medical 1%; and other uses 6% (USGS, 2024). While ABC is a major reservoir of lithium, the monopoly over many "critical minerals" and salt refining facilities, as well as the largest installed capacities for lithium-ion battery production, is held by China, the world's largest exporter of electric vehicle batteries (Singh, 2021). In addition, China accounts for almost 90% of the global installed capacity for cathode active material manufacturing and more than 97% of anode active material manufacturing capacity.[8] Outside of China, the countries with a significant share of cathode active material manufacturing capacity are South Korea (9%) and Japan (3%) (IEA, 2024). This concentration of industrial capacity presents major challenges for raw material producing countries, such as ABC, in the face of interests to control deposits and supply flows of these materials.

In 2024 (final figures pending), the market share of electric vehicles was expected to reach up to 45% in China, 25% in Europe and over 11% in the US. In the coming years, it is anticipated that the market share of electric vehicle sales in China will be 50% of the total,

8 The manufacture of a lithium-ion battery requires: i) metal oxides for the construction of the cathode (positive electrode); ii) a carbon-based compound for the anode (negative electrode), usually graphite; and iii) lithium salts dissolved in organic solvents for the electrolyte (Rodriguez et al., 2020).

reaching its 2035 target a decade ahead of schedule (IEA, 2024). Even more ambitious targets have been set by countries like the United Kingdom (80% of zero emission vehicles sales by 2030), Japan, the European Union and Chile (Government of Chile, 2021; IEA, 2024), as well as by some US states, with a target of 100% zero emission or "electrified" vehicle sales by 2035 (IEA, 2024).

Lithium, among other minerals, is considered a "critical raw material" in many of these economies, a category based on the high importance of such materials to the economy of a country or region and the risk of supply disruption (European Commission, n.d.). Lithium is particularly strategically important and "critical" due to high demand and limited supply, a situation that has implications for the growing expectations, tensions and competition over its concentration in a few locations around the world, as well as the control of a small number of economic actors in its production (Bos & Forget, 2021).

The high concentration of production capacities of materials, batteries and electric vehicles, as well as interests in controlling major deposits, has placed lithium at the centre of geopolitical and economic tensions. In efforts to reduce dependence on Chinese exports, both the US and the EU have enacted policies to secure access to "critical materials" and establish domestic refining facilities and electric vehicle battery factories. This is expected to drive the development of new industrial sites over the next decade (Bridge & Faigen, 2022).

Following a global trend, Chinese investments in South American lithium have been particularly significant in recent years. In Chile, for example, the company Tianqi acquired a 23% stake in the *Sociedad Química y Minera de Chile* (SQM), the country's largest lithium producer. Several other Chinese investments are under development in Chile and expected to begin operations in 2025. For example, the Chinese electric vehicle company BYD has a lithium cathode material production project, with a projected investment of USD 290 million; and the company Yongqing Technology (part of the Tsingshan group) has a similar project, with an investment of USD 233 million (CORFO, 2024).

In Argentina, the Tres Quebradas and Cauchari-Olaroz lithium mines are wholly or partially owned by Chinese companies. Other Chinese-owned companies have developed plans for lithium battery cathode plants and battery and electric vehicle manufacturing facilities in the country. Finally, in Bolivia, the Chinese consortium CBC, of which CATL (the world's largest lithium-ion battery producer) is a member, signed a partnership agreement with the Bolivian state-owned enterprise *Yacimientos de Litio Bolivianos* (YLB) to build two lithium carbonate plants in the Salar de Uyuni (Rahman & Lazarus, 2023). Meanwhile, China's CITIC Guoan and Russia's Uranium One Group are planning to build two more lithium plants in the same salt flat.

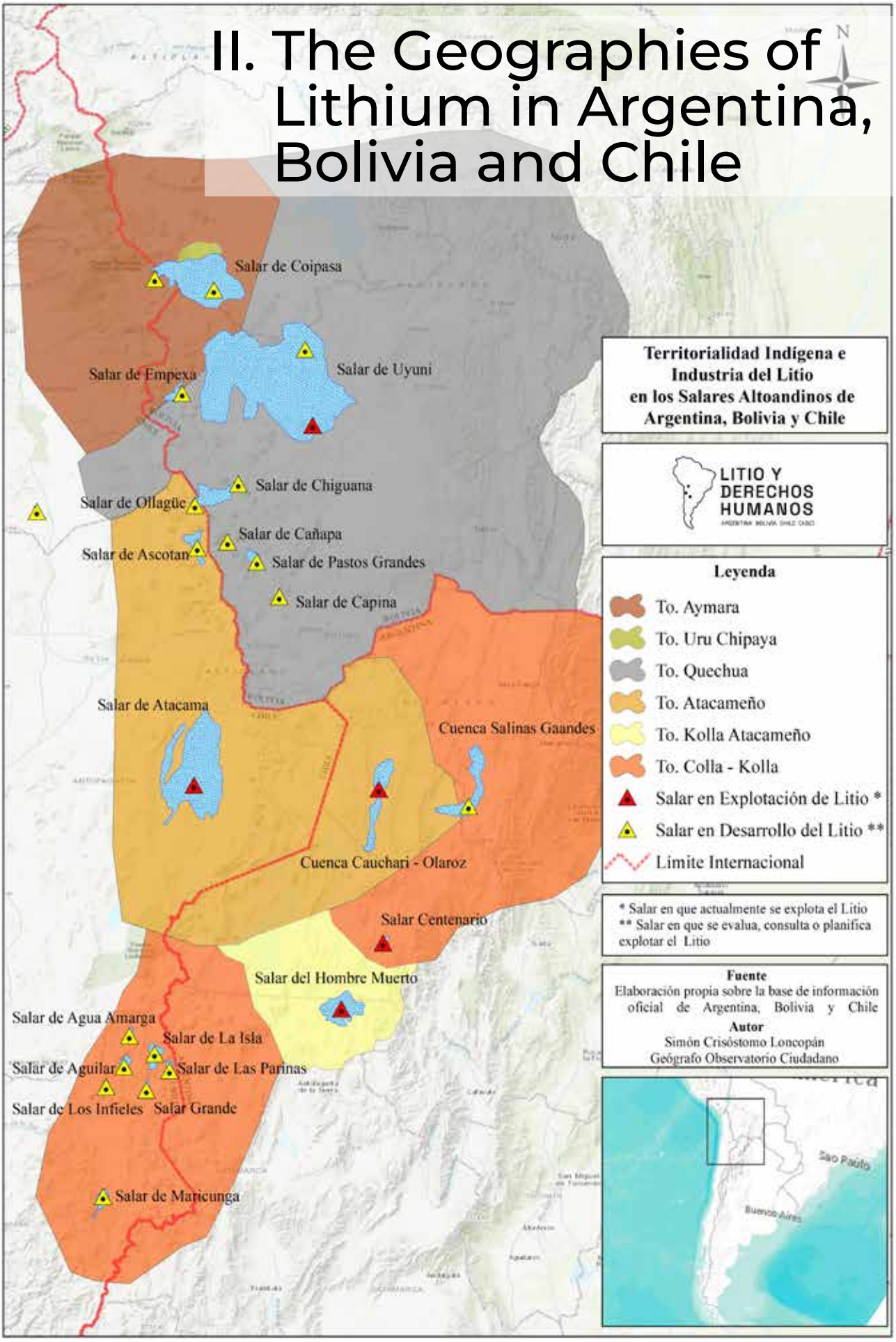
The recent signing of Memoranda of Understanding on "sustainable raw material value chains" between the EU and Chile (European Commission, 2023a) and between the EU and Argentina (European Commission, 2023b), as well as statements by US government officials in Argentina (Feliba and Pouchard Serra, 2024; US Department of State, 2024), reflect the centrality of access to lithium reserves in EU and US diplomatic efforts, as they seek to catch up with China.

Joint investments between Chinese companies with South American companies and companies from Western countries are increasingly common (Feliba & Pouchard Serra, 2024). This is indicative of the cooperation and deep-rooted involvement of these different actors in securing lithium and consolidating their business strategies related to the energy transition. In this

context, the geopolitical and economic tensions between these actors are having a strong impact on the development of the lithium industry in ABC, and will doubtless continue to do so. This reality has triggered a scramble for resources and investment in lithium. In addition, attempts by many countries to take over key segments of the supply chain will impact on the efforts of these South American states to develop local refining capacity, and to consolidate their own battery production capabilities, an issue addressed in later chapters of this report.

The urgent need to move towards energy transition, and the geopolitical pressure from the countries of the Global North to secure lithium as a critical mineral, create a challenging scenario for Argentina, Bolivia and Chile, as actors in the first links of the value chain. These countries, and particularly the territories where these materials are found, are already experiencing this global pressure, which will likely intensify in the coming decades. While this represents a major economic opportunity for these states, it also raises serious challenges linked to the sustainability of this industry, in fragile and highly vulnerable ecosystems. This challenge is all the more significant given that the salt flats, from which lithium is extracted, are the traditional territories of several Andean peoples, whose rights are also concerned and threatened by the development of this industry, as described later in this report.

II. The Geographies of Lithium in Argentina, Bolivia and Chile



As noted in the previous chapter, lithium in Argentina, Bolivia and Chile (ABC) is extracted from the salt flats located in the high Andean zone where these three countries converge. This is an area of extreme aridity, flanked to the west by one of the driest deserts in the world – the Atacama Desert – and situated at high altitude, with elevations exceeding 6,000 metres above sea level, due to the presence of the Andes Mountain range, which crosses it from north to south.

This area, which due to its altitude and geography has also been called the "Circumpuneña Region"[9] (Benedetti, 2005; Benedetti, 2007; Tarragó, 1984), has been inhabited for millennia by various interrelated peoples and communities, who through time and exchange have developed their ways of life in close connection with its fragile ecosystems, which have been decisive in shaping their cultures. This chapter addresses the geospatial characteristics of the territory where lithium development is currently taking place in ABC. It then looks at the peoples and communities that inhabit this area, and the history of their settlement. Lastly, it explores the current situation of these peoples and communities, as well as some of the challenges they face.

1. Physical Geography

The geography of the high Andean region is characterised by the presence of mountain ranges and high plateau valleys with an average elevation of between 2,000 and 4,000 metres above sea level. This area features lakes, lagoons, vegas (wetland plains) and *bofedales* (peat-forming wetlands), left by the melting of ice and glaciers that have existed in this area for millennia (López & Vargas, 2021). Also found here are the *salares* (salt flats) that were formed thousands of years ago as a result of a combination of geological, morphological, hydrological and climatic factors. Most of these were created through the desiccation of previously existing lakes, and the subsequent deposition of saline materials from the evaporation of surface water, groundwater and annual or intermittent floodwaters that are incorporated into the closed or endorheic basins where they are located (Cabello, 2022). Salt flats are sedimentary geological formations and complex ecosystems containing polyextremophilic microorganisms,[10] characterised by extreme aridity (Martínez Moreira, 2022).

These salt flats are located inside closed basins, in terrain depressions, flanked by volcanic mountain ranges. They are made up of a central salt crust, surrounded by perimeter areas of saline water bodies of varying dimensions, forming permanent or seasonal lagoons. There are 163 salt flats and salt lagoons in ABC[11] in the following distribution: Chile (69), Argentina (56) and

9 The so-called "Circumpuneña Region" (referring to the area around the Puna) was originally a territory marked by geopolitical disputes between Argentina and Chile over control of the mountain range along the Tropic of Capricorn. This dispute resulted in the annexation of part of the territory to Argentina, while the other part remained in Chilean territory. Following the negotiation process to establish borders, the Argentina-Chile inter-state border in the Atacameño portion did not become a barrier to mobility, allowing for the maintenance of strong transnational connections around the tri-border area at Cerro Zapaleri (Benedetti, 2005).

10 Extreme environments are habitats that experience stable or fluctuating exposure to one or more environmental factors such as salinity, desiccation, UV radiation, barometric pressure, pH and temperature. Microorganisms capable of living in such environments are called extremophilic. This set includes several subgroups: psychrophilic, thermophilic, halophilic, alkalophilic and acidophilic (Seufferheld et al., 2008, cited in Farías, 2018).

11 The data on salt flats and salt lagoons in ABC is based on: Government of Chile (2023); López Steinmetz (2024); and Olivera (2017).

Salar de Pastos Grandes. Lagoon of the same name and a flamingo population. Potosí, Bolivia.
Photo: Manuel Olivera

Bolivia (38). These salt plains are located between 2,300 metres above sea level (Salar de Atacama, Chile) and 4,584 metres above sea level (Laguna Pabellón, Argentina), and their surface area ranges from a few to thousands of square kilometres. The most notable are the Salar de Uyuni in Bolivia (10,582 km^2), the Salar de Atacama in Chile (3,418 km^2) and the Salar de Arizaro (1,919 km^2) in Argentina.

The salt flats and salt lagoons of ABC are part of the Puna and desert ecosystems characteristic of the southern Bolivian Altiplano, northern Chile and Northwestern Argentina (NOA). These are fragile ecosystems, with specialised biodiversity and high vulnerability to climate change (Grau et al. 2018; Marconi et al., 2022). Due to their unique characteristics and vulnerability to environmental changes, these ecosystems are crucial for biodiversity and local communities, providing essential ecosystem services (Izquierdo et al., 2016). Their delicate balance is threatened by various factors, including water resource depletion and anthropogenic activity (Sepúlveda et al., 2021). The fragility of these natural ecosystems is further affected by factors such as soil suitability, land morphology, climate, erosion levels and vegetation cover (Ramsar Convention, Governments of Ecuador and Chile, CONDESAN, & TNC-Chile, 2008). Vulnerability is compounded by reduced precipitation due to the global climate crisis.

Wetlands of Tilopozo affected by lithium operations in the Salar de Atacama, Chile.
Photo: José Aylwin

2. Human Geography

Human settlement in the high Andean region goes back thousands of years. The first inhabitants of the Altiplano territory, which today forms part of Bolivia and is the cradle of Andean civilisation, date back to the Paleo-Indian Archaic period (13,000 BC). These populations subsisted by hunting and gathering. Over time, these communities developed agricultural systems for potato, quinoa and corn, and domesticated camelids, consolidating agricultural and livestock-based economies between 3,500 BC and 500 AD (Arellano & Berberian, 1981).

The Tiwanaku culture, which developed between 1,500 BC and 1,200 AD, was of great significance in this period, centred around Lake Titicaca in territory that is now part of Bolivia, but extending towards the northwest, in what is now Peruvian territory, and towards the south in territory that is now part of Chile and Argentina. The Tiwanaku exerted a strong cultural, religious and economic influence on the peoples living there, as confirmed by the Historical Truth and New Deal with Indigenous Peoples Commission (2003) in the case of the Atacameño oases. This Commission identified a period between 900 and 1,400 AD of the so-called "regional developments", during which highly autonomous processes took place in the high Andean territories, from what is now southern Peru to the northwest of what is now Argentina, interconnected through trade and short-distance caravan trading networks. During the period of regional chiefdoms (500-1,200 AD), complex political structures emerged, such as the Mallku Chiefdom, representing a transition to highly organised societies in the post-Tiwanaku region (Arellano & Berberian, 1981).

From the first half of the 14th century onwards, the Inca expansion began, leading to the formation of Tawantinsuyu. As part of this

process, the Incas conquered the so-called Kollasuyu, occupying the territories located to the south of Cuzco, the seat of the Inca empire, including the territory of Lipez in what is now Bolivia and, further south, the territory of the Colla or Kolla[12] to the east of the Andes Mountains and the Aymara and Atacameño or Lickanantay on the western slopes. The Incan influence on the various peoples of the conquered territory was significant, evidenced in the installation of connecting roads, the imposition of new cults, the exploitation of metals, the establishment of administrative centres and population management through labour regimes (*mitimaes*) and taxation (Historical Truth and New Deal with Indigenous Peoples Commission, 2003). Thus, for example, in the case of the territory of Lípez, in the Salar de Uyuni, Tawantinsuyo brought important advances in infrastructure, including *tambos* (way stations) and roads connecting with the lowlands. This period, known as the Late Horizon, gave way to the colonial era, marked by trade networks and caravan routes that maintained the region as a vital commercial hub (Arellano, 2000).

The conquest of Cuzco by Francisco Pizarro in 1533 marked the beginning of the Spanish colonial period. Alongside the brutal destruction of the Inca empire, under the Viceroyalty of Peru, the conquistadors imposed, in addition to Catholicism, new forms of territorial and property organisation. They also introduced taxes on mining and commercial activities, and the encomienda labour system. All of this had a profound impact on the lives of the pre-existing indigenous peoples. The abuses committed by the Hispanic conquistadors triggered an Inca rebellion in the late 18th century, which spread from southern Peru to the high Andean territories of northern Chile and northwestern Argentina. As a result of these rebellions, reforms were introduced to the colonial regime, including the abolition of the *encomienda* system, and changes to the political-administrative organisation, while the political and cultural domination characteristic of the Hispanic regime remained intact.

With independence from Spanish colonial rule and the creation of the states of Argentina, Bolivia and Chile, as well as Peru, borders were established at the beginning of the 19th century that divided the high Andean peoples who had historically been linked through alliances and trade. Inspired by liberal ideas, the newly formed countries initially abolished tributes (colonial taxes) and other colonial forms of vassalage to which the indigenous peoples had been subjected, encouraging private ownership of lands that had previously been collective in nature.

The development of the saltpetre industry in the Atacama Desert, which boomed in the 1870s, sparked confrontation between these states, and was decisive in the War of the Pacific (1879-1883), in which the Chilean state annexed territories previously belonging to Bolivia and Peru. This had profound implications for the indigenous high Andean peoples, who found themselves split by new borders that imposed new forms of political-administrative division and new mechanisms for registering property. In the case of Chile, the authorities in the annexed territories encouraged the persecution of indigenous populations, many of whom were forced to flee, as well as their "Chileanisation" through the establishment of schools and, later, compulsory military service (Historical Truth and New Deal with Indigenous Peoples Commission, 2003).

Although mining in the high Andean territories of northwestern Argentina, southwestern Bolivia and northern Chile

12 The Kolla or Colla people inhabit both sides of the Andes Mountains, in Argentina and Chile. While in Argentina they self-identify as Kolla, in Chile they are known as *Colla*. This study will respect and use each group's chosen form of self-identification in their respective contexts.

has historical roots dating back to the pre-Columbian era, when indigenous peoples extracted minerals such as copper and gold, the discovery of large deposits in the 19th century marked the beginning of modern mining in the area. This was particularly the case with the development of the saltpetre and copper industries in Chile, and silver and tin industries in Bolivia.

Throughout the 20th century, mining in these regions experienced accelerated development in line with the expansion of international markets and the demand for strategic minerals, becoming one of the main economic activities of ABC in the high Andean region. Chile gained global prominence with the exploitation of copper, initially through foreign investments and later through nationalisation in the early 1970s. One of the main deposits was the Chuquicamata mine, located in the territory of the Atacameño or Lickanantay people. In Bolivia, the tin boom strengthened the economy until the mid-20th century, while in Argentina, mineral exploitation began to expand in the 1990s, with the development of new extraction technologies and openness to foreign investment.

Since the 1980s and 1990s, lithium has become established as a strategic resource, in the context of technological advances and growing global energy needs. In Chile, this process began with the exploitation of the Salar de Atacama, located in the Antofagasta Region (Arrese, 2019). With one of the world's largest lithium reserves, this salt flat became a cornerstone of the country's non-metallic mining industry (Poveda Bonilla, 2020). Companies such as SQM and Albemarle, in conjunction with state policies, drove the Chilean model of lithium extraction, positioning the country as one of the world's leading lithium exporters (Cademártori Dujisin, Ramírez Salazar, Fuentes Peralta & Castillo Hidalgo, 2018).

In Argentina, lithium mining started in 1997 in the Salar del Hombre Muerto, located in the province of Catamarca (Gaido, Carrizo & Litvinoff, 2024). The involvement of international companies, such as Livent Corporation, was instrumental in the initial development of lithium mining in Argentina. Since 1997, the Fénix Project, at the Salar del Hombre Muerto, has been operated by this company, marking a milestone in the national production of lithium compounds. Subsequently, the activity expanded to other regions, such as the Salar de Olaroz in Jujuy, with projects led by international consortia and supported by a regulatory framework favourable to foreign investment (Marín, Murguía & Itoiz, 2024).

Bolivia has taken a unique approach to lithium exploitation. Although the Salar de Uyuni, located in the Potosí region, is recognised as the largest evaporite deposit in South America, lithium extraction in this area faces major challenges. Technological and financial difficulties have slowed the progress of extraction plans, limiting the full development of its potential (Méndez, 2019). Bolivia has implemented a state governance model for lithium exploitation, based on direct government control. Since 2008, the industrialisation strategy has been led by the central government, and in 2017 it created the state-owned enterprise *Yacimientos de Litio Bolivianos* (YLB), whose purpose is not only the extraction of the resource in the Salar de Uyuni, but also its industrialisation to produce batteries and other derivatives, with the strategic participation of international partners (Obaya, 2019).

These regional development processes are closely tied to the rise of the global energy transition, which has significantly increased demand for lithium, a mineral that, as explained in the first chapter of this report, is now strategic in the context of that transition. In addition to its use in renewable energy storage, lithium is also used for pharmaceutical and industrial purposes, all of which determine its growing global demand (Secretariat of the Economy, 2018).

This context has raised the strategic value of lithium, creating opportunities but also significant challenges for the ABC countries. Among the main challenges is the need to balance intensive resource exploitation with the conservation of the unique ecosystems of the salt flats and respect for the rights of the indigenous peoples who inhabit these territories.

3. Current Settlement in the High Andean territory

Although settlement in the high Andean territory of ABC has common ethnic and cultural roots, human mobility as a result of the expansive processes that took place first in the pre-Columbian era, then under Spanish colonial rule, and later due to the establishment of state sovereignty in this region, led to particularities that must be recognised. The following sections outline these particularities, including reference to the socio-demographic, cultural, economic and territorial situation of the populations settled in this area.

3.1. Argentina

Lithium development in Argentina has thus far been concentrated primarily in the provinces of Northwestern Argentina (NOA), especially Catamarca, Salta and Jujuy. According to the 2022 Population Census, the province of Catamarca had a population of around 430,000 inhabitants at that date, of which around 20,000 people (4.6% of the total) belonged to one of the seven indigenous peoples present on that territory. For the same year, the census reported that the province of Jujuy had a population of 811,611 people, around 81,000 (10% of the total) of whom were considered to belong to one of the nine indigenous peoples there, with the population of Kolla origin (27,000 members) being the largest indigenous population. Finally, Salta province recorded a total population of 1.4 million, with around 142,000 people (9.9% of the total) identified as belonging to one of the eight indigenous peoples there (National Institute of Statistics and Censuses, 2024). Although the historical indigenous population in this area now constitutes a minority of the overall population in these provinces, their presence is significant, particularly in the high Andean area where the lithium-rich salt flats are located.

Of particular interest in this context is the Salinas Grandes and Laguna de Guayatayoc basin, located at 3,500 metres above sea level, spanning the provinces of Jujuy and Salta, with a total surface area of 17,552 km^2. This area is an endorheic basin, characterised by internal drainage systems and the presence of evaporite deposits, a geological configuration dating back to the Palaeogene and Miocene-Pliocene (López Steinmetz et al., 2020). The basin is inhabited by approximately 33 indigenous communities, mainly of the Kolla people, with an estimated population of 7,000.[13] The highest concentration is found in the departments of Cochinoca and Tumbaya (Jujuy) and La Poma (Salta). These communities maintain a subsistence-based agriculture and livestock economy, cultivating potatoes, corn and beans, and raising llamas, sheep and goats. They also develop artisanal activities such as harvesting salt for both human and animal consumption, as well as for industrial use. In addition, tourism has become an important economic activity, with communities offering guided tours, gastronomic services and handicraft products made from animal fibres. These practices have helped preserve cultural and economic traditions passed down through generations.

13 In the province of Jujuy alone there are more than 300 communities, of which 274 have recognised legal status (Ministry of Human Rights and Indigenous Peoples, 2023a).

Since the late 2000s, several companies have begun to carry out lithium exploration in the basin, triggering strong community resistance. The presence of these companies with their machinery and workers, the impacts caused by well drilling in the salt flats, and the lack of free, prior and informed consultation led to the formation of the *Mesa de las 33 Comunidades de la Cuenca de las Salinas Grandes y la Laguna Guayatayoc* (Board of the 33 Communities of the Salinas Grandes and Laguna Guayatayoc Basin) in 2010. Since then, the communities have undertaken various actions, including filing lawsuits at the provincial and federal levels, and bringing cases before international bodies to resist lithium extraction in their ancestral territories. In addition, a protocol on consultation and free, prior and informed consent was drafted in 2015 (*Comunidades de Salinas Grandes y Laguna de Guayatayoc*, 2015), which has been proposed to the authorities with the aim of being recognised as the culturally appropriate procedure to guide interactions between public authorities, companies and communities (International Federation for Human Rights, 2024).

It should be noted that, despite the recognition of indigenous collective land rights in Argentina's constitutional and legal system, most of the indigenous peoples who live there are in a situation of legal insecurity over their ancestral territories. In the case of the province of Jujuy, as of July 2023, only 73 out of 300 indigenous communities held titles for their communal lands. This means that more than 70% of them are settled on lands legally considered as "public lands", i.e. state-owned (Ministry of Human Rights and Indigenous Peoples, 2023b).

In terms of protected areas, none of the lithium brine extraction operations currently underway in the salt flats, nor those sites projected for future extraction, are located within protected zones (*Administración de Parques Nacionales*, 2017).

In the Salinas Grandes and Laguna de Guayatayoc basin, only 10 of the 24 communities on the Jujuy side and 9 on the Salta side were included in the indigenous territorial survey, meaning that many of them still lack communal land titles or recognised legal status. This legal gap is used by state authorities and business actors to challenge or deny their territorial rights. The Board's organisational strength lies in its unifying capacity. According to Clemente Flores, community leader, the basin represents a space of cultural and symbolic integration for its inhabitants, who share traditions and a collective vision of resource management. He stated:

> We are 7,000 inhabitants from 33 communities spread across an area of 150 kilometres, with numerous roads connecting us. We do not distinguish ourselves by group; we identify as part of the basin, and we have a shared culture and traditions through traits and symbols (Flores, 2017, p.158).

3.2. Bolivia

The Bolivian Altiplano is a vast closed basin of 187,000 km^2, bounded by the eastern and western mountain ranges, with lakes Titicaca and Poopó, the Desaguadero river and salt flats such as Coipasa, Uyuni, Empexa, Chiguana, Chalviri and Pastos Grandes. The initiatives thus far promoted for lithium exploration and exploitation are concentrated in the southern Altiplano, which begins south of Lake Poopó and covers an area of 76,800 km^2. This region is characterised by the presence of large salt flats[14] and vast desert plains; it is the most arid sector of the

14 Some of the most important salt flats in Bolivia, in terms of size and economic significance, are: Uyuni (10,582 km^2), Coipasa (1,650 km^2), Empexa (402 km^2), Chalviri (194 km^2) and Pastos Grandes (125 km^2).

country, with annual rainfall of less than 100 millimetres (Montes de Oca, 1997).

This territory holds a rich archaeological heritage, including citadels, *tambos* (way stations), necropolises and petroglyphs, as well as a deep cultural tradition in mythology, worldview and agricultural rituals (Rendón, 2006). According to Arellano and Berberian (1981), there is evidence of the existence in this region of an *Aymara Chiefdom* called "Mallku", which is thought to have emerged after the decline of Tiwanaku. Aymara is believed to have become the dominant language in the Salar de Uyuni area from 1,000 AD onwards. Rendón (2006) notes that the Incas resettled Quechua speakers among the inhabitants of the most strategic areas of Lípez, such as the mining and quinoa-growing regions.

The Salar de Uyuni is located in the department of Potosí and spans the provinces of Daniel Campos, Nor Lípez and Antonio Quijarro. While over 99% of the Salar de Uyuni is in Potosí, a small fraction of it, to the north, is in the department of Oruro.[15] To the south of the Salar de Uyuni is the Salar de Pastos Grandes, within the Nor Lípez province (department of Potosí), along with other salt flats, which are in the prospecting stage. Most of these are within the zone of influence of the Eduardo Avaroa National Andean Fauna Reserve (REA), a protected area of national importance.[16] The majority of the Bolivian salt flats of interest for lithium extraction are part of the southwest region of Potosí, which is made up of five provinces.[17]

The areas designated for lithium exploitation, or where development is planned, are characterised by the presence of unique ecosystems, located within salt flats in the *precordillera* (foothills) and in the *cordillera* (mountain ranges). These regions, located at altitudes ranging from 3,000 to 4,500 metres above sea level, have an arid climate and specific soils that support biodiversity adapted to extreme conditions. The scenic beauty of the region and the particularities of its biodiversity led not only to the creation of the REA, but also to the establishment of an area of importance for the conservation of wetlands: the Lípez Ramsar Site.[18] The Salar de Uyuni is also Bolivia's second most important tourist destination, after Lake Titicaca, receiving over 150,000 tourists a year.

Moreover, Bolivia's southern Altiplano is not uninhabited. This natural environment is home to diverse ancestral peoples who have inhabited these lands for generations and whose relationship with the land and water sustains deeply rooted cultural and productive practices. According to the Population and Housing Census (2024), the southwestern region of Potosí has a total population of 85,725 inhabitants, 55% of whom are concentrated around the Salar de Uyuni (*Instituto*

15 In the department of Oruro lies the Salar de Coipasa, where the Bolivian government has begun brine exploration and research.

16 The Eduardo Avaroa National Andean Fauna Reserve (REA) is located in the province of Sud Lípez, in the area adjacent to the ABC tri-national border. This area is part of the National System of Protected Areas, created in 1973, mainly for the protection of flamingos, *vicuñas* (camelids) and rheas. See https://sernap.gob.bo/eduardoavaroa/

17 Bolivia's territorial administrative organisation includes nine departments, one of which is Potosí. Within the departments there are 112 provinces, and, within those, 342 municipalities and six indigenous autonomies, the latter two classified as autonomous territorial entities. In the case of southwest Potosí, there are five provinces and 11 municipalities: Daniel Campos, with the municipalities of Llica and Tahua; Enrique Baldiviezo, with the municipality of San Agustín; Nor Lípez, with the municipalities of Colcha K and San Pedro de Quemes; Sud Lípez, with the municipalities of San Pablo de Lípez, Mojinete and San Antonio de Esmoruco; and the Antonio Quijarro, with the municipalities of Uyuni, Porco and Tomave.

18 The total area of the REA, along with its zone of influence, was categorised as a Ramsar site under the name Los Lípez and includes almost forty "permanent endorheic, saline, hypersaline and alkaline lakes, as well as *bofedales* (peat-forming wetlands) and geothermal wetlands". In addition, it contains "two of the 14 priority sites of the Network Wetlands of Importance for the Conservation of High Andean Flamingos in Argentina, Bolivia, Chile and Peru" (Ramsar, 2009).

Nacional de Estadísticas, 2024). The region is characterised by the presence of Quechua-speaking populations, predominantly in the northeast and southeast of the salt flat, while the western and north-western flanks of the salt flat are surrounded by Aymara-speaking communities. This coexistence between Aymara and Quechua-speaking communities and provinces is mainly explained by the Inca presence in mining and quinoa-farming territories. According to Olivera (2017), this ethnic diversity leads to divergent visions of development and communication barriers, which are due to these different ethnic origins (Aymara in Daniel Campos, and Quechua in Nor Lípez and Quijarro).

Although it does not enjoy administrative autonomy, the Lípez region is now politically known as the "Southwest Potosí region" (SOP), as a way of asserting its claims and mediating with the departmental and national levels. In this sphere of representation of regional interests, grassroots peasant trade union organisation plays a crucial role. According to Quisbert and Huanca (2001), the union matrix, emerging from the constitution of the agrarian trade unions in the period after the Chaco War (1932-1935), gave rise to the gradual organisation of the Quechua-origin communities in Nor Lípez into union groups at the communal, sub-central and central provincial levels. Although *ayllus* (family clans) existed, they gradually weakened in this Quechua-speaking area, giving way to the dominance of elected authorities (by the community members themselves), known as *corregidores*. Quisbert and Huanca (2001) also point out that the organisation of agrarian unions, as well as the supra-communal union structures described above, responded primarily to the severe 1983 drought, which affected the entire Bolivian Altiplano, when they were used to demand and gain access to food assistance programmes.

Trade union organisation was, and continues to be, of enormous significance in the region's development. The representative grassroots trade union organisation in this territory is the *Federación Regional Única de Trabajadores Campesinos del Altiplano Sud* (FRUTCAS). Around 1986, FRUTCAS began seeking a registered land title in the Potosí Land Rights Registry, a *Título Revisitario* (revalidation of title) recognising the land ownership of the Lipeños. The organisation thus became actively involved in the territorial claims of the Nor Lípez province. In 1996, the Lipeños marched to the city of La Paz "for Land, Territory, Dignity and Political Rights". Furthermore, the legal framework created by the Law on the Creation of the *Instituto Nacional de Reforma Agraria* (National Institute for Agrarian Reform – INRA)[19] enabled their claim for *Tierras Comunitarias de Origen* (Community Lands of Origin –TCO)[20] submitted by the union authorities of Nor Lípez at the beginning of 1999 (Gysler, 2011). Finally, in 2011, they secured the title to 2,000,291.58 hectares (of a total claim of 2,540,206.36 hectares), granting administration and oversight to the *Central Única Provincial de Comunidades Originarias de Nor Lípez*, including in its jurisdiction a population of 10,460 inhabitants, in 1,980 families (Government of Bolivia, n.d.). Although the claimed territory incorporates the central and south-eastern portions of the Salar de Uyuni, the titled territory does not include these lands or the perimeter area of the salt crust, while the current and planned infrastructure for pumping and piping water for industrial uses, on behalf of the YLB company, is located within this territory.

Land use and tenure is organised according to the communities' own administration schemes, establishing rules for access to terrains, in general, based on each family's labour capacity. According to studies by the Bolivian Vice-Ministry of Lands, the forms of

19 Law on the Creation of the National Institute for Agrarian Reform (INRA), No. 1,715, 1996, Bolivia.

20 Today known as *Territorio Indígena Originario Campesino* (Indigenous Native Peasant Territory – TIOC).

access to resources in the Nor Lípez territory combine individual and collective rights. While plots for cultivation are subject to family usufruct rights, the grazing areas are communal. Not all families hold the same amount of terrain; in order to retain land rights, certain obligations must be fulfilled, such as contributions, holding positions of authority and participation in communal work (Government of Bolivia, n.d.).

The people of the southern Altiplano, particularly in communities such as Río Grande and Mallcu Villamar, both in Nor Lípez province – identify as belonging to the Lipeño people. The Llipi or Lipeño nation or people is a reflection of a process of identity recovery, debated in academic circles, not only because of their Aymara origin and Quechua language, but also because of the recent process of self-identification towards the end of the 20th century, which is considered more localised (Rendón, 2006). However, beyond the ethnic aspect, the Lipeño identity is also a product of social construction around key economic activities such as mining, quinoa agriculture and camelid breeding, as well as salt harvesting and links to the railway industry. Mallcu Villamar has experienced an economic revival due to tourism, particularly in accommodation and food services. These initiatives have encouraged the return of migrants, boosting the local economy and preserving cultural traditions. Río Grande, unlike most communities in the province, is mainly dedicated to mining, in this case extraction of ulexite (borax salt) from deposits in the Salar de Uyuni. In addition, in recent times, the people of Río Grande have provided material transport services to the state-owned enterprise YLB. The development of state policies and projects linked to the lithium sector, and their interventions in the territories, will be discussed in greater detail in subsequent sections of this report.

3.3. Chile

As discussed in detail in the next chapter of this report, lithium has been extracted in Chile since the 1980s in the Salar de Atacama, located in the Antofagasta Region, on the traditional territory of the Atacameño or Lickanantay people. More recently, as also discussed below, lithium development projects have expanded mainly to the Salar de Maricunga, located in the Atacama Region, on the traditional territory of the Colla people. This section outlines the socio-demographic and cultural context of these peoples.

The Atacameño people, who call themselves Likan-Antai – "inhabitants of the territory" in the Kunza language – live near the Salar de Atacama and in the upper basin of the Loa River, in the Loa province of the Antofagasta Region. This name was given by the Spaniards and its etymology, according to some scholars, may derive from the Quechua word "p'atacama" ("gathering of people"). This name reflects the social complexity of a people whose existence dates back millennia (Molina Otárola, 2018). According to the most recent census, their population is approximately 30,000 people (Chilean National Institute of Statistics, 2017).

The Salar de Atacama, with a surface area of 3,418 km^2 (at 2,300 metres above sea level), is a mineral-rich ecosystem that has been essential to the economic and cultural development of its Atacameño inhabitants for more than 10,000 years. From their first settlements – in villages such as Tulor – the communities developed water management systems and domesticated camelids, adapting to desertification processes occurring around 7,000 BC. This context facilitated the transition to more organised ways of life, consolidating oases such as San Pedro de Atacama, which became centres of exchange during the period 100-500 AD (Agüero, 2005).

The influence of the Tiwanaku culture had a significant impact on the Atacameño

people, introducing changes to their religious practices and art, as evidenced by their textiles and ceremonial objects. With their incorporation into the Inca Empire in the 15th century, their agricultural techniques were improved and their territorial structure reorganised. The arrival of the Spanish in the 16th century marked a significant cultural decline, with the imposition of the *encomienda* system and the suppression of ancestral ceremonies (Thomas, Benavente Aninat & Massone Mezzano, 1985).

Following the War of the Pacific (1879-1883), the Atacameño territory – then Bolivian – was annexed by Chile. However, the identity of this people was only officially recognised with Law No. 19,253, on the Protection, Promotion and Development of Indigenous Peoples, known as the "Indigenous Law", enacted in 1993, after the restoration of democracy in Chile. This law recognises, among other indigenous ethnic groups, the Aymara, Atacameño, Quechua, Colla and Diaguita peoples of the north of the country. The law also identifies the different types of property – individual property, indigenous community property and patrimonial lands – that must be safeguarded by the authorities in the processes of regularising and establishing ownership of the Andean communities over their ancestral lands. On this basis, the Chilean state launched a process of identification of the lands claimed by the Lickanantay. Between 1997 and 1998, an area of 2,342,442.9 hectares was identified as part of this claim (Consultora Datura, 1998).[21]

By 2020, the state – through the *Corporación Nacional de Desarrollo Indígena* (National Corporation for Indigenous Development – Conadi) and the Ministry of National Assets – had only recognised 394,797.79 hectares as belonging to indigenous communities and indigenous people in the Antofagasta Region. Of these, a total of 196,488.44 hectares were transferred in ownership, while 63,594.31 hectares were granted in concession and 134,715.04 hectares were delivered through community title regularisation. Of the total of 24 communities whose lands have been recognised, 12 are Atacameño communities of the *Área de Desarrollo Indígena* (Indigenous Development Area – ADI) "Atacama la Grande", in which the Salar de Atacama is located (Conadi, 2020).

In 1994, the *Consejo de Pueblos Atacameños* (Council of Atacameño Peoples – CPA) was created as a representative organisation of the Lickanantay people in order to unify communities and address common demands. Its mission is to improve the quality of life, manage educational resources – such as the Andean boarding school in Calama – and defend the territory against extractive projects. However, in 2009 the communities of Alto Loa separated from the CPA, forming the *Consejo de Pueblos del Alto Loa*, leaving the CPA to represent only the communities of the Salar de Atacama (Aylwin, Didier & Mora, 2021).

The *Consejo de Pueblos de "Atacama La Grande"* is the officially recognised political body for engagement with the Atacameño communities, composed of a president and a delegate from each of the 18 associated communities. Its internal structure includes a board of directors with a president, vice-president, treasurer, secretary, director and an assembly, also participating in the "Atacama La Grande" ADI.

In addition to the insufficient recognition of property rights over their ancestral lands, the Lickanantay people's territorial rights have been affected by the declaration as a protected area of the Los Flamencos National Reserve, which covers 73,000 hectares near the Salar de Atacama. Although this reserve is managed with participation of their

21 The *Corporación Nacional de Desarrollo Indígena* (National Corporation for Indigenous Development –Conadi) identifies the historical claim of the Atacameño people, as established in the Datura Report, at 3 million hectares (Conadi, 2020).

communities (Molina Otárola, 2018), it is within the spaces registered and claimed by them as ancestral property. In addition, the appropriation and intensive use of water, both surface water and brine from the salt flats, have been going on for decades in lithium extraction, as discussed in detail below in the analysis of the industry's impacts in this area in the Salar de Atacama.

Today, the Lickanantay people's economic activities are centred on subsistence agriculture and livestock farming, as well as tourism development, both at the individual and community level. Notable initiatives are those organised through indigenous tourism associations and communities that directly manage their own tourism spaces, such as the co-management of areas in the Los Flamencos National Reserve (Molina Otárola, 2018). Another significant activity is the provision of services to the mining industry, which includes accommodation, food and the participation of Atacameño workers in various mining operations in the territory.

The Colla people in Chile, with a population of approximately 20,000 (*Instituto Nacional de Estadísticas*, 2017), live in the Atacama Region. Their organisation includes settlements in ravines and rivers, with migration to urban centres such as Copiapó, Chañaral and Diego de Almagro. Historically linked to *arrieraje* (transportation of goods) and artisanal mining, the Colla have combined livestock and agricultural activities with their deep knowledge of the Andean passes (Historical Truth and New Deal with Indigenous Peoples Commission, 2003).

The term "Colla" became popular in the 19th century to describe herders in the high plateau, although (as mentioned above) official recognition of this people in Chile did not come until the adoption of Law No. 19,253 of 1993. Migration from northwestern Argentina and Bolivia to the Chilean *cordillera* (mountain ranges) was driven by the expansion of cattle ranches in the high plateau, which displaced indigenous communities into new territories. Their subsistence depended on a combination of activities such as gold and copper mining, and the hunting of local fauna such as vicuñas and chinchillas (Gleisner, Montt & Contardo, 2014). The rise of industrial mining from the 19th century onwards significantly altered traditional Colla ways of life by depleting water resources and contaminating grazing lands. Despite these challenges, communities have continued to defend their territories and traditions, adapting to harsh conditions in the highlands of the Atacama Region (Chilean National Council for Culture and the Arts, 2011).

In the case of the Colla, there has been a similar delay in the recognition of territorial rights. Between 1996 and 1997, the state recognised the Colla communities in the Atacama Region as having approximately 800,000 hectares of land. However, by 2019, only a total of approximately 9,000 hectares had been titled in favour of their communities (Conadi, 2019).[22] In contrast, the Colla community of Pai-Ote, which through transhumance activities traditionally occupies a vast high Andean sector, stretching from *La Junta de la Quebrada de Paipote* to the Salar de Maricunga basin and the Laguna del Negro Francisco in the Copiapó Altiplano, still does not have legal title to its land. This is particularly serious given that the lithium development projects currently in the exploration phase are located in the traditional use territory of this community (Guerra & Aylwin, 2020).

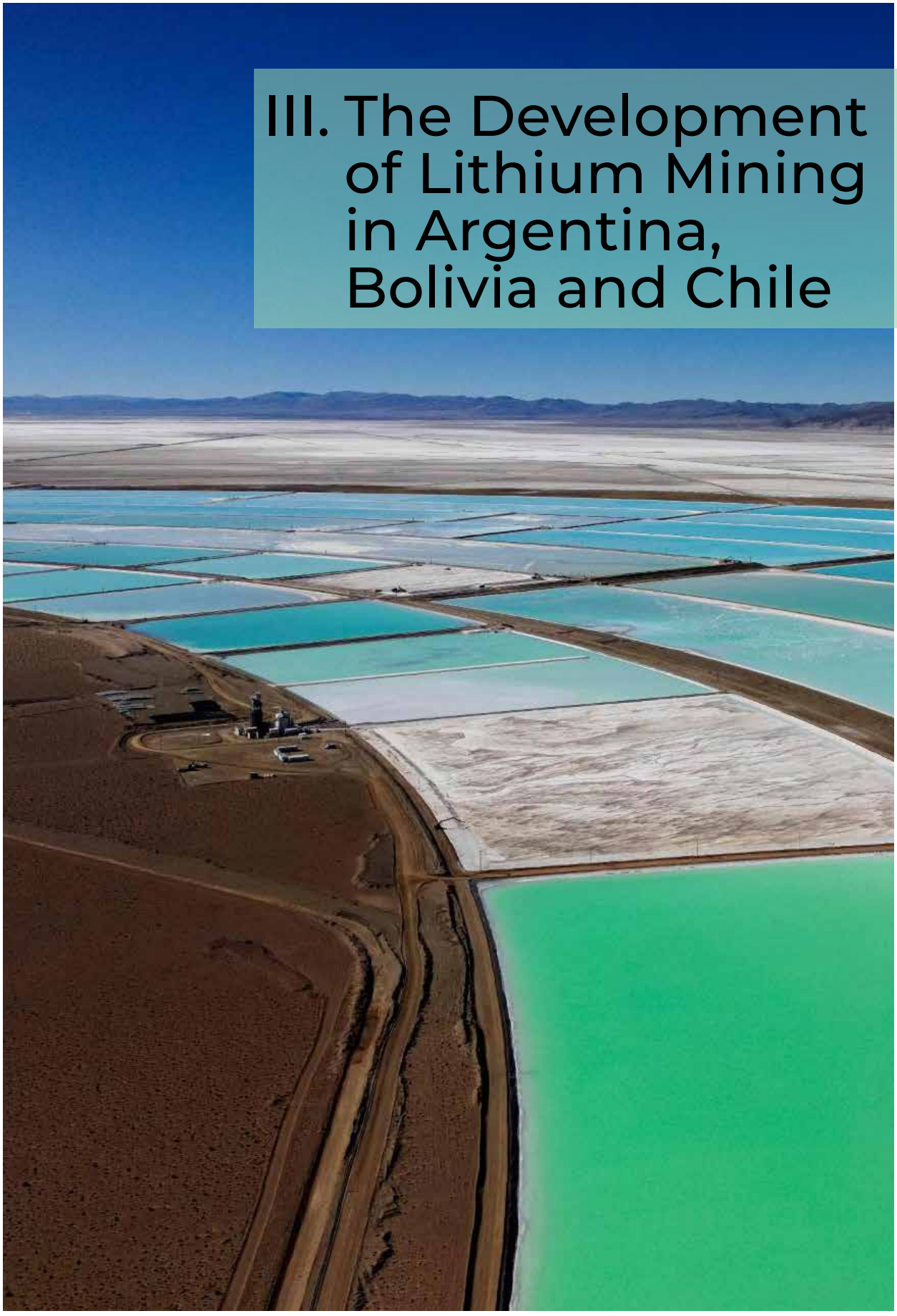
Furthermore, Colla territory has been declared as protected areas, including the Salar de Maricunga, recognised as a Ramsar site (wetland of international importance under the Ramsar Convention), and the Nevado

22 Among them are the Colla communities of Sinchi Wayra, Pastos Grandes, Diego de Almagro, Río Jorquera, and Serranía de Poblete (Conadi, 2019).

Tres Cruces National Park, both located in the Atacama Region. These areas, which are vital to the Pai-Ote Colla community, face serious threats from the presence and planning of gold and lithium mining projects in the vicinity. Extractive operations in the Salar de Maricunga endanger not only the biodiversity of these protected areas, but also the ecological balance and the territorial rights of indigenous communities. These initiatives have generated tensions, as the Colla people seek to protect their ancestral territory, essential to their culture and traditional practices.

Sheep herding in the Peine community territory, Salar de Atacama, Chile.
Photo: Oriana Mora

III. The Development of Lithium Mining in Argentina, Bolivia and Chile



Evaporation ponds for lithium extraction in the Salar de Olaroz, province of Jujuy (Argentina), July 2024.
Photo: Luis Robayo / AFP

As noted in previous chapters, lithium has positioned itself globally as a strategic resource due to its growing demand, particularly for the production of rechargeable batteries for electronic devices and electric vehicles. This demand has surged in recent years as a result of the need to find alternatives to fossil fuels in the context of the energy transition.

This chapter describes the process through which lithium has been developed over time in Argentina, Bolivia and Chile (ABC), the main deposits where this mineral is extracted, as well as the companies and actors involved. For a better understanding of the implications of lithium development, the production cycle is also outlined, analysing the processes of extraction and processing, the volumes reached and the markets to which it is destined. Finally, the implications of lithium for ABC economies and the future prospects for its development are explored.

1. Background to Lithium Development

1.1. Argentina

Argentina began exploiting its lithium deposits in 1997, when FMC Corporation started large-scale operations at the Salar del Hombre Muerto in the province of Catamarca. Throughout the 2010s and 2020s, new projects were added in the provinces of Jujuy (Olaroz and Caucharí-Olaroz) and Salta (Centenario-Ratones).

Argentina is currently the world's fifth largest lithium producer, with 87.5% growth in annual production in 2024 (USGS, 2025). This production comes mainly from the Fénix project (Catamarca), Olaroz project (Jujuy) and Caucharí-Olaroz project (Jujuy). As will be seen below, attempts to expand exploitation into other areas with potential deposits (such as the Salinas Grandes basin and Laguna de Guayatayoc) have led to an increase in social unrest. A major challenge for the authorities and companies seeking to expand the number of projects is to demonstrate that it is possible to sustainably manage water resources, the main source

Salinas Grandes. Jujuy, Argentina.
Photo: Susi Maresca

of tensions with indigenous communities, especially due to the intensive use of water in the salt flats of northwestern Argentina (Fuentes-Claros, 2020).

Article 124 of the Argentine Constitution establishes that the provinces have control over natural resources, which creates a multi-level governance system that complicates policy coordination between different jurisdictions (Rehner et al., 2023; Juste & Rubiolo, 2023). This lack of unified policy, and the absence of a national strategic vision, have also been of interest to companies, as they negotiate directly with the provinces, which in turn compete with one another to offer the best conditions to attract foreign investment.

In Argentina, the main companies producing lithium salts are: (i) Arcadium Lithium, which operates in the Salar del Hombre Muerto (Catamarca) and the Salar de Olaroz (Jujuy), created in 2023 through the merger of Livent and Allkem, and recently acquired by the mining firm Rio Tinto; (ii) Minera Exar, which operates in the Caucharí-Olaroz salt flat (Jujuy), composed of Ganfeng Lithium (46.6%), Lithium Argentina (44.8%, a subsidiary of Lithium Americas Corp.), and *Jujuy Energía* y *Minería Sociedad del Estado* (JEMSE) (8.5%); iii) *Eramine Sudamérica* S.A. (subsidiary of Eramet, France), which operates in the Salar Centenario-Ratones (Salta), in partnership with the Chinese steel company Tsingshan. Of the three countries, Argentina is presented as the one that generates the fewest benefit options from lithium exploitation, based on a governance system not guided by a strategic development vision, but rather aimed at offering advantages to attract companies.

1.2. Bolivia

Bolivia is the site of the world's largest lithium deposit, in the Salar de Uyuni, identified during the 1970s through initial exploratory and prospecting studies in the Altiplano salt flats, promoted by the Geological Mining Service and Bolivian public universities, such as the Universidad Mayor de San Andrés (UMSA). Studies carried out in the 1980s and 1990s confirmed the country's vast potential to become a global leader in lithium production. In 1988, a controversial period began with the arrival of the US company Lithium Corporation (Lithco) in Bolivian territory, at the direct invitation of the government, in violation of several legal provisions. This event initiated a period of social unrest, which ended with the departure of the multinational company in 1993 (Iño, 2017; Olivera, 2017).

In February 2009, through a referendum, the Bolivian population approved a new Political Constitution of the State, forming the framework of rights, obligations, roles and responsibilities in the foundation of the Plurinational State. A year earlier, the government of Evo Morales initiated a policy of absolute state control over lithium resources, establishing a plan for their industrialisation. This approach led to the creation of pilot plants in Uyuni and agreements with foreign companies for research. Despite these advances, lithium carbonate production, which started in 2013, is still limited. The exploitation of this resource has faced obstacles such as the lack of technological infrastructure, complex biophysical conditions, increasing conflict and management issues (Ströbele-Gregor, 2012; Olivera, 2017; Obaya, 2019; Azamar Alonso, 2022).

Since 2017, exploration and exploitation of lithium have been under the responsibility of the national strategic state-owned enterprise *Yacimientos de Litio Bolivianos* (YLB), established under Law No. 928. Beginning in April 2021, the Bolivian government initiated a phase of inviting foreign companies to submit proposals for the implementation of Direct Lithium Extraction (DLE), both in the Salar de Uyuni

Lithium pilot plant in Llipi, in the Salar de Uyuni (Bolivia), 2022.
Photo: Gaston Brito Miserocchi / Getty Images South America / Getty Images via AFP

and in six other selected salt flats, including Coipasa and Pastos Grandes. In this phase, the central government, through YLB, issued two calls for proposals and publicly signed agreements, memoranda of understanding and contracts. Among these contracts are agreements signed with two Chinese companies and one Russian company, which include controversial elements subject to debate. These include the socio-environmental risks associated with the installation and operation of plants; non-compliance with free, prior and informed consultation; and disadvantageous terms for the state. From the perspective of corporations, the state monopoly is seen as a factor that slows the sector's growth, although the country seeks to integrate into the global value chain through the industrialisation of batteries and high value-added products (Del Barco & Foladori, 2020). The challenges of implementing lithium salt mining operations, particularly in the Salar de Uyuni, include the lack of appropriate technology for the salt flat's specific conditions and tensions over water access and use, which raise concerns about long-term water sustainability (Calla, 2014; Fuentes-Claros, 2020).

1.3. Chile

Chile is the world's second largest lithium producer (USGS, 2025), making it a leader in lithium exports (Cabello, 2022; Lagos, 2012). Lithium exploration and exploitation in Chile is the oldest in the region with at least forty years of development. It has evolved from models of state exploitation to the granting of public concessions to private companies, and more recently, to public-private partnerships with increased regulation.

Lithium deposits in the Salar de Atacama were discovered in the 1960s. During the 1970s, the *Corporación de Fomento de la Producción* (Chilean Production Development Corporation – CORFO) initiated research that laid the foundations for the sector's development. Lithium exploitation in Chile began in the 1980s with the creation of the *Sociedad Chilena del Litio* (SCL), a joint venture between CORFO and Foote Mineral Co. (Poveda Bonilla, 2020). During this phase, CORFO granted special concessions for lithium exploitation in the Salar de Atacama, establishing lease contracts with private companies under state supervision (Cabrera Valencia, 2023).

The development of Chile's lithium industry has been marked by changes in ownership of the operating companies. In the late 1980s, CORFO sold its stake in SCL, leaving exploitation in private hands. SCL was acquired by Rockwood in 2004 and later by Albemarle in 2015, consolidating its position as one of the world's leading lithium producers (Poveda Bonilla, 2020). Meanwhile, the company Amax, which entered the sector in the 1980s, became Foote Mineral and later, in the 1990s, the *Sociedad Química y Minera de Chile* (SQM), a company that has since maintained a dominant presence in lithium exploitation in the Salar de Atacama (González Eyzaguirre & Cantallopts Araya, 2020).

In 2018, Chinese company Tianqi Lithium acquired 23% of SQM, marking a milestone in the company's ownership structure. This move raised concerns about market control but was approved by Chilean authorities with specific conditions to safeguard free competition (CIPER Chile, 2018).

Contracts between CORFO and mining companies have been crucial in regulating lithium extraction in Chile. In 2016, Albemarle renegotiated its contract with CORFO, obtaining authorisation to expand its production until 2043 in exchange for increased economic contributions and environmental commitments. SQM reached an agreement with CORFO in 2018 to extend its exploitation until 2030 under new conditions that increased payments to the state (Berroeta Rojas, 2023). Overall, the prohibition on granting concessions over lithium under Chilean law limits the entry of new actors, but guarantees indirect state control through *contratos especiales de operación de litio* (Special Lithium Operation Contracts – CEOLs).

Public plans and policies on lithium have varied among different Chilean governments over the past decade. During Michelle Bachelet's presidency (2014-18), the *Comisión Nacional del Litio* (National Lithium Commission) was created, which recommended greater state participation in the sector (National Lithium Commission, 2015). Sebastián Piñera's government (2018-22) issued tenders for salt flats, but these were annulled by the Supreme Court due

Lithium mining operations at the Salar de Atacama, Chile, 2024.
Photo: Lucas Aguayo Araos / ANADOLU / Anadolu via AFP

to lack of indigenous consultation (*Diario y Radio Universidad de Chile*, 2022).

The current government of Gabriel Boric has promoted the National Lithium Strategy, which seeks to strengthen state participation in exploitation of the mineral through public-private partnerships with majority state control. In addition, state-owned mining company Codelco has been tasked with participating in the exploitation of lithium in the Atacama and Maricunga salt flats and promoting the development of new technologies (Government of Chile, 2023).

In 2024, an agreement was reached between Codelco and SQM to form a joint venture in the exploitation of the Salar de Atacama. This agreement provides that Codelco shall hold a 50% + 1 share from 2025 and shall assume overall management of the operation from 2031 (Codelco, 2024). This move aims to change the governance of lithium in Chile, guaranteeing a higher state revenue and the promise of incorporating new technologies to reduce the environmental impact of extraction, particularly concerning water usage.

Signing of a partnership agreement between Codelco and SQM for lithium development in the Salar de Atacama, 31 May 2024. In https://www.codelco.com/codelco-y-sqm-firman-acuerdo-para-asociacion-que-da-a-chile-liderazgo-en

2. The Lithium Cycle: Extraction, Processing and Destination

2.1. Extraction

The predominant method of lithium extraction in the ABC salt flats is solar evaporation, which uses the sun's radiation to concentrate lithium in evaporation ponds or pools. While this method has relatively low costs, it has significant environmental impacts, particularly in terms of water consumption and salinisation of local aquifers (Viacava & Rodríguez Altamirano, 2024).

In Argentina, this method is used in salt flats such as Hombre Muerto and Caucharí-Olaroz, with issues related to water efficiency and management. It is estimated that up to 50% of the lithium is lost during the process, due to leakage and incomplete evaporation.

In Bolivia, where the conventional method is also used, the high presence of magnesium in the brines of the Salar de Uyuni has historically complicated extraction processes. In addition, the rainfall patterns in this area reduce the efficiency of the evaporation ponds (Nievez et al., 2014).

In Chile, the Salar de Atacama is known for its high lithium concentration and high evaporation rates, making operating costs lower and recovery rates higher compared to other deposits in the region (Córdoba Restrepo, 2023).

In recent years, attempts have been made to introduce new methods to extract lithium from salt flats. Direct Lithium Extraction (DLE) technologies could represent an emerging solution to the problems associated with evaporative methods. These technologies allow lithium to be extracted directly from brine using chemical adsorbents, selective membranes or electrochemical processes.

In Argentina, pilot projects such as that led by the company Eramet in the Salar Centenario-Ratones (Salta province), have been exploring DLE technologies (Bunel, 2024). Eramet inaugurated its plant incorporating these technologies and began production in July 2024.

In Bolivia, lithium extraction started in 2013 on a pilot scale, and an industrial plant using evaporation technology was inaugurated in 2023. Since then, agreements have been signed with foreign companies to explore direct extraction methods to reduce water impact and increase lithium recovery rates (Ministry of Hydrocarbons and Energy, 2024; YLB, 2022; Olivera, 2017).

In Chile, CORFO has initiated research to implement DLE, focusing on minimising environmental impact and improving water efficiency.

2.2. Processing

Lithium processing involves converting the extracted raw material into compounds such as lithium carbonate or lithium hydroxide. In the first stage, lithium must be concentrated using the evaporation technique, harnessing solar energy. Once concentrated, a second stage takes place in the plant, where a series of chemical processes are applied to crystallise lithium carbonate salts.

In Argentina and Chile, processing plants – located near the salt flats – use chemical methods including precipitation and purification. According to recent studies, precise control of variables such as pH and temperature can improve the purity of the final product, reaching standards required for use in lithium-ion batteries (Braga et al., 2018). In the case of Argentina, improvements in the quality of lithium carbonate have been achieved through the purification of lithium hydroxide using recrystallisation methods, which guarantees products with a purity of over 99.5% for battery applications (Braga et al., 2018).

Operations in Bolivia began at a pilot processing plant in the Salar de Uyuni, located near the evaporation ponds. Since 2024, YLB has been operating an industrial plant, but its capacity to process large volumes is still limited. Bolivia has therefore been promoting international collaborations to overcome these challenges (Yáñez Fernández, 2021). In 2024, a *Contrato de Asociación Accidental* (temporary, project-specific partnership agreement) was signed with Uranium One Group (Russia) for the development of an industrial plant using DLE technology and lithium carbonation in the Salar de Uyuni. In addition, a *Contrato de Servicios* (service contract) was signed with the Chinese company Hong Kong CBC Investment Limited for the production of lithium carbonate in the Salar de Uyuni, which includes the installation of two industrial plants. The Bolivian government's strategy is to complement the processing capacity of the industrial plant (100% state-owned) with plants using DLE technology, both from well brine (directly pumped from the salt flat) and residual brine (the lithium residue from YLB's processing operations).

Yacimientos de Litio Bolivianos' contract with the company Uranium One Group (Russia). In https://www.ylb.gob.bo/node/113

In Chile, companies such as SQM and Albemarle operate processing plants that treat brine from the ponds in the salt flats. In addition, these companies are exploring the implementation of experimental plants that incorporate technological improvements, such as DLE techniques. These innovations aim to increase energy efficiency and minimise waste generated during processing (Cochilco, 2024b).

2.3. Production Volumes and Country Comparison

In 2024, global lithium production exceeded 1.2 million tonnes of lithium carbonate equivalent (LCE), with the countries in the "Lithium Triangle" accounting for about 29% (USGS, 2025). In 2024, Argentina produced 95,809 tonnes of LCE, making it the fifth largest producer globally (USGS, 2025). Argentina is currently in a phase of rapid development, with expanding projects that seek to close the gap with Chile. The federal governance model, which gives provinces control over resources, has resulted in advantages for companies to encourage foreign investment, but also presents coordination challenges (*Informe Litio*, 2021).

Bolivia, although home to the world's largest lithium deposit in the Salar de Uyuni, produced just over 1,100 tonnes in 2024. This low level of production is due to technological and infrastructure limitations, with efforts focused mainly on pilot plants and development projects (ECLAC, 2023; *Foro del Litio*, 2023). State governance – through *Yacimientos de Litio Bolivianos* (YLB) – has sought to ensure national control of the value chain. However, the country faces significant delays in implementing advanced technologies and attracting the investments needed to compete globally (OLADE, n.d.; *Foro del Litio*, 2023).

Chile is the largest regional producer and one of the leading global producers. In 2023, the country exported 188,380 tonnes of lithium carbonate and 23,016 tonnes of lithium hydroxide, representing 27% of the world's lithium supply (Cochilco, 2024a). In 2024, Chile produced just over 260,000 tonnes of LCE, making it the world's second largest producer after Australia (USGS, 2025). Its production comes almost exclusively from the Salar de Atacama, known for its high lithium concentrations and operational efficiency (Central Bank of Chile, 2023). The quality and quantity of its reserves, along with its well-established infrastructure, allow Chile to maintain high production and export volumes (Central Bank of Chile, 2023). In addition, the country has implemented a National Lithium Strategy that aims to promote sustainability and state participation in the industry (ECLAC, 2023).

2.4. Production of Derivatives and End-use Applications

The main lithium derivatives include lithium carbonate, lithium hydroxide and lithium chloride. These compounds are essential for the manufacture of batteries, ceramics and industrial lubricants. As mentioned above, the primary use of lithium globally is in the manufacture of rechargeable batteries, which accounted for approximately 84% of total lithium consumption in 2023.

In addition to its use in batteries, lithium has important applications in the ceramics, glass and pharmaceutical industries. These sectors, together with other niche uses, account for approximately 10% of the total lithium market, according to estimates by Global Growth Insights (2024). In the ceramics and glass industry, lithium is used to enhance thermal resistance and product durability. In pharmaceuticals, lithium carbonate is used in the treatment of bipolar disorder and other psychiatric conditions, due to its mood-stabilising properties.

In Argentina, lithium hydroxide production is gaining ground due to its high demand in Asian markets for the manufacture of electric vehicle batteries. In this context, companies such as Livent and Allkem have announced investments and innovations in purification processes to meet competitive standards (Ministry of Productive Development, 2021).

In Bolivia, development projects are focused exclusively on the production of lithium carbonate. While there has been some progress in the installation of demonstration and experimental plants for the production of cathode materials and battery assembly, recent policies have prioritised specialising the country in the supply of raw materials through agreements and contracts with transnational companies. In addition to lithium carbonate, Bolivia has focused efforts on the production of potassium chloride, a by-product of the evaporation chain installed in Uyuni (Olivera, 2017).

In Chile, the focus is on high-purity lithium carbonate, which represents a key pillar in the country's exports and in its strategy to capture added value in the global lithium value chain (Garcés Millas, 2024; SQM Lithium, n.d.). Domestic production is also directed towards the development of hydroxides, cyanides and metallic lithium to meet the growing demand for advanced technologies.

2.5. Fluctuations in Lithium Production

Fluctuations in lithium salts production in ABC have been linked to various economic, regulatory and socio-environmental factors.

In Argentina, a steady increase in production has been observed since the 2010s. However, domestic economic volatility, regulatory changes at the provincial level and social unrest, stemming from a lack of consultation and an absence of environmental safeguards, have slowed the pace of expansion (*Informe Sectorial Litio*, 2024; *Foro del Litio*, 2023).

Bolivia, despite having the world's largest lithium deposit, has experienced inconsistent production due to technological delays and inefficiencies that have characterised lithium development in this country. Production has been increasing since 2013, but with limited results in terms of productive capacity. The state industrialisation strategy, centred on *Yacimientos de Litio Bolivianos* (YLB), has advanced slowly, limiting Bolivia's competitiveness in the global market (OLADE, n/d; ECLAC, 2023).

In Chile, production has historically been stable thanks to well-established infrastructure and a regulatory framework that has stimulated production. However, occasional drops in output have been observed due to revisions in concession contracts and growing environmental concerns related to intensive water use in the Salar de Atacama (Central Bank of Chile, 2023; ECLAC, 2023).

Lithium prices have seen significant fluctuations, reaching record highs in 2022 due to surging demand, followed by substantial declines in 2023 and 2024. This has impacted profitability and long-term project planning (Central Bank of Chile, 2023).

The causes of fluctuations in lithium production in ABC are related to global and local factors. For example, the boom in lithium demand, driven mainly by the energy transition and electric vehicle manufacture, has generated significant increases in production. However, periods of oversupply in the global market have triggered sharp price drops, affecting the sustainability of ongoing projects (*Informe Litio*, 2021; *Radiografía del Litio*, 2023).

Government policies are another factor explaining fluctuations in lithium production.

As mentioned above, in Argentina, provincial regulations and a lack of coordination among local governments have been cited as excuses by the private sector to explain delays in some projects. In Bolivia, the state control strategy has encountered setbacks related to administrative limitations, a degree of isolation of the state programme from national technological capacities and the lack of a sufficient regulatory framework to ensure sector development. In Chile, concession contracts with CORFO have established production limits to ensure environmental sustainability.

3. Main Markets

As mentioned above, global demand for lithium has experienced exponential growth in recent years. In 2023, it reached 920,000 tonnes of LCE, with a projected increase to 1,404,000 tonnes by 2025, representing a 52% growth (*Informe Mercado del Litio*, 2024).

The main lithium export destinations include China, the largest global consumer – accounting for nearly 55% of consumption worldwide (Cabrera Valencia, 2023) – followed by the US and Europe. These markets are driven by energy transition policies that increase demand for lithium for batteries and clean technologies (EPRE, 2024).

As also noted, the main use of lithium globally is in the manufacture of rechargeable batteries. These batteries are essential for electric vehicles, electronic devices and renewable energy storage systems. Projections indicate that this market segment will reach 89% of total consumption by 2025 (*Informe Mercado del Litio*, 2024); lithium exports are mostly destined for this market. In 2023, shipments to Asia, particularly China and South Korea, accounted for more than 90% of the volume exported by Argentina and Chile. These two countries export large volumes to the Asian market, while Bolivia, although with lower production capacity, has signed agreements with Chinese companies for future exports (*Informe Mercado del Litio*, 2024).

In 2023, Chile's export market was mainly concentrated in China, South Korea and Japan, which together accounted for 92% of total lithium shipments during the year. Competition in the lithium market focuses on quality and quantity of production, and Chile remains a global leader in exports thanks to its experience and the high purity standards of its products.

In terms of strategic alliances, in Argentina and Bolivia agreements between the government and international companies to promote technology transfer and expand production capacity are common. For example, Bolivia signed agreements with the Chinese consortium CBC, headed by CATL, to implement direct extraction technologies, although a contract signed in 2024 has been criticised for a series of irregularities and inconsistencies. In contrast, Chile has adopted a model of regulated concessions under the supervision of CORFO, which has provided regulatory stability and allowed for long-term planning of the extraction process, creating conditions for a possible involvement of Codelco in the lithium business in the country (National Lithium Strategy, 2023).

4. Importance for the Economies of ABC Countries

The lithium sector has varying degrees of importance for the economies of Argentina, Bolivia and Chile (ABC), notably impacting exports and tax revenue generation. In exports, Argentina generated approximately USD 700 million in 2022, representing 0.5%

of its GDP. Exports are expected to exceed USD 2 billion annually by 2030, consolidating lithium as an important source of income for the country (EPRE, 2024). In Bolivia, although exports are currently marginal, they are projected to generate around USD 500 million annually by 2030 due to the implementation of new industrial projects and strategic agreements with international partners such as China (Yacimientos de Litio Bolivianos, 2023). Chile leads the sector, with exports exceeding USD 8.546 billion in 2022, representing 4% of GDP. This explosive growth is due to international lithium prices that exceeded USD 80,000 per tonne in 2022, combined with the implementation of the National Lithium Strategy and the high quality of the Salar de Atacama reserves (NRGI, 2024).

The contribution of lithium to fiscal revenues also differs among the three countries. In Argentina, mining royalties generated USD 264.66 million in 2023 (EITI Argentina, 2024), distributed mainly among the mining provinces. Bolivia's revenues remain limited, generating USD 22.5 million in 2023 from the sale of both lithium carbonate and other salts (by-products); this amount includes mining royalties of USD 675,000. In Chile, revenues amounted to more than 5.4 billion dollars in 2022, equivalent to 1.8% of GDP and 6.9% of total tax revenues. These resources have been allocated to social programmes, infrastructure and technological development (NRGI, 2024). This variability depends not only on the level of development of the sector, but also on the royalties charged in each country. While in Argentina (depending on the province) and Bolivia they represent 3%, in Chile the contracts signed by CORFO with SQM and Albemarle establish a progressive royalty system ranging from 6.8% to 40% of the lithium sales price, depending on international price brackets (*Biblioteca del Congreso Nacional de Chile*, 2024).

5. Future Trends

World lithium production is projected to continue to grow to meet the demand for a Global North-focused energy transition, with products such as batteries for electric vehicles and renewable energy storage. The ABC countries are each committed to playing a central role in this process (OLADE, n.d.; National Lithium Strategy, 2023).

In Argentina, production growth projections are optimistic. The country is currently expanding existing projects and developing new initiatives in Jujuy, Salta and Catamarca, often, as discussed below, at the cost of affecting basic social and environmental rights. The Argentine government's strategy focuses on making it as easy as possible for companies, ignoring the country's strategic development and respect for social and environmental safeguards. Projections for 2025 aim to double current production capacity to approximately 100,000 tonnes of LCE. By 2030, Argentina aims to consolidate its position as the world's second largest producer, and by 2050 to lead lithium production in South America (Salta Mining, 2024; *Panorama Minero*, 2024).

Bolivia aims to significantly increase its lithium production through service contracts with transnational companies to overcome technological and infrastructure challenges that have limited capacity so far. The government has identified lithium industrialisation as a centrepiece of its economic strategy, with a view to diversifying the economy and boosting local development (*Infobae*, 2024; *Informe Sectorial Litio*, 2024). In the short term, Bolivia's goal is to achieve annual production of 15,000 tonnes of lithium carbonate through its industrial plant. This volume would be supplemented by a further 49,000 tonnes through new industrial plants in the Salar de Uyuni, based on DLE technologies. By 2030, Bolivia hopes to reach annual production of more than 50,000 tonnes

and, by 2050, to develop a fully integrated industry, including manufacture of batteries and high value-added derivative products (YLB, 2024; *Infobae*, 2024).

Chile seeks to maintain its position as a global leader by promoting more sustainable technologies and developing its National Lithium Strategy. This strategy encourages greater state participation across the entire value chain, notably with the involvement of Codelco in lithium extraction through the promotion of public-private partnerships. Chile also aims to diversify its industry, advancing production of cathode materials and other battery value chain stages, reinforcing its global competitiveness (National Lithium Strategy, 2023; Central Bank of Chile, 2023). Chile plans to maintain leadership with projected production of 70,000 tonnes per year by 2025, optimising existing operations in the Salar de Atacama and developing new projects in other salt flats. By 2030, the implementation of direct extraction technologies (DLE) and the renewal of contracts with companies such as SQM and Albemarle will be key.

The investments needed to achieve these goals are significant. Argentina plans to spend more than USD 4 billion on infrastructure and advanced technology by 2030, financed mainly by international companies such as Lithium Americas. Bolivia, initially backed by a Chinese consortium and a Russian company, plans to invest around USD 2 billion in the development of three industrial plants. Chile, meanwhile, plans to invest USD 2 billion to modernise its extraction and processing technologies and strengthen its competitive position in the global market (OLADE, n.d.; *Infobae*, 2024).

IV. International Human Rights Standards Applicable to Lithium Mining

Representatives of indigenous peoples at the opening of the United Nations Permanent Forum on Indigenous Issues. New York, 2017.
Photo: IWGIA

This chapter looks at the development of international human rights standards applicable to lithium mining. Firstly, it analyses the duty of states to protect these rights, which, according to the first pillar of the *Guiding Principles on Business and Human Rights* (Guiding Principles), means the obligation to regulate, supervise and monitor the activities of companies, whether public, mixed or private. It addresses the issue of the international responsibility of the state in relation to the activities of business enterprises. It also analyses the extraterritorial human rights obligations of the home states of companies operating in foreign jurisdictions. Next, it outlines the human rights responsibilities of companies under these same international standards, including the specific responsibilities of state-owned enterprises. The rights of indigenous peoples are then analysed, with particular attention to the rights to prior consultation and other participation mechanisms, the right to self-determination, the rights to their territories and natural resources, and the right to benefit-sharing and fair compensation in the context of exploration or exploitation projects affecting these peoples. This chapter also covers the right to a healthy environment and related issues, in particular with regard to access to information, participation and justice in environmental matters, as well as the protection of environmental defenders. In addition, it addresses the legal status of human rights treaties that recognise these rights within the legal systems of the ABC states. Finally, it examines the implementation of voluntary sustainability initiatives, such as labels and certifications, focusing on the key aspects of the second pillar of the *Guiding Principles*, concerning corporate responsibility to respect human rights.

1. International Human Rights Standards Applicable to the Lithium Industry in ABC

1.1. The Duty of States to Protect, Respect and Fulfil Human Rights: Prevention through Regulation, Supervision and Monitoring of Companies

States, as the primary duty-bearers of international treaty obligations, must respect, protect and fulfil human rights.[23] These general obligations incumbent on states can only be fully met if the state protects individuals not only from human rights violations committed by its own agents, but also from acts or omissions by private parties – including businesses – that undermine the enjoyment of internationally recognised rights (UN Human Rights Committee, 2004, para. 8).

In this regard, the *Guiding Principles* (first pillar) clarify and define the scope of the state's duty to protect human rights in relation to companies, regardless of their nature (public, mixed or private), size or sector of activity. The *Guiding Principles* state that: "States must protect against human rights abuse within their territory and/or jurisdiction by third parties, including business enterprises. This requires taking appropriate steps to prevent, investigate, punish and redress such abuse through effective policies, legislation, regulations and adjudication." (United Nations, 2011, p. 3). The duties to protect, respect and fulfil human rights apply directly to public and mixed enterprises. Where a company is controlled by the state or its acts can be otherwise attributed to the state, an abuse of human rights by that company may entail a violation of the state's own obligations under international law (United Nations, 2011).

23 For example, the UN International Covenant on Civil and Political Rights (ICCPR), in Article 2, states that "Each State Party... undertakes to respect and to ensure to all individuals within its territory and subject to its jurisdiction the rights recognized" in the Covenant. Article 1 of the American Convention on Human Rights provides that states parties "undertake to respect the rights and freedoms recognised [therein] and to ensure to all persons subject to their jurisdiction the free and full exercise of those rights and freedoms".

Moreover, the closer the company is to the state, or the more it relies on statutory authority or taxpayer support, the stronger the state's policy rationale becomes for ensuring that the enterprise respects human rights (United Nations, 2011). In relation to private companies, it should be considered that:

> ...States are not per se responsible for human rights abuse by private actors. However, States may breach their international human rights law obligations where such abuse can be attributed to them, or where they fail to take appropriate steps to prevent, investigate, punish and redress private actors' abuse. (United Nations, 2011, p. 3).

With regard to the international responsibility of states for acts or omissions by private parties, the Inter-American Court of Human Rights (IACtHR) in its first judgement in a contentious case stated:

> Thus, in principle, any violation of rights recognized by the [American] Convention carried out by an act of public authority or by persons who use their position of authority is imputable to the State. However, this does not define all the circumstances in which a State is obligated to prevent, investigate and punish human rights violations, nor all the cases in which the State might be found responsible for an infringement of those rights. An illegal act which violates human rights and which is initially not directly imputable to a State (for example, because it is the act of a private person or because the person responsible has not been identified) can lead to international responsibility of the State, not because of the act itself, but because of the lack of due diligence to prevent the violation or to respond to it as required by the [American] Convention (Case of *Velásquez Rodríguez v. Honduras*, 1988, para. 172).

According to this reasoning, specific circumstances can be identified in which international responsibility is attributed to the state for actions of private actors, such as when the state fails to exercise due diligence to prevent companies from committing acts or omissions that violate human rights recognised in the *American Convention on Human Rights* (American Convention) and other relevant treaties (Medina Ardila, 2009). This standard of due diligence with regard to the protection, respect and fulfilment of human rights "extends beyond the relationship between the state agents and the persons subject to their jurisdiction, also including the obligation to prevent third parties, in the private sphere, from violating the protected legal rights" (Case of *Ximenes Lopes v. Brazil*, 2006, para. 89; Case of *González Lluy et al. v. Ecuador*, 2015, para. 170). This obligation to prevent ultimately translates into the duty of states to regulate, supervise and monitor the activity of private parties, including companies (Case of *Ximenes Lopes v. Brazil*, op. cit, para. 141; Case of *Albán-Cornejo et al. v. Ecuador*, 2007, para. 121; Case of *Lagos del Campo v. Peru*, 2017, para. 149; Case of the *Workers of the Fireworks Factory in Santo Antonio de Jesús and their Families v. Brazil*, 2020, para. 120; Case of the *Indigenous Communities Members of the Lhaka Honhat (Our Land) Association v. Argentina*, 2020, para. 207; Case of the *Miskito Divers (Lemoth Morris et al.) v. Honduras*, 2021, paras 46 and 109; Case of *The Inhabitants of La Oroya v. Peru*, 2023, para. 156; Case of Olivera Fuentes v. Peru, 2023, para. 104).

The IACtHR has concluded that "States must establish regulations requiring companies to implement actions aimed at ensuring respect for the human rights recognized in the various instruments of the Inter-American System for the Protection of Human Rights" (Case of the *Miskito Divers*, op. cit., para. 48). Moreover, "under these regulations, businesses must ensure that their activities do not cause or contribute to human rights violations, and must adopt measures to redress such violations" (Case of the *Miskito Divers*, idem). States must therefore

adopt regulatory measures to ensure that companies have appropriate policies for the protection of human rights, due diligence processes to identify, prevent, and correct human rights violations, and mechanisms that enable them to remedy violations that result from their activities (Case of the *Miskito Divers*, ibid, para. 49; Case of *Vera Rojas et al. v. Chile*, 2021, paras 85, 86 and 145; Case of *Olivera Fuentes*, op. cit., paras 100 and 104; Case of *The Inhabitants of La Oroya*, op. cit., paras 110, 111 and 112).

1.2. States' Extraterritorial Human Rights Obligations and their Implications for Business Activity

International law has progressively recognised that states must comply with their international human rights obligations (respect, protect and fulfil) not only on their own territory, but also beyond, giving rise to what have become known as extraterritorial human rights obligations (ETOs). ETOs stem from obligations under international human rights law, including the *UN International Covenant on Civil and Political Rights (ICCPR)* and the *International Covenant on Economic, Social and Cultural Rights (ICESCR)*. Thus, the UN Human Rights Committee has stated that Article 2(1) of the *ICCPR*, which requires states parties to respect and to ensure the civil and political rights of all individuals within its territory and subject to its jurisdiction, also includes extraterritorial obligations. In its General Comment No. 31 (2004), the Committee underlined the extraterritorial effect of the Covenant, urging States to respect and ensure the rights it protects to anyone within the power or effective control of that state party, even if not situated within the territory of the state party (UN Human Rights Committee, 2004).

Similarly, the UN Committee on Economic, Social and Cultural Rights has stated that Article 2(1) of the *ICESCR*, which provides that states parties must progressively achieve the realisation of these rights by taking steps individually and through international assistance and cooperation, establishes extraterritorial obligations for states in relation to these rights (UN Committee on Economic, Social and Cultural Rights, 1990; UN Committee on Economic, Social and Cultural Rights, 2000).

The Committee interpreted the obligations of states parties regarding the corporate sector in a 2011 statement. It noted that states parties must take steps to prevent human rights contraventions abroad by corporations which have their main offices under their jurisdiction. This should be done without infringing the sovereignty or diminishing the obligations of host states under the ICESCR (UN Committee on Economic, Social and Cultural Rights, 2011).

In its General Comment No. 24 (2017) on state obligations in the context of business activities, the Committee identifies the specific extraterritorial obligations of states parties, including to respect, protect and fulfil Covenant rights in the context of the activities of companies domiciled in their territories and/or jurisdiction operating abroad (UN Committee on Economic, Social and Cultural Rights, 2017).

Human rights ETOs have also been embraced and developed in the Inter-American human rights system. The Inter-American Commission on Human Rights (IACHR) has held on numerous occasions that both the American Declaration of the Rights and Duties of Man and the American Convention on Human Rights implicitly establish extraterritorial human rights obligations.[24]

24 IACHR, *Petitions and Cases Declared Inadmissible*, Report No. 38/99, *Víctor Saldaño*, Petition (Argentina), 11 March 1999, para. 17; *Report on the Situation of Human Rights in Chile* (1985), para. 80; Report No. 109/99 (Merits Report), Case No. 10,951, *Coard et al.* (United States), 29 September 1999, para. 37; Report No. 112/10, Inter-state Petition PI-02, Admissibility, *Franklin Guillermo Aisalla Molina, Ecuador* (Colombia), 21 October 2010, para. 91.

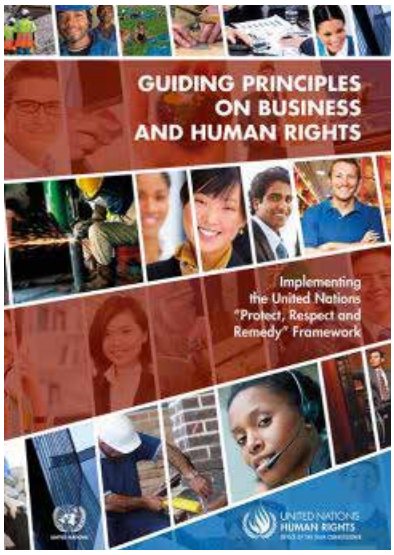
Likewise, the Inter-American Court of Human Rights (IACtHR) has also recognised extraterritorial human rights obligations in a 2017 Advisory Opinion on Environment and Human Rights (IACtHR, 2017).

Of particular relevance to the issues explored in this report is the IACHR's analysis of states' extraterritorial responsibility in the context of business activity and the obligations that arise from it. In its recent report on human rights and business, the IACHR stated that:

> Given the complex forms of organization and operation of economic actors like their relation to the realization of human rights at the local, regional and global levels, the mechanisms, policies and normative frameworks aimed at facing challenges in this field should incorporate and recognize the extraterritorial application of obligations arising from international human rights law, whether with regard to the States or their effects over the businesses or non-state actors themselves, so as not to leave the involved people and communities unprotected, whether, for example, regulating, preventing, or creating effective remedies for investigation and redress, as appropriate (IACHR, 2019 para. 52).

1.3. Corporate Responsibility with Regard to Human Rights

The *Guiding Principles*, referred to above, not only establish the responsibility of states with regard to human rights, but also the obligation and responsibility of businesses to respect human rights (second pillar). In fulfilling this obligation, businesses "should avoid infringing on the human rights of others and should address adverse human rights impacts with which they are involved" (United Nations, 2011, Principle 11). The *Guiding Principles* further provide that this responsibility extends to all business operations and relationships, requiring them to "[a]void causing or contributing to adverse human rights impacts through their own activities, and address such impacts when they occur", and that they seek to "prevent or mitigate adverse human rights impacts that are directly linked to their operations, products or services by their business relationships, even if they have not contributed to those impacts" (ibid., Principle 13). To this end, companies should have appropriate policies and processes in place, including: "(a) A policy commitment to meet their responsibility to respect human rights; (b) A human rights due diligence process to identify, prevent, mitigate and account for how they address their impacts on human rights; (c) Processes to enable the remediation of any adverse human rights impact they cause or to which they contribute" (ibid., Principle 15). According to the *Guiding Principles* this covers "adverse human rights impacts that the business enterprise may cause or contribute to through its own activities, or which may be directly linked to its operations, products or services by its business relationships" (ibid., Principle 17). In addition, where companies have caused or contributed to adverse impacts, they "should provide for or cooperate in their remediation through legitimate processes" (ibid., 2011, Principle 22). Finally, businesses, like states, "should ensure that effective grievance mechanisms are available" (ibid., 2011, Principle 30).



Cover page of the UN Guiding Principles on Business and Human Rights. In https://www.ohchr.org/en/publications/reference-publications/guiding-principles-business-and-human-rights

Of relevance in defining corporate responsibility for human rights are the OECD *Guidelines for Multinational Enterprises on Responsible Business Conduct* (*OECD Guidelines*) updated in 2023 (OECD, 2023). In addition to establishing that multinational enterprises must comply with national laws, the *OECD Guidelines* require them to carry out risk-based human rights due diligence by incorporating it into their risk management systems. They should seek to prevent and mitigate adverse human rights impacts, even if they have not contributed to causing them, where the impact is nevertheless directly linked to their operations, products or services by a business relationship. Where such adverse impacts occur, companies should address them. In addition, enterprises should engage meaningfully with stakeholders and their legitimate representatives as part of carrying out due diligence (ibid., 2023). Although the Guidelines are recommendations and are not legally binding, they underline that many of the matters covered by the guidelines are based on international commitments made by states. These Guidelines have been particularly significant for OECD member countries, which have established National Contact Points for Responsible Business Conduct. Among other functions, these contribute to the resolution of issues or disputes arising from the implementation of the Guidelines.

Given the limitations of the above-mentioned Principles and Guidelines in terms of enforceability of corporate responsibility with regard to human rights, in June 2014, at the initiative of Ecuador and South Africa, the UN Human Rights Council in Geneva adopted Resolution 26/9, establishing an open-ended Intergovernmental Working Group (IGWG), tasked with developing an internationally legally binding instrument to regulate the activities of transnational corporations and other business enterprises with respect to human rights.

In the 2023 revised draft of the instrument, its central objectives include:

> *a) To clarify and facilitate effective implementation of the obligation of states to respect, protect, fulfil and promote human rights in the context of business activities, particularly those of a transnational character; b) To clarify and ensure respect and fulfilment of the human rights responsibilities of business enterprises; c) To prevent the occurrence of human rights abuses in the context of business activities by effective mechanisms for monitoring, enforceability and accountability* (IGWG, UN, 2023, Article 2).

Matters addressed in the draft include the rights and protection of victims of human rights abuses committed by business enterprises, access to remedy, legal liability of business enterprises and jurisdiction. However, the short-term prospects for approval by the UN system are slim.

Corporate responsibility for human rights has also been developed within the Inter-American human rights system. In line with developments in this area, both the IACHR and the IACtHR have made progress in identifying the responsibilities of business enterprises in this area. In its 2019 report on the subject, the IACHR, drawing on Inter-American standards, provides that states have a duty to regulate and adopt domestic law provisions to guarantee human rights in the context of business activities, and to investigate, punish and ensure access to effective mechanisms for redress in the event of abuses. In addition, it states that "[business entities] must abstain from infringing, contributing, facilitating, encouraging or aggravating human rights violations and deal with the negative human rights consequences in which they have participated, whether through their own activities, commercial relationships, or corporate structure (IACHR, 2019, para. 452). To this end, it recommends that companies

"[h]ave appropriate due diligence policies and procedures in the area of human rights within their operations, corporate structures and supply chains, which includes standards on transparency, good faith and access to relevant information in these contexts, using as a minimum standard the Guiding Principles and the standards established by the Inter-American system on this subject" (ibid., para. 453). In relation to impacts of business activities on the rights of indigenous peoples, a frequent reality in the Americas, the Commission recommends that companies "create appropriate safeguards to respect the rights to prior and informed consultation and consent as to the self-determination of indigenous and tribal Afro-descendant peoples, as well as the right to a healthy environment" (ibid.).

More recently, the IACtHR, in a landmark judgment in the case of *La Oroya v. Peru* (2023), found the Peruvian state responsible for violations of human and environmental rights due to prolonged toxic industrial pollution caused by a smelting plant operating in the Andes in that country, which seriously affected the health of children. In addition to establishing the state's responsibility and the need to adopt measures to make collective reparations to the population affected by violations of their rights, the Court held the companies involved responsible for compensating the community for the environmental damage caused by their operations. It stated:

> Similarly, the State shall ensure that mining or metallurgical operations are carried out in accordance with the UN Guiding Principles on Business and Human Rights... and the Framework Principles on Human Rights and the Environment... Thus, the State must ensure that mining companies are held responsible for the consequences and provide compensation for environmental damage caused by their operations, in accordance with "the polluter pays" principle (IACtHR, *La Oroya v. Peru*, op. cit, para. 352).

This is a highly relevant and unprecedented ruling, given that it recognises the responsibility of business entities to address, in this case financially, the human rights consequences of their operations.

1.4. State-Owned Enterprises and Human Rights

Given the importance of state-owned enterprises (SOEs) and enterprises with state participation in the development of lithium in ABC, it is important to highlight the specific human rights responsibilities of these entities. As previously noted, the *Guiding Principles* establish the state's obligation to protect against human rights abuses by third parties, including business enterprises, through appropriate measures, regulation and adjudication (first pillar). As a consequence of this general obligation, the *Guiding Principles* establish a specific obligation for business enterprises that are owned or controlled by the state:

> States should take additional steps to protect against human rights abuses by business enterprises that are owned or controlled by the State, or that receive substantial support and services from State agencies such as export credit agencies and official investment insurance or guarantee agencies, including, where appropriate, by requiring human rights due diligence (UN, 2011, *Guiding Principles*, Pillar 1.4).

It is important in this context to define what is meant by an SOE. The OECD *Guidelines on Corporate Governance of State-Owned Enterprises* provide that "[a]ny undertaking recognised by national law as an enterprise, and in which the state exercises ownership or control, should be considered as an SOE" (OECD, 2015, p. 15).

These Guidelines refer to the centrality of state control over a given enterprise in this regard. They indicate that such control may exist when the state holds a majority of voting rights, or when the legal or factual arrangements confer control of the company, even with a minority stake (OECD, 2015).

In its thematic report on the subject, the UN Working Group on Business and Human Rights (2016) seeks to define the "additional steps" mentioned in the *Guiding Principles*, and which states should take to protect against human rights abuses by business enterprises that are owned or controlled by them. The Working Group argues that states "have greatest means within their power to ensure that relevant policies, legislation and regulations regarding respect for human rights are implemented". It adds that, in relation to these enterprises, state agencies "have greater scope for scrutiny and oversight, including ensuring that effective human rights due diligence is implemented" (UN Human Rights Council, 2016, para. 26). It also affirms that these obligations are matters of policy coherence and the legitimacy and credibility of states (UN Human Rights Council, 2016, paras 27 and 28).

In its report, the Working Group argues that the form of governance of SOEs appears to be a determining factor in the respect of human rights. It also refers to the OECD *Guidelines on Corporate Governance of State-Owned Enterprises*, according to which governments should exercise their function by avoiding passive conduct or, conversely, excessive state intervention, guaranteeing the autonomy of SOEs to ensure that their governance is carried out in a transparent and accountable manner (OECD, 2015; in United Nations, Human Rights Council, 2016). These Guidelines also provide that states' expectations with regard to responsible business conduct should be publicly disclosed and that mechanisms for their implementation should be clearly set out, for example, in National Action Plans on Business and Human Rights or in a specific state ownership policy (OECD, 2015; in UN Human Rights Council, 2016).

The Working Group stresses the need for states to require due diligence, transparency in accountability for environmental, social and human rights performance by SOEs, and to ensure access to justice. In relation to access to justice, they provide that states should ensure that such enterprises "(a) do not obstruct justice; (b) cooperate fully with judicial and non-judicial grievance mechanisms; and (c) fully comply with their responsibility to respect human rights, including providing remediation for human rights abuses that they may be causing or contributing to" (UN Human Rights Council, 2016, para. 84).

Of particular relevance to the analysis of state responsibility with regard to human rights in the context of the activity of SOEs is a recent study by the UN Working Group on Business and Human Rights (2023) on SOEs and human rights in Latin America. The study highlights the economic significance of such enterprises in various countries in the region, in some cases contributing up to 20% of GDP. Based on an analysis conducted in several countries, the study concludes that more centralised models of ownership management of SOEs offer greater opportunities to incorporate a human rights approach into their governance than decentralised models. It also underscores the importance of these enterprises making explicit their expectations for respect of human rights, including when operating abroad.

The study finds that a significant proportion of the socio-environmental conflicts involving SOEs, which generate serious human rights and environmental abuses, are related to the lack of participation of the affected communities, particularly indigenous peoples. It underlines, in particular, the lack of consultation and free, prior and informed consent, as required by international

standards. To address this, it suggests that "states should require [SOEs] to consult with potentially affected communities, in particular indigenous peoples, from the exploration stage of projects and on an ongoing basis throughout the enterprise's activities, in accordance with applicable international standards" (UN Working Group, 2023, p. 5).

The study also concludes that the bodies responsible for scrutiny, oversight, and monitoring of SOEs lack an explicit and specific mandate to monitor human rights, with oversight of a financial, economic, regulatory and management nature. To address this reality, it proposes "the creation of oversight bodies or citizen observatories with a human rights approach as a strategy to ensure greater transparency and legitimacy" (UN Working Group, 2023, p. 5).

In relation to human rights due diligence, the study notes its incorporation in SOEs – including in joint ventures – but stresses the need for alignment with the *Guiding Principles*, highlighting the criterion of prioritising measures based on the severity of impacts, as well as the importance of guaranteeing substantive consultation with interested parties, among other considerations.

Finally, taking into account the lack of awareness of international human rights standards in SOEs, the study emphasises the importance of implementing training for their personnel, including boards of directors, to foster a corporate culture with a comprehensive vision of human rights.

1.5. Indigenous Peoples' Rights: Prior Consultation and Other Participation Mechanisms, Right to Self-Determination and Rights to Territories and Natural Resources

Given that lithium exploration and exploitation activities in the high Andean salt flats of Argentina, Bolivia and Chile are carried out in territories inhabited by indigenous communities, it is essential to consider the standards of international law that protect the rights of these peoples. In this regard, there are several relevant international instruments adopted by various bodies, of differing normative value.

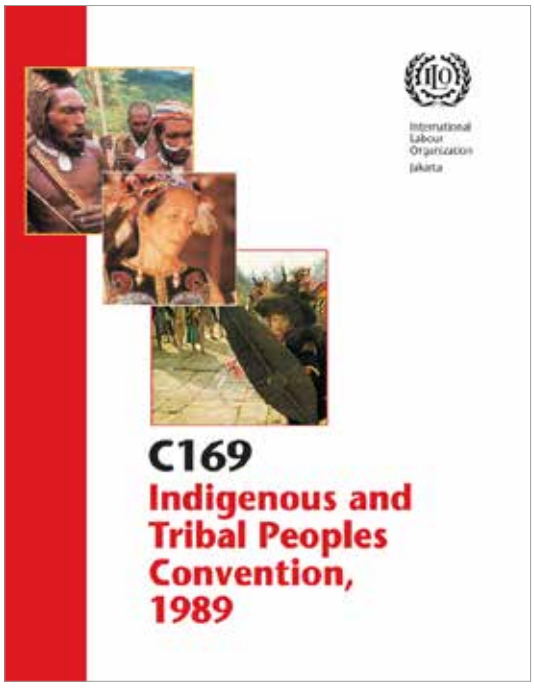
Non-binding instruments include the *UN Declaration on the Rights of Indigenous Peoples* (*UNDRIP*), adopted on 13 September 2007, and the *American Declaration on the Rights of Indigenous Peoples* (*ADRIP*), adopted on 14 June 2016.[25] While these instruments do not create directly enforceable state obligations, they are highly useful in guiding state action to protect and respect indigenous peoples' rights. They also serve as a foundation for the development of binding instruments and for guiding the work of the various human rights protection bodies.

Binding instruments include those adopted within the universal human rights protection system (UN), such as the *International Covenant on Civil and Political Rights* (*ICCPR*), the *International Covenant on Economic, Social and Cultural Rights* (*ICESCR*) and the *UN Convention on the Elimination of All Forms of Racial Discrimination*; and within the Inter-American system, such as the *American Convention on Human Rights* and the *Additional Protocol to the American Convention on Human Rights in*

25 UN General Assembly resolution A/RES/61/295, adopting the *UN Declaration on the Rights of Indigenous Peoples,* with 143 votes in favour, including those of Argentina, Bolivia (sponsoring state) and Chile; Resolution AG/RES. 2888 (XLVI-O/16) of the General Assembly of the Organisation of American States, approving the American Declaration on the Rights of Indigenous Peoples, was also adopted with Argentina, Bolivia and Chile voting in favour.

the Area of Economic, Social and Cultural Rights (Protocol of San Salvador). Another relevant international treaty is *International Labour Organisation* (*ILO*) *Convention No. 169 on Indigenous and Tribal Peoples* (*ILO Convention No. 169*).[26]

On the basis of these sources of international law, together with others considered below, this section analyses various rights relevant to indigenous peoples living in the territories where lithium exploration and extraction are concentrated in Argentina, Bolivia and Chile. These rights include: the right to prior consultation and other participation mechanisms; the right to self-determination; and rights to territory and natural resources.



Cover page of the ILO Convention 169. In file:///C:/Users/cwloczysiak/Downloads/wcms_124013.pdf

i. Prior Consultation and other Participation Mechanisms

The right to consultation is enshrined in both *UNDRIP* and *ADRIP*. Article 19 of *UNDRIP* provides that states have the obligation to consult in good faith with indigenous peoples, through their own representative institutions, in order to obtain their free, prior and informed consent before adopting legislative or administrative measures that may affect them. According to Article 32(2) of *UNDRIP*, this obligation also applies prior to the approval of any project affecting their lands, territories or other resources. Exceptionally, states must obtain the free, prior and informed consent of the indigenous peoples concerned in situations involving their relocation outside their traditional lands (Article 10) and in cases involving the storage or disposal of hazardous materials or military activities on indigenous territories (Articles 29(1) and 30(1)). Likewise, *ADRIP* establishes as a general rule the obligation to consult indigenous peoples, in order to obtain their free, prior and informed consent, before adopting legislative or administrative measures that may affect them (Article XXIII.2).

Article 6(1)(a) of *ILO Convention* No. 169 establishes that states have the obligation to "consult the peoples concerned, through appropriate procedures and in particular through their representative institutions, whenever consideration is being given to legislative or administrative measures which may affect them directly". Article 6(2) provides that these consultations "shall be undertaken, in good faith and in a form appropriate to the circumstances, with the objective of achieving agreement or consent to the proposed measures". Furthermore, the right to consultation, together with the rights to compensation for damages and benefit-sharing, is recognised as a right of indigenous peoples in the context of the exploration or exploitation of state-owned

26 All these international instruments have been signed and ratified by Argentina, Bolivia and Chile.

mineral, sub-surface or other resources on their lands (Article 15(2)). The Convention also establishes the right to prior consent in cases of relocation from their lands and territories (Article 16(1)).

In its interpretation of this right, the ILO stresses the importance of obtaining consent, especially when the consequences of a measure could be severe for indigenous peoples. It states that "the more severe the potential consequences are for the concerned indigenous peoples, the greater is the importance of obtaining agreement or consent. If, for instance, the continued existence of an indigenous culture is at stake, the need for consent to proposed measures is more important than in cases where decisions might result in minor inconveniences, without severe and lasting consequences" (ILO, 2013, p. 17).

Within the universal system, the views, observations and recommendations of UN bodies reflect a consensus on the requirement of consent in consultation processes with indigenous peoples. A significant case is the decision of the UN Human Rights Committee in the case of *Ángela Poma Poma v. Peru* (2009), in which an indigenous community was affected by a groundwater extraction project on its traditional lands. Referring to Article 27 of the *ICCPR*, the Committee affirmed that when measures substantially affect the culturally significant economic activities of an indigenous community, "participation in the decision-making process must be effective, which requires not mere consultation but the free, prior and informed consent of the members of the community" (UN Human Rights Committee, 2009, para. 7.6).

In the Inter-American system, this right is more specifically developed. It is established that, in the context of an investment project, consultation must be carried out in an informed manner, in accordance with the customs and traditions of the indigenous peoples concerned, within a framework of continuing communication, and in good faith, using culturally-appropriate procedures and with the objective of reaching an agreement (Case of the *Kichwa Indigenous People of Sarayaku v. Ecuador*, 2012, paras 166, 167 and 177; Case of the *Indigenous Communities Members of the Lhaka Honhat Association*, op. cit., para. 174). Similarly, the IACtHR noted that, in cases involving large-scale development or investment projects that would have a major impact on indigenous territories, the state not only has an obligation to consult the community, but also to obtain its free, prior and informed consent, according to its customs and traditions (Case of the *Saramaka People v. Suriname*, 2007, paras 129 and 133). The IACtHR also held that:

> In order to safeguard the right to collective property, the State must guarantee the right to consultation and participation in any project or measure that may affect the territory of an indigenous community, or other rights essential to their survival as a people. This must be done from the first stages of the planning or preparation of the proposed project or measure, so that the indigenous peoples can truly participate in and influence the decision-making process, in accordance with relevant international standards. In this regard, the State must ensure that the rights of indigenous and tribal peoples are not ignored in any other activity or agreement reached with third parties, or in the context of decisions of the public authorities that would affect their rights and interests. Therefore, as applicable, the State must also carry out the tasks of inspection and supervision of their application and, when pertinent, deploy effective means to safeguard those rights through the corresponding judicial organs. Regarding the nature of such consultation, the Court has established that prior consultation must be conducted in good faith, with the aim of reaching an agreement, and must be

appropriate, accessible and informed (Case of the *Kichwa Indigenous People of Sarayaku*, op. cit., para. 167; Case of the *Maya Q'eqchi' Indigenous Community of Agua Caliente v. Guatemala*, 2023, para. 250 [unofficial translation]).

ii. Right to Self-Determination and to Determine Development Priorities

International law also recognises indigenous peoples' right to freely determine their political status and freely pursue their economic, social and cultural development. This right is recognised in Article 3 of *UNDRIP* and Article III of *ADRIP*. However, both declarations underline that these rights cannot be used as a justification for impairing the territorial integrity or political unity of states (Article 46 of *UNDRIP* and Article IV of *ADRIP*).

It is important to note that both the UN Human Rights Committee and the UN Committee on Economic, Social and Cultural Rights have invoked common Article 1 of the ICCPR and the ICESCR, which establish the right of self-determination of all peoples. This right has been applied to indigenous peoples, especially in matters relating to their land rights, economic rights, the right to participation and indigenous institutions (UN Expert Mechanism on the Rights of Indigenous Peoples, 2021).

In the words of former UN Special Rapporteur on the Rights of Indigenous Peoples, James Anaya, the right to self-determination is crucial in the context of investment projects that impact indigenous lands and territories (Anaya, 2013, paras 9, 10 and 11). Anaya observes that under the prevailing business model, in which an outside company, with backing by the state, manages resource extraction operations, neither the right to self-determination nor indigenous land and territory rights are fully respected (Anaya, 2013, para. 4). He emphasises that: "the business model that still prevails in most places for the extraction of natural resources within indigenous territories is not one that is fully conducive to the fulfilment of indigenous peoples' rights, particularly their self-determination" (Anaya, 2013, para. 4).

ILO Convention No. 169, while using different language, pursues the same goal by guaranteeing the right of indigenous peoples to "decide their own priorities for the process of development as it affects their lives, beliefs, institutions and spiritual well-being and the lands they occupy or otherwise use". It also recognises their right to exercise control, to the extent possible, over their own economic, social and cultural development (Article 7(1)). It states that "[s]pecial measures shall be adopted as appropriate for safeguarding the persons, institutions, property, labour, cultures and environment of the peoples concerned", while respecting their "freely-expressed wishes" (Article 4(1) and 4(2)).

At the regional level, the Inter-American Commission on Human Rights (IACHR) has issued guidelines on the scope of this right in a recent report, which states that self-determination must be understood as "the basis for dialogue for the construction of a new relationship between [indigenous] peoples and States" (IACHR, 2021, p. 14).

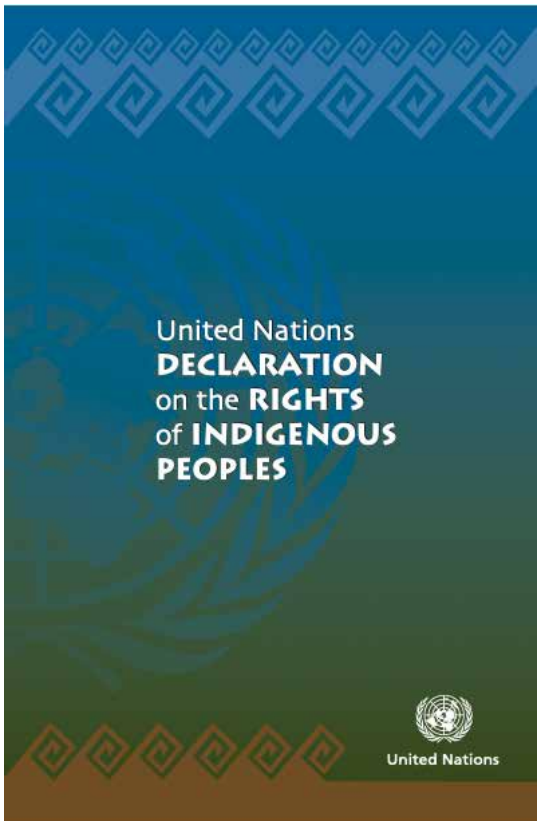
iii. Rights Over Lands, Territories and Natural Resources

International instruments that protect the rights of indigenous peoples consistently guarantee their rights to lands, territories and natural resources of traditional occupation. These instruments oblige states to respect the special relationship that indigenous peoples have with their lands and territories, which are essential to their cultures, spiritual values and their social, cultural and economic survival as distinct groups. They also recognise the rights derived from ancestral occupation and use of these lands, territories and resources.

ILO Convention No. 169, for example, recognises the rights of indigenous peoples over the totality of the territories they occupy or otherwise use, covering the total environment of the areas (Articles 13 and 15). It also establishes their right to participate in the management and conservation of these resources (Article 15(1)). Article 14(1) of the *ILO Convention* reaffirms that "[t[he rights of ownership and possession of the peoples concerned over the lands which they traditionally occupy shall be recognised". In addition, under Article 14(2) states must take steps to identify the lands which the peoples concerned traditionally occupy, and to guarantee effective protection of their rights of ownership and possession. Procedures must also be established to resolve land claims (Article 14(3)). The ILO emphasises that these rights are based on ancestral occupation, and not on titles granted by the state. Furthermore, the Convention protects not only their rights over physically occupied lands, but also in the context of the "process of development as it affects their lives... and the lands they occupy or otherwise use" (Article 7(1)). Beyond this, *ILO Convention No. 169* protects the rights of indigenous peoples over the waters they use or occupy.

UNDRIP states in Article 26(1) that "indigenous peoples have the right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired". Article 28 of the *UNDRIP* provides for indigenous peoples' right to redress, which may include restitution or, when that is not possible, just, fair and equitable compensation, where lands have been confiscated, occupied or damaged without their free, prior and informed consent. In the absence of an alternative agreement, compensation should consist of land of equal quality, size and legal status, or adequate monetary compensation. Article 25 of *UNDRIP* recognises indigenous peoples' right to maintain a spiritual relationship with the waters, coastal seas and other resources they have traditionally occupied, imposing an obligation on states to protect that relationship.

The monitoring bodies of the universal human rights protection system have determined that the general rule is restitution of lands, territories or resources of which indigenous peoples have been dispossessed without their consent. Only in exceptional cases is monetary compensation considered, preferably through the provision of equivalent lands. The UN Committee on the Elimination of Racial Discrimination (1997, para. 5) urges states to return lands of which indigenous peoples have been deprived without free and informed consent, and to provide just compensation only when return is not possible.



Cover page of the United Nations Declaration on the Rights of Indigenous Peoples. In https://www.un.org/esa/socdev/unpfii/documents/DRIPS_en.pdf

These rights are reaffirmed by the Inter-American human rights system. The IACtHR has held that Article 21 of the American Convention protects the property rights of indigenous peoples, based not on state recognition, but on the traditional use and occupation of their lands and resources (Case of the *Mayagna (Sumo) Awas Tingni Community v. Nicaragua*, 2000, para. 148). The IACtHR has also held that the close ties of indigenous peoples with their territories and natural resources, which are fundamental to their culture, must be protected by states by virtue of the rights recognised under Article 21 of the Convention (Case of the *Yakye Axa Indigenous Community vs. Paraguay*, 2005, para. 137).

In a later case, the IACtHR recognised that indigenous territorial rights can be expressed in different ways, depending on the people and their specific circumstances, and this can include spiritual ties, settlements, sporadic cultivation, seasonal hunting, fishing or gathering, among other traditional uses (Case of the *Sawhoyamaxa Indigenous Community v. Paraguay*, 2006, para. 131). In the case of the *Saramaka People v. Suriname*, the Court also affirmed that "... the right to use and enjoy their territory would be meaningless ...if said right were not connected to the natural resources that lie on and within the land" (Case of the *Saramaka People*, op. cit., para. 122).

iv. Right to Benefit-Sharing and Compensation for Damages

The right of indigenous peoples to participate in the benefits of investment or development projects carried out on their lands and territories is supported by Article 15(2) of *ILO Convention No. 169*. This article states that "[t]he peoples concerned shall wherever possible participate in the benefits of such activities, and shall receive fair compensation for any damages which they may sustain as a result of such activities".

Article 32(3) of *UNDRIP* reinforces this right, stipulating that "States shall provide effective mechanisms for just and fair redress for any such activities, and appropriate measures shall be taken to mitigate adverse environmental, economic, social, cultural or spiritual impact".

The standard for ensuring that benefit-sharing is effective was outlined by former UN Special Rapporteur James Anaya, who argued that benefit-sharing is a safeguard against any limitation or deprivation of indigenous peoples' property rights. He stressed that "... under a corporate approach based on respect for indigenous rights, benefit sharing must be regarded as a means of complying with a right, and not as a charitable award or favour granted by the company in order to secure social support for the project or minimize potential conflicts" (Anaya, 2010, para. 79). He added that "From the standpoint of indigenous rights, benefit sharing must go beyond restrictive approaches based solely on financial payments which, depending on the specific circumstances, may not be adequate for the communities receiving them" (Anaya, 2010, para. 80).

At the regional level, the IACtHR has affirmed that "The concept of benefit-sharing, which can be found in various international instruments regarding indigenous and tribal peoples' rights, can be said to be inherent to the right of compensation recognized under Article 21(2) of the [American] Convention" (Case of the *Saramaka People*, op. cit., 2007, para. 138). More recently, in the case of the *Inhabitants of La Oroya v. Peru*, the IACtHR examined the issue of state responsibility for the actions of businesses and compensation for the damage caused by them. In this regard, the Court states that companies are primarily responsible for acting responsibly in the activities they carry out and that they must adopt preventive measures to protect the human rights of their workers, and to prevent their actions from causing negative impacts on the communities or the

environment (Case of the *Inhabitants of La Oroya*, op. cit., para. 114). More specifically, the IACtHR indicates that states must ensure that mining companies carry out their operations in accordance with the *UN Guiding Principles on Business and Human Rights and the Framework Principles on Human Rights and the Environment*. Thus, the state must "ensure that mining companies are held responsible for the consequences and provide compensation for environmental damage caused by their operations, in accordance with 'the polluter pays' principle" (Case of the *Inhabitants of La Oroya*, op. cit., para. 352).

1.6. Right to a Healthy Environment and Related Matters

i. Right to a Healthy Environment

Human rights have an important relationship with environmental matters. As stated in the *Framework Principles on Human Rights and the Environment*, "Environmental harm interferes with the enjoyment of human rights, and the exercise of human rights helps to protect the environment and to promote sustainable development" (UN, 2018). In the same vein, the UN General Assembly has recognised the right to a clean, healthy and sustainable environment as a human right (UN, 2022).

The IACtHR has also addressed the relationship between human rights and environmental matters. In Advisory Opinion OC-23/17 it systematised the doctrine it had already developed in this regard:

> Specifically, in cases concerning the territorial rights of indigenous and tribal peoples, the Court has referred to the relationship between a healthy environment and the protection of human rights, considering that these peoples' right to collective ownership is linked to the protection of, and access to, the resources to be found in their territories, because those natural resources are necessary for the very survival, development and continuity of their way of life. The Court has also recognized the close links that exist between the right to a dignified life and the protection of ancestral territory and natural resources (IACtHR, 2017, para. 48).

In the same Advisory Opinion OC-23/17, the IACtHR also stated that "Notwithstanding the State obligation to supervise and monitor activities that could cause significant harm to the environment, the Court takes note that, according to the 'Guiding Principles on Business and Human Rights', business enterprises should respect and protect human rights, and prevent, mitigate and assume responsibility for the adverse human rights impacts of their activities" (IACtHR, 2017, para. 155).

One of the latest relevant developments in the Inter-American system in the area of human and environmental rights is the judgment in the case of the *Inhabitants of La Oroya v. Peru*. The Court emphasised that the right to a healthy environment includes access to clean air and water. This right is protected by the obligation to respect and guarantee, as established in Article 1(1) of the [American] Convention, which implies taking preventive measures to avoid violations. This obligation extends to the private sphere, in order to prevent third parties from violating protected legal rights. It also includes legal, political, administrative and cultural measures to protect human rights, and to ensure that any violations are treated as unlawful acts (Case of the *Inhabitants of La Oroya*, op. cit., para. 125).

In addition, the IACtHR noted that the principle of prevention of environmental harm is part of customary international law (Case of the *Inhabitants of La Oroya*, ibid. para. 126). In this regard, the Court stated:

> [This principle] entails the State's obligation to implement the necessary

> measures to address damage to the environment, taking into account that, owing to its particularities, after the damage has occurred, it will frequently not be possible to restore the previous situation. Based on this principle, States are "bound to use all the means at their disposal to prevent activities under their jurisdiction from causing significant harm to the environment." This obligation must be fulfilled in keeping with the standard of due diligence, which must be appropriate and proportionate to the level of risk of environmental harm. In the case of activities that are known to be more hazardous... this obligation has a higher standard (Case of the *Inhabitants of La Oroya*, idem.).

Another principle recognised in the jurisprudence of the IACtHR is the precautionary principle in environmental matters: "This principle relates to the measures to be taken in cases where there is no scientific certainty about the environmental impact that a particular activity may have (Case of the *Inhabitants of La Oroya*, ibid., para. 127). The Court held that "States must act in accordance with the precautionary principle in order to protect the rights to life and to personal integrity in cases where there are plausible indications that an activity could result in serious and irreversible damage to the environment, even in the absence of scientific certainty" (Case of the *Inhabitants of La Oroya*, idem.).

Finally, the Court emphasised that "the State is obliged to ensure access to information in accordance with the principle of active transparency in environmental matters, so that people can exercise their rights" (Case of the *Inhabitants of La Oroya*, ibid., para. 262). The Court also recalled "the right of individuals to participate actively in public policy decisions that affect the environment, as part of their right to participate in the conduct of public affairs (Case of the *Inhabitants of La Oroya*, idem.). An interesting aspect in this regard is that the IACtHR integrates the *Escazú Agreement* into its reasoning, so that, in establishing the scope of the right to access information and political participation, the Court states that "access to information on activities and projects that could have [an environmental] impact" is a matter of public interest (Case of the *Inhabitants of La Oroya*, ibid. para. 145) and that, in accordance with the principle of active transparency, the state must provide information *ex officio* to interested parties (Case of the *Inhabitants of La Oroya*, ibid, para. 247).

ii. Access to Information, Public Participation and Justice in Environmental Matters

In order to protect the human right to a healthy environment, the states of Latin America and the Caribbean adopted a new binding legal instrument: the *Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean*. Also known as the *Escazú Agreement*, this treaty was adopted within the framework of the UN system. The Agreement entered into force in 2021 and has been ratified to date by 17 states in the region, including Argentina, Bolivia and Chile. In its Preamble it states that "broad public participation and access to information and judicial and administrative proceedings [are] essential to the promotion of sustainable development; and encourage[s] action at the regional, national, subnational and local levels to promote access to environmental information, public participation in the environmental decision-making process and access to justice in environmental matters..." (ECLAC, 2018).

Of particular importance in relation to indigenous peoples and other vulnerable groups, such as those affected by the lithium industry in ABC, is Article 5(3) of the Agreement:

> Each Party shall facilitate access to environmental information for persons or groups in vulnerable situations, establishing procedures for the provision of assistance, from the formulation of requests through to the delivery of the information, taking into account their conditions and specificities, for the purpose of promoting access and participation under equal conditions.

Likewise, Article 7(14) provides:

> The public authorities shall make efforts to identify and support persons or groups in vulnerable situations in order to engage them in an active, timely and effective manner in participation mechanisms.

Article 8(1) is also relevant. It provides that "Each Party shall guarantee the right of access to justice in environmental matters in accordance with the guarantees of due process". Article 8(3)(g) states that to guarantee the right of access to justice in environmental matters, each Party shall have "mechanisms for redress, where applicable, such as restitution to the condition prior to the damage, restoration, compensation or payment of a financial penalty, satisfaction, guarantees of non-repetition, assistance for affected persons and financial instruments to support redress".

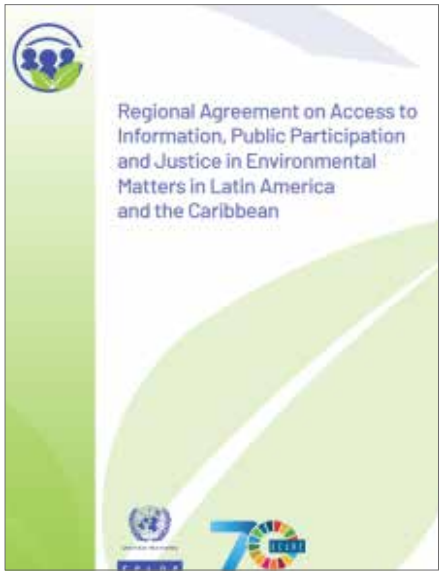
Finally, and also of great relevance to the situation addressed in this report, are the provisions under Article 9 of the Agreement that, recognising the contribution made by human rights defenders to the protection of the environment and sustainable development, establish the following obligations for states parties:

1: ...guarantee a safe and enabling environment for persons, groups and organizations that promote and defend human rights in environmental matters, so that they are able to act free from threat, restriction and insecurity.

2: ...take adequate and effective measures to recognize, protect and promote all the rights of human rights defenders in environmental matters, including their right to life, personal integrity, freedom of opinion and expression, peaceful assembly and association, and free movement, as well as their ability to exercise their access rights, taking into account its international obligations in the field of human rights, its constitutional principles and the basic concepts of its legal system.

3: ...take appropriate, effective and timely measures to prevent, investigate and punish attacks, threats or intimidations that human rights defenders in environmental matters may suffer while exercising the rights set out in the present Agreement.

The duty of states parties to this Agreement is expressed in Article 13, which provides that they undertake to"...provide the resources for national activities that are needed to fulfil the obligations derived from the present Agreement".



Cover page of the Escazú Agreement.
In https://www.cepal.org/en/escazuagreement

2. Hierarchy of International Human Rights Standards in ABC Domestic Laws

It is relevant to address the hierarchy of human rights treaties in the states that are the focus of this research.

The *Constitution of Argentina*, as amended in 1994, grants constitutional status to a series of international human rights treaties, which means that these instruments enjoy equal status with the Constitution itself. These treaties are complementary to the rights and freedoms recognised in the Constitution, broadening their scope. Furthermore, the Constitution establishes the obligation of the Argentine legislature to guarantee the enforcement of these rights, with special emphasis on vulnerable groups such as children, adolescents, women, the elderly and persons with disabilities. Finally, the Constitution assigns the Ombudsman the task of protecting and defending human rights and other guarantees set forth in this legal framework.

The *Political Constitution of the State of Bolivia* grants international human rights treaties a special status within the Bolivian legal system. According to Article 13, ratified treaties that recognise human rights prevail over domestic legislation, even in exceptional situations. According to Article 256, treaties establishing more favourable rights than those in the Constitution have preferential application, reinforcing their priority status. Furthermore, Article 410 establishes the Constitution as the supreme norm of the country, but incorporates these treaties into the so-called *bloque de constitucionalidad* ("constitutional bloc"), consolidating their primacy in the interpretation and application of rights in Bolivia.

In the *Chilean Constitution*, international treaties, including human rights treaties, hold a special position within the legal system, although their hierarchical status is not expressly defined. Article 5 of the Constitution states that "The exercise of sovereignty recognises as a limitation the respect for essential rights that emanate from human nature, guaranteed by this Constitution and by the international treaties ratified by Chile and in force". This implies that ratified human rights treaties play an important role in the protection of fundamental rights and must be considered in the interpretation and application of these rights.

With regard to the effects of the judgments of the IACtHR for the states that are part of the Inter-American system, it is important to consider the doctrine of control of conventionality. The concept of "control of conventionality" refers to the obligation of states to ensure that their domestic norms are in conformity with the American Convention and the interpretation given to it by the IACtHR. This control must be exercised by all national authorities, including judges and other judicial bodies, *ex officio*, to ensure that domestic laws and decisions align with international human rights standards. The Court's judgments, where the state has been a party to a case, are binding on all state institutions. Moreover, even when the state was not a party to a case, the authorities remain obliged to apply the Court's precedents insofar as they are relevant to compliance with the Convention. This reinforces the value of the IACtHR's judgments as an indispensable element of the interpretation and application of human rights throughout the Inter-American system.

3. Voluntary Sustainability Standards and Human Rights: Labels and Certifications for Lithium in ABC

Finally, it is worth mentioning the various voluntary sustainability standards (VSS) – such as labels and certifications – to which many lithium-producing companies have subscribed. This section examines these VSS and the current trends in their use by companies. It analyses how these initiatives, labels and certifications incorporate relevant human rights and environmental matters. It then outlines the VSS implemented by the companies relevant to this report and their specific strengths and weaknesses with regard to human rights and environmental issues.

3.1. Characteristics of VSS and Current Trends

Specialised literature on certifications refers to VSS "as an umbrella term for various sustainability instruments, including certifications" and labels (Araya & Correa, 2023; Sanguinetti, 2023). According to the UN Forum on Sustainable Standards, VSS are guidelines, standards and measures that producers, traders, manufacturers, retailers or service providers must follow "so that the things they make, grow or do don't hurt people and the environment" (UNFSS, n.d.). The use of sustainability certifications and labels has expanded in recent years and they are considered useful instruments for interested individuals and institutions to obtain information on the performance of a given company in such critical dimensions as environmental, social and corporate governance (Sanguinetti, 2023).

Regarding the model for certifications and labels, the following steps can be identified (Araya & Correa, 2023, p. 7):

First, the standard and its measurement instruments must be created. The accrediting organisation – which can be a private entity, such as NGOs, companies or associations, or a public entity, such as international organisations, national or sub-national governments – defines the sustainability standards that a given company or product should meet. To determine the level of compliance with these standards, the accreditor must design various measures and indicators.

Second, a company, organisation or product must be certified as meeting the accreditor's standards. This may be done by the accreditor itself ("second-party audit") or by an external certification company ("third-party audit").

Third, the conditions of the company, organisation, or product seeking certification are assessed. If the accreditor's standards are met, the certification and corresponding label are awarded.

A notable trend regarding certifications is their proliferation. Since the 1990s, there has been a significant expansion in the use of VSS (Araya & Correa, 2023). In Latin America and the Caribbean, the countries examined in this report rank in the upper-mid range in terms of the presence of certifications in their jurisdictions. In a ranking covering 34 countries, Argentina is in fifth position, Chile is sixth, and Bolivia is eleventh (Araya & Correa, 2023).

3.2. Problems with Certifications

The proliferation of labels and certifications comes with problems and drawbacks. The large number of VSSs can lead to confusion for individuals trying to understand the substantive scope of certifications and the type of information each one covers. Moreover, reports on certifications and labels, as well

as company sustainability reports, are often lengthy and require significant technical knowledge to fully comprehend. This hinders the possibility for rights holders, affected communities, and other stakeholders to obtain high quality, accessible and understandable information. The complexity of information on labels and certifications can create fertile ground for poor corporate practices such as greenwashing and other forms of corporate image laundering.

According to the Institute for Multi-Stakeholder Initiative Integrity (MSI Integrity), these types of voluntary measures "are not effective tools for holding corporations accountable for abuses, protecting rights holders against human rights violations, or providing survivors and victims with access to remedy" (MSI Integrity, 2020, p. 4). Consequently, it is necessary to rethink the role of these types of measures. The presence of a VSS should not be a substitute for the state's duty to protect human rights through effective regulation, supervision, and monitoring of businesses (MSI Integrity, 2020). According to MSI Integrity (2020), the presence of a label or certification should, on the contrary, put governments, as well as MSIs and their supporters, on notice that a governance gap exists, and that they need to supplement the voluntary efforts of that MSI with mandatory measures at local, national, and international levels.

The MSI Integrity 2020 report identifies two core features of VSS that prevent them from effectively protecting human rights. Firstly, they are not rights-holder centric. They "employ a top-down approach to addressing human rights concerns, which fails to center the needs, desires, or voices of rights holders" (MSI Integrity, 2020, p. 5). Secondly, they "have not fundamentally restricted corporate power or addressed the power imbalances that drive abuse" (MSI Integrity, 2020, p. 5).

V. Regulatory Frameworks and Public Policies Applicable to Lithium Development in ABC

President of Chile, Gabriel Boric, presents the National Strategy with representatives of Lickanantay, Quechua and Colla communities in San Pedro de Atacama, 23 June 2023.
Photo : Office of the President of Chile. In https://prensa.presidencia.cl/comunicado.aspx?id=236319

This chapter addresses the regulatory frameworks applicable to lithium development in Argentina, Bolivia and Chile (ABC). For this purpose, the constitutional and legal frameworks referring to the legal status of minerals in general and lithium in particular are analysed, as well as those referring to human rights, in particular the rights of indigenous peoples and the environment in the three countries, which must be considered in lithium development. Given the federal nature of the Argentine state, the regulatory frameworks applicable in the three provinces where lithium is extracted are analysed: Catamarca, Jujuy and Salta. This chapter also describes and analyses the policies, plans and projects that have been promoted in the past by these countries, and by the provinces in the case of Argentina, in relation to lithium, paying special attention to those policies that are currently being promoted in these contexts to encourage the extraction of this mineral given its growing value and demand in international markets.

1. Argentina

The Argentine Republic is a federal country, which implies that obligations, responsibilities and powers over different matters are distributed between the provinces and the federal government. The same applies to issues relevant to the lithium industry and its relationship with human rights impacts.

Regulation on human rights, indigenous peoples' rights and the environment has a general framework at the federal level, which also stems from the incorporation of various international conventions and treaties on these matters, as discussed in the previous chapter. In addition, there are provincial regulations that clarify and give substance to the federal regulations in specific institutions at this level. This has led to inconsistencies or even contradictions between the spirit of the laws and the measures taken by federal and provincial governments. At times, such as the present, there are alignments between the perspectives of federal and provincial administrations. When this happens, the result is often a weakening of protections and safeguards, as these alignments generally occur when the federal government relinquishes its task of monitoring the provinces to ensure that they operate on a common basis of respect for the rights enshrined in the Constitution and in federal laws.

Thus, although at the federal level Argentina has extensive legislation recognising rights, there are many obstacles to its implementation. The 1994 reform of the National Constitution recognised the ethnic and cultural pre-existence of indigenous peoples, the ratification of *ILO Convention No. 169* and the incorporation of international human rights law into domestic law, including the *ILO Convention* and the *UNDRIP*. The chapter on new rights and guarantees, includes Article 41 on environmental rights, and Article 75(17) on the pre-existence of indigenous peoples and the right to communal property. A process of recognition and expansion of environmental rights and the rights of indigenous peoples had been underway since 1992 and continued until 2007. In 2018, the *Escazú Agreement* was signed. It was approved in 2021 by Law No. 27,566, which – as explained in Chapter IV of this report – contains specific provisions on the protection of human rights defenders and access to information in environmental matters.

This legislation provided for advances in the recognition of environmental rights as collective rights, establishing minimum budgets in terms of environmental care, territorial planning of native forests, access to public environmental information, and recognition of the collective right to territory of indigenous peoples, legal personality, intercultural education and the pre-existence

of peoples to the national state. However, this has barely been incorporated in doctrine and jurisprudence or by provincial governments and judicial officials, rooted in traditional legal education.

The legislation recognising rights is thus resisted by most of those charged with its application, so that daily practice shows an anomalous pre-eminence of lower-ranking norms (laws or administrative regulations), which maintain the orientation repealed by the 1994 Constitution and treaties. For example, despite the terms of the Constitution, and a ruling against Argentina by the IACtHR (IACtHR, 2020), the Argentine provinces still do not regulate indigenous community property in accordance with the appropriate standards. In 2022, the governors of the northern mining provinces (through their senators and members of parliament) blocked a wetlands protection law that provided, among other issues, for greater levels of control over the exploitation of the salt flats where lithium is found (Caminos, M., *elDiarioAr*, 2022).

At the same time, Article 124 of the Constitution states that "the provinces have the original dominion over the natural resources existing in their territory", which means that the main decisions on mining depend on the provincial governments. However, national regulations have served in different historical contexts as a way of establishing general guidelines. The Mining Code, which determines the rights and obligations of the state and individuals and the procedures to enforce both the exercise and protection of rights before the relevant mining authorities, dates back to 1886 (although it has been amended several times). In 1993, Law No. 24,196 on Mining Investments was enacted (Government of Argentina, 1993), which established the policy position of promoting an extractive model rooted in mining, as part of a series of reforms to "open" the economy to foreign investment. This law has granted significant tax advantages to mining companies over the last 30 years.

Even more regressive in terms of recognition of rights is the *Régimen de Incentivo de Grandes Inversiones* (Large Investment Incentive Regime – RIGI), approved in June 2024 by the National Congress. With the aim of guaranteeing stability and profitability for various economic sectors (including mining, hydrocarbons, forestry and tourism), this regulation ignores any kind of environmental safeguards and the rights of communities in the territories. Article 165 of the regime was challenged for violating the republican system and the division of powers, as it stipulates that any rule or de facto measure that limits, hinders or distorts the provisions of the RIGI, whether by the nation or the provinces that have adhered to the regime, will be null and void, adding that the competent justice system must immediately prevent its application. This legislation establishes a sort of supra-norm that aims to deactivate others that contradict it.

Cover page of the English language dissemination of the RIGI Law by the Ministry of Economy and the Secretariat for Mining of Argentina. In https://www.argentina.gob.ar/sites/default/files/tax_benefits_in_argentina_rigi_general_resolution_no._1020_1_1.pdf

In terms of human rights and their relation to business activity, the RIGI could jeopardise the necessary prevention and remediation of potential damages caused by the activity.

This regime exonerates companies from any responsibility for potential damage caused. Moreover, there is no provision on corporate due diligence to commit projects in relation to the prevention and possible remediation of the human rights damages that they may cause.

While at the federal level strategies to deploy economic incentives and neutralise environmental and rights safeguards are employed, the concrete granting of permits and setting up of exploitation projects depend on the provinces. In the case of lithium, the three provinces with the highest concentration of the mineral (Catamarca, Jujuy and Salta) signed the *Interprovincial Treaty for the Creation of the Lithium Mining Region* in 2021. This instrument established a "Lithium Board" (General Secretariat of the Government of Salta, 2021). This space has functioned as a coordination forum and public communication device, and has yet to develop substantive lines of work. A fourth province, La Rioja, has taken a different path to the provinces composing the "Lithium Board", declaring lithium to be a resource "of public interest" and suspending all mining concessions for this mineral *(Ecojournal*, 2023).

Another interjurisdictional mechanism is the *Interprovincial Agreement for the Integrated Management of the Salinas Grandes Water Basin*, signed between the governments of Jujuy and Salta in November 2023 (SAIJ, n.d.). This is an instrument specifically aimed at the management of the Salinas Grandes basin, one of the areas of most conflict and which has offered the greatest resistance to the advances of companies seeking to exploit lithium. This agreement establishes the creation of the Inter-jurisdictional Commission for the Integrated Environmental Management of the Salinas Grandes Water Basin, which will be made up of provincial authorities responsible for environmental issues, water, mining and indigenous communities. This type of approach had been requested through litigation by the *Mesa de Comunidades de Salinas Grandes* (Board of the Communities of Salinas Grandes), supported by the organisation *Fundación Ambiente y Recursos Naturales* (FARN). However, the institutions effectively created do not provide for mechanisms to guarantee free, prior and informed consultation or the participation of the communities that requested it.

The following is an analysis of the particularities of the regulatory framework and public policy on lithium and human rights in the three provinces with the greatest lithium development in Argentina.

1.1. Province of Catamarca

Catamarca is one of the first provinces to legislate on mining activity, even before the enactment of the National Mining Code. The first mining regulations date back to 1853, when Law No. 34 was passed, declaring all lime kilns, whether public or private, open to claims for exploration.

During the 1990s, in line with national policy, a series of measures were adopted to promote investment. In 1992, the *Consejo Asesor de la Minería* (Mining Advisory Council) was created, and the province adhered to the Mining Investment Law. In 1994, under Law No. 4,780, the contract signed in 1991 between the Provincial Executive Authority, the General Directorate of Military Manufacturing and FMC Corporation-Lithium Division, FMC Argentina S.A.C.I.F. and Minera del Altiplano S.A. was approved. This contract was the entry point for North American capital for lithium exploration in the Salar del Hombre Muerto, the first large-scale lithium project in Argentina.

In 2012, *Catamarca Minera y Energética Sociedad del Estado* (CAMYEN S.E.) was created by Law No. 5,354. With the creation of this state-owned enterprise, the province aimed to take part in the mining

activity through an entity that would participate in the different stages of the process. Between 2019 and 2020, a series of changes took place, including the repeal of the 2004 Mining Royalties Law, through Decree 672/2020, and the enactment of a new law, No. 5,642, which establishes a mechanism for the distribution of mining royalties. Although these modifications introduce forms of distribution according to certain transparency criteria and promote departmental autonomy, in line with the National Constitution, they do not include provisions for general public participation or the rights of indigenous communities.

Likewise, the Catamarca Mining Procedure Code – a recent piece of legislation (Law No. 5,682 of 2020) – contains some novel provisions on environmental protection, conservation, education and responsibility, but does not include provisions that reflect an intercultural perspective. In procedures for requesting authorisation for exploration or exploitation, indigenous communities are not recognised as rights-holders or as entitled or legitimate to take part.

1.2. Province of Jujuy

Legislation on mining activity was also introduced at the end of the 19th century, but a key milestone occurred in 1965, with the creation of the Mining Administrative Court. Today, this institution is still in charge of granting exploration permits and mining concessions. This court operates under the executive branch, within the Ministry of Productive Development, and its jurisdiction covers the entire territory of the province.

In recent years, driven by growing interest in lithium, a series of political and regulatory reforms have been adopted that tend to concentrate greater decision-making power in the provincial government. In 2011, lithium reserves were declared a strategic resource for the productive development and growth of the province (Government of Jujuy, 2011). That same year, the state-owned enterprise *Jujuy Energía y Minería Sociedad del Estado* (JEMSE) was created, which has a minority stake in the various lithium mining projects in the province. In 2012, the Secretariat of Mines and Hydrocarbons was created as the enforcement body of mining legislation, responsible for planning, executing and promoting mining development in the province.

In January 2023, the Provincial Executive adopted a regulatory decree (7,751/23) (Government of Jujuy, 2023) in relation to the Provincial Environmental Law (Law No. 5,063) which granted greater powers to the Secretariat of Mining. This decree made the processes of prior consultation more flexible and gave various departments of the provincial government (Secretariat of Mining, Secretariat of Indigenous Peoples) the authority to decide, in practice, which communities are consulted, and which are excluded from such processes.

A few months later, in June 2023, a partial reform of the provincial constitution was debated and approved in record time, triggering significant social unrest due to its pro-extractivist content and denial of the rights of indigenous peoples and social protest, as discussed in detail in Chapter VI.

The constitutional reform introduced changes to the regulation of public lands, water management and environmental conservation, which worsened the lack of protection and legal insecurity of Jujuy's indigenous peoples over their ancestral territories. By weakening the constitutional protection of indigenous rights, the provincial government behind the reform aimed to facilitate the installation of extractive industries, especially lithium mining. The new constitutional articles prioritise the productive exploitation of the province's public lands and water, establishing a regulatory framework conducive to

the deployment of extractive projects on indigenous territories, the massive exploitation of water for lithium production, and mining activities in ecosystems of special environmental importance such as the high Andean wetlands.

In environmental matters, Article 22 of the constitutional reform recognises the right of all inhabitants of the province to enjoy a healthy and balanced environment, as well as the duty to care for and protect it. However, it removes the obligation of the provincial government, contained in the previous version of the Constitution, to "eliminate or avoid, through effective monitoring and surveillance, all elements that may cause pollution of the air, water, soil and, in general, anything that in any way affects or could affect the environment of its inhabitants and the community". The absence of this provision in the new version implies that the state is no longer required to intervene to prevent damage, and only establishes subsequent obligations for remediation. This modification goes against the National Constitution and the General Environmental Law (a national law).

Cover page of the Constitution text of the province of Jujuy, amended in 2023.

The province of Jujuy is notable for having developed, alongside its mining and environmental regulations, civil, felony and misdemeanour criminal regulations aimed at neutralising conflicts that could affect the establishment of companies, particularly those related to indigenous peoples. The long-standing resistance of communities in the Salinas Grandes region partly contributed to these decisions. The province also created an institutional framework for indigenous affairs which, together with the Secretariat of Mining, is responsible for managing relations with the communities. The Secretariat of Indigenous Peoples is seen by indigenous communities as a body that gives legality to processes that are merely bureaucratic and do not substantively comply with minimum standards of participation, consultation and environmental impact assessment.

1.3. Province of Salta

Salta has an extensive set of regulations governing mining activity, generally aligned with national regulations, developed between the 1950s and 1990s. However, in recent years, significant modifications have been introduced due to the increasing global interest in minerals that are critical for the global energy transition.

In 2019, Law No. 8,164 on mining promotion was passed, followed by Law No. 8,229 in 2021, which regulates mining royalties. The former focuses on two points: compensation for infrastructure works and the hiring of local suppliers and labour. Regarding compensation, it establishes that it will be determined by a commission that includes the participation of a representative of the indigenous communities. However, it says nothing about the mechanisms to be followed to guarantee a process of free, prior and informed consultation.

The regulatory decree of this law (Government of Salta, n.d.) indicates that the representative must come from "legally constituted" communities, duly registered by the Secretariat of Indigenous Affairs, thereby leaving the decision of who may

participate in the hands of the state. It also establishes that they must be communities from the place where the project is located, which also makes it possible to reduce the number of communities consulted (since those affected by a project are not necessarily limited to those in the place where the project is located). Furthermore, nothing is said about the notification mechanisms or the timeframes for this participation to be genuine and in accordance with the law.

In December 2023, the Mining Procedure Code was amended to speed up the approval of projects in the province (Government of Salta, 2023). The acceleration of the evaluation and authorisation of mining projects by the Secretariat of Mining and the Mining Court affects consultation processes when projects are developed in community territories.

As in Catamarca and Jujuy, the province of Salta also created a state-owned enterprise to have a presence in extractive projects. *La Casualidad* S.A. was established in 1985, named after sulphur processing mine located in La Puna. In 2008 it was restructured and renamed *Recursos Energéticos y Mineros de Salta*, S.A. (REMSa S.A.). It is a public limited company with majority state participation, responsible for managing the energy and mining resources of the province of Salta.

2. Bolivia

2.1. Constitutional Framework

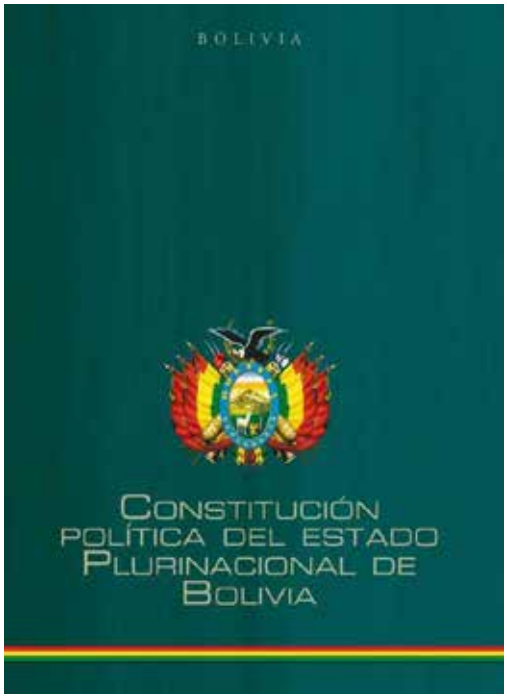
Under the *2009 Political Constitution of the State*, Bolivia is recognised as a "Unitary Social State of Plurinational Community-Based Law, free, independent, sovereign, democratic, intercultural, decentralised and with autonomies" (Constituent Assembly of Bolivia, 2009, Article 1). The Constitution recognises a series of rights and obligations related to participation in environmental management, consultation, access to public information, participation in the formulation of public policies, social oversight, among many other gains achieved through social struggle, the result of a long process of social mobilisation and constitutional lobbying between 2006 and 2009 (Schavelzon, 2009).

These rights include several rights linked to the quality of a healthy environment and the recognition of the rights of indigenous peoples and society as a whole, in relation to decisions about this environment and full political participation:

• Recognition of ancestral territories, their institutions, and their self-determination (Art. 2).
• Right to a healthy, protected and balanced environment (Art. 33).
• Natural heritage is of public interest and of a strategic nature (Art. 346).
• Natural resources are of a strategic nature and of public interest (Arts 348-II, 369-II).
• Social, cultural and environmental function of water (Art. 373).
• Guarantee the responsible use of natural resources (Art. 9) and the preservation of groundwater and wetlands (Art. 374).
• Guarantee the right to communication and the right to information (Art. 106).
• Guarantee participation and social oversight (Art. 309-5).
• Direct and participatory democracy, including referendum, citizen legislative initiative, assembly, councils and prior consultation (Art. 11).
• Right to water (Art. 16-1); Water cannot be subject to concession or privatisation (Art. 20-3).

• Right to access, interpret, analyse and freely communicate information (Art. 21-6).
• Participation includes oversight of actions of public officials (Art. 26-5).
• Participation in the design and oversight of public policies (Art. 241).
• Participation in environmental management and right to be consulted and informed in advance on decisions that may affect the quality of the environment (Art. 343).
• Indigenous Native Peasant Nations and Peoples (NPIOC) have the right to self-determination and territoriality (Art. 30-II-4) and to mandatory prior consultation, carried out by the state, in good faith and through agreement (Art. 30-II-15).
• Right to take legal action in defence of environmental rights (Art. 34).
• Right to file an *Accion Popular* (Popular Action), against acts that violate rights related to heritage and the environment (Art. 135).

Given the elements highlighted above, the Bolivian Constitution is an interesting example of an advanced legal framework. It was drafted and approved in a context marked by the decline of the neoliberal model and the emergence of progressive governments in the region, alongside the Ecuadorian Constitution (Fernández, 2012).



Cover page of the 2009 Political Constitution of Bolivia.

2.2. Mining Sector Framework and Lithium

Although the Plurinational State of Bolivia has an extensive environmental regulatory and instrumental framework, it does not yet have a specific environmental regulation for the non-renewable energy sector, the mining of evaporite resources, or the lithium industry or mining. However, Bolivia has a general framework established by the Mining and Metallurgy Law (Plurinational State of Bolivia, 2014), which recognises certain principles, responsibilities and powers in environmental matters, as well as more specific definitions and restrictions, such as the obligation to comply with environmental regulations, certain obligations of mining rights holders regarding safeguards, and some preventive measures, among others.

With regard to human rights and the scope of social and environmental safeguards, it is important to start with the definition of *Reserva Fiscal* (Public Reserve), a legal measure granting the state exclusive rights, usually through direct administration by the

central government, over access, control and use of natural resources. The Public Reserve mechanism has a precedent in 2003, prior to the Plurinational State, when Bolivia decided to declare the Salar de Uyuni Public Reserve through a specific law (Plurinational State of Bolivia, 2003). In 2007, in the period of the Plurinational State, prior to the Constituent Assembly, Bolivia extended the Public Reserve to the entire national territory (Plurinational State of Bolivia, 2007).

Seven years later, under the new Constitution, the Mining and Metallurgy Law declared lagoons and salt flats as "areas reserved for the state" (Article 26). The declaration of a Public Reserve automatically granted exclusive state ownership over a specified territory, setting aside any other private interest or user. This is constitutionally supported by Article 350 of the Constitution, which states: "Any title granted over a Public Reserve shall be null and void, except when expressly authorised for reasons of state necessity and public utility, in accordance with the law." Likewise, in the case of strategic natural resources, which include minerals and water sources, this control, enabled through the Public Reserve mechanism, is exercised through the exclusive authority of the central level of the state (Article 298-2-4 of the Constitution). Finally, the Mining and Metallurgy Law empowers the Executive Branch to declare a Mining Public Reserve, by Supreme Decree, over "specified areas of the national territory, in order to carry out prospecting, exploration and evaluation activities, to determine the mineralogical potential of the reserve area and identify new areas of interest for mining, respecting pre-established and acquired rights" (Mining and Metallurgy Law No. 535, Article 24).

Although legal certainty supports public investments in a Public Reserve, this does not automatically exempt the state from its social and environmental safeguard obligations, particularly regarding indigenous peoples. More specifically, the Mining and Metallurgy Law provides for the obligation of the state, through the *Autoridad Jurisdiccional Administrativa Minera* (Jurisdictional Administrative Mining Authority – AJAM), to initiate the process of Free, Prior and Informed Consultation (FPIC) and the obligation of the mining rights holder to include this consultation as part of their rights application.[27] In contrast, mining right holders have the right to use natural waters that flow in the mining area, with almost no restrictions or permissible limits. Moreover, there is no specific technical regulation to guide mining management in high Andean wetlands, where the salt flats are located.

2.3. Social and Environmental Safeguards

Free, Prior and Informed Consultation

In the Plurinational State of Bolivia, national regulations recognise two mechanisms for social participation in decision-making on Activities, Works and Projects for the exploitation of mining resources. First, the *Consulta Pública* (Public Consultation) is part of the process of preparing the *Estudio de Evaluación de Impacto Ambiental* (Environmental Impact Assessment Study – EEIA), recognised under Law No. 1,333 of 1992 on the Environment. It requires the technical team in charge of preparing the EEIA and the competent authority to consult with the affected population, allowing them to make observations and suggestions for the implementation of Activities, Works and Projects, during the

27 The AJAM is an autonomous entity, with legal personality and its own assets, under the Ministry of Mining and Metallurgy. It is responsible for the management, administration, registration, control and supervision of mining activity throughout the territory of the Plurinational State of Bolivia (see https://www.autoridadminera.gob.bo/).

impact identification phase.[28] Second, prior consultation in the context of Free, Prior and Informed Consent (FPIC), also known as *Free, Prior and Informed Consultation* is mandatory under *ILO Convention No. 169*, ratified by Bolivia in 1991.[29] It provides for the effective participation of the populations located within *Territorios Indígena Originario Campesinos* (Indigenous Native Peasant Territories – TIOCs).[30] In addition to *ILO Convention No. 169*, Bolivia has also adhered to the *UNDRIP*.[31]

In the mining sector, the FPIC process is governed by the provisions of the Mining and Metallurgy Law, which establishes a procedure and an institutional framework to make this consultation operational.[32] In practice, it is carried out during the approval process for Administrative Mining Contracts, which is part of the procedure for granting mining rights. Such consultation is mandatory and is conducted only once. In the case of lithium-related mining operations, there is no specific provision to exempt the state from carrying out this consultation. However, state-owned enterprises and public officials interpret the "Public Reserve" as empowering them or exempting them from this procedure.

Although FPIC is part of the process for granting mining rights, the existence of indigenous territories obliges the state to make this process effective, as this right is recognised in the Political Constitution of the State. As mentioned above, the Indigenous Native Peasant Nations and Peoples have the right to self-determination and territoriality (Article 30-II-4) and to mandatory prior consultation, carried out by the state, in good faith and in agreement (Article 30-II-15).

At the sectoral level, the Mining and Metallurgy Law defines prior consultation as:

> The process... of intracultural and intercultural dialogue, in agreement and good faith, free and informed, which involves a procedure implemented in successive stages, between the state, with the participation of the requesting mining production actor and the subject of the consultation, respecting their own culture, language, institutions, norms and procedures, with the aim of reaching agreements to proceed with the request to sign the corresponding administrative mining contract and thereby contribute to the *Vivir Bien* (well-being) of the Bolivian people, in the framework of sustainable development of mining activities (Article 208).

According to the Mining and Metallurgy Law, the AJAM is in charge of carrying out this procedure, within a maximum period of four months. The AJAM is the public body responsible for monitoring and supervision

28 The outcome of this procedure is a meeting record setting out the observations made by the consulted population on the project. Consultations are conducted through public meetings convened by the environmental authority.

29 Convention No. 169, adopted in 1989 by the ILO, was ratified by the Plurinational State of Bolivia through Law No. 1,257 of 11 July 1991.

30 The *Territorios Indígena Originario Campesinos* (TIOCs) were formerly known as "*Tierras Comunitarias de Origen*" (Community Lands of Origin – TCOs). Under Supreme Decree No. 727 of 6 December 2010, the TCOs were renamed TIOCs. Article 2 of this Decree states: "The Indigenous Native Peasant Nations and Peoples shall specifically name their Indigenous Native Peasant Territories (TIOCs), according to their own norms and procedures, in keeping with the cultural identity of each people."

31 Ratified by Bolivia through Law No. 3,760 of 7 November 2007.

32 The procedure is covered by the Mining and Metallurgy Law No. 535 (2014), and the *Reglamento para la Observación y el Acompañamiento en Procesos de Consulta Previa* (Regulation on Observation and Accompaniment of Prior Consultation Processes) – Resolution of the Plenary Chamber of the *Tribunal Supremo Electoral* (Supreme Electoral Tribunal – TSE) No. 118/2015 (26 October 2015).

of mining activity in Bolivia. According to this regulatory framework, the FPIC process involves at least four phases:

a. Establishment of preconditions: this involves the definition of the mining right, formalisation of the application for the Administrative Mining Contract, presentation of a work plan and, above all, the definition of the subject of consultation. This last condition is particularly relevant, as it determines the characteristics of the ancestral population, the belonging to an Indigenous Native Peasant Nation or People and whether there is indeed collective management of land and territory.[33]

b. Preparatory phase: in which a Technical Reasonableness Report of the Work Plan is presented, prepared by the *Servicio Geológico Minero* (Geological Mining Service –SERGEOMIN), which must be approved without observations in order to move on to the next phase.

c. Deliberative phase: in which a meeting is convened between the community and the mining production actor, during which the collective rights affected and the remediation mechanisms, which should be proportional to the impact, are defined. As this is a deliberative space, the regulation requires a maximum of three meetings.

d. Mediation and final resolution phase: this final stage has the objective of approving the agreement between the community and the mining production actor, through a Ministerial Resolution, which requires, in addition to the record of the agreement signed by the parties, an accompanying report from the Electoral Body.[34]

It is possible that lithium mining operations may not directly affect a TIOC, in which case it could be argued that there is no need for FPIC. However, the Inter-American human rights system establishes that, in absence of such a condition does not prevent a given area from being considered *a social subject of prior consultation*. This is because "as established in IACHR jurisprudence, lack of legal personality, territorial or demarcation conflicts, or agrarian title are responsibilities and obligations of the state, not of indigenous communities or peoples" (Mercado, 2021).

Rights to Self-determination, Land and Territory

Bolivia incorporated and recognised the rights to land and territory as a result of the first "Indigenous March for Territory and Dignity" in 1990, whose main demand was the legal recognition of the territories and rights of indigenous peoples. In addition, the ratification of *ILO Convention No. 169* in 1991 provided a legal framework for the claims and gains of indigenous native peoples. The first territories, recognised as TCOs, were part of the so-called "lowlands" in Bolivia, including the Sirionó Indigenous Territory (Supreme Decree 22609/1990), the Isiboro Sécure Indigenous Territory and National Park (Supreme Decree 22610/1990), the Multiethnic Indigenous Territory I

33 The Mining and Metallurgy Law (Article 209) establishes that the populations that are considered "subjects of prior consultation" are those that meet the following conditions: i) Pre-colonial existence and ancestral domain over the territory; ii) Conservation of their cultural patterns, ways of life, their own institutions (social, economic, cultural and political institutions that represent them), and being distinct from other sectors of the population; iii) Identification as part of a nation or people that currently maintains a relationship with that collectivity; and iv) Access to and collective management of their lands and territories.

34 During the meetings of the deliberative phase, the Plurinational Electoral Body, through the *Servicio Intercultural de Fortalecimiento Democrático* (Intercultural Department for Democratic Reinforcement – SIFDE), must participate as an observer and accompanying body.

(Supreme Decree 22611/1990) and the T'simane Indigenous Territory (Supreme Decree 22611/1990) (*Fundación Tierra,* 2011; Wanderley, 2017; CEJIS, 2024).

Later, as a consequence of these first gains achieved through social struggles, the 1994 Political Constitution of the State recognised the multicultural and pluri-ethnic character of the Bolivian nation, paradoxically, in a period marked by neoliberal policies. Nevertheless, in 1996, indigenous peoples mobilised for a second time, resulting in the enactment of Law No. 1,715 of the National Agrarian Reform Department, which established the regularisation procedures and agrarian processes for the titling of TCOs, leading to the admission of territorial claims (*Fundación Tierra*, 2011).

The 2009 Political Constitution of the State expanded the recognition of the rights of indigenous peoples, within the framework of the category of Indigenous Native Peasant Nations and Peoples (NPIOC) and the Afro-Bolivian people. The Constitution lays out principles on the management of nature and indigenous territories that underpin social participation mechanisms and are directly linked to the case of lithium. As mentioned above, the most important of these are:

- Recognition of ancestral territories, their institutions and self-determination (Article 2).
- Recognition of the right of indigenous native peasant peoples to the protection of their sacred sites, to live in a healthy environment, and to share in the benefits of the exploitation of natural resources in their territories (Article 30)
- Everyone has the right to a healthy, protected and balanced environment (Article 33).
- Recognition of indigenous native peasant autonomy, which consists of self-government as an exercise of self-determination (Article 289).
- Natural heritage (Article 346) and natural resources (Articles 348-2, 369-2) are of public interest and of a strategic nature.
- Recognition of water as having a social, cultural and environmental function (Article 373).

As a consequence of the rights to self-determination and participation in decisions affecting their territories, the Constitution provides that in the case of the "exploitation" of non-renewable natural resources in the territory they inhabit, the Indigenous Native Peasant Nations and Peoples have the right to "mandatory prior consultation carried out by the state, in good faith and in agreement", through "appropriate procedures, in particular through their institutions, whenever legislative or administrative measures are envisaged that may affect them" (Political Constitution of the State, Article 30-II-15).

Right to Benefit-Sharing and Compensation for Harm

The right of Indigenous Native Peasant Nations and Peoples to benefit-sharing is recognised in the context of the right to consultation. Article 352 of the Constitution provides: "The exploitation of natural resources in a determined territory shall be subject to a process of consultation with the affected population, convened by the state, which shall be free, prior and informed." Article 403-1 of the Constitution recognises the integrity of indigenous native peasant territory, which includes "the right... to prior and informed consultation [and] to participation in the benefits from the exploitation of non-renewable natural resources found in their territories" (Political Constitution of the State, 2009, cited in Mercado, 2021).

The right to compensation for harm is effectively addressed within the deliberation phase of the FPIC process, during which remediation mechanisms are defined, which should be proportional to the impact. However, beyond the existence of this process, mechanisms for participation in certain benefits, which are usually framed or perceived as compensation mechanisms for local populations, are established in the context of obtaining a social licence. Nevertheless, according to Torres Wong (2019), the process of reaching agreements on forms of compensation may weaken socio-environmental defence mechanisms by and within indigenous communities themselves:

> ...the environmental component of resource-related struggles may be weakened or even rendered invisible by the logic of compensation-consent of the local population that usually governs the various platforms for dialogue and community participation that are often implemented in response to socio-environmental protest (Torres Wong, 2019, p. 965).

This ambivalence or ambiguity, typical of the mechanisms and outcomes of these spaces of agreement between communities and mining companies, has been analysed and discussed in some depth in relation to other mining territories in Latin America (Bebbington et al., 2008; Lorca et al., 2022).

3. Chile

According to the Political Constitution of the Republic of Chile, which dates back to 1980, Chile is a unitary state. This implies centralised administration of power and a single territorial structure. The country is divided into 16 regions, which are subdivided into provinces and municipalities, all governed by one Constitution and a unified legal system. This structure creates a framework of administrative and legal homogeneity throughout the national territory, with powers delegated to regional and municipal governments, but always subordinate to central authority.

The administration of Chilean territory follows principles of administrative decentralisation and deconcentration of power, without losing sight of its unitary character. According to this model, the regions and municipalities have a certain degree of autonomy in the management of local resources, although under the directives of the central government. Under Chile's legal system, laws and regulations apply throughout the country, without regional variations that could compromise their interpretation or implementation. This centralised legal framework determines the existence of public policies of national scope, which are generally applied uniformly throughout the territory. This model has been criticised in relation to its capacity to respond to the cultural and social specificities of some regions, especially those with a significant presence of indigenous communities.

The regulatory framework for lithium and its exploitation in Chile dates back to the 1970s. In 1975, lithium was declared a substance of nuclear interest under the "Regulation of Nuclear Terms" (Decree No. 450 of 1975 of the Ministry of Economy, Development and Reconstruction). According to this regulation, lithium, like other minerals, was a mineral that could be subject of a concession (*mineral concesionable),* nevertheless, the authorization from the *Comisión Chilena de Energía Nuclear (*Chilean Nuclear Energy Commission – CCHEN*)* was necessary for a concession to be granted.

In 1979, with the enactment of Decree Law No. 2,886, lithium was declared a resource of national interest that could not be the subject of a concession (*mineral no concesionable*), and its extraction and commercialisation was exclusively

reserved for the state (Article 5). It should be noted that, prior to the enactment of this regulation, the state had already granted lithium mining claims to the *Corporación de Fomento a la Producción* (Chilean Production Development Corporation – CORFO) in the Salar de Atacama. The state-owned enterprise Codelco was granted claims in the Maricunga and Pedernales salt flats, and the *Empresa Nacional de Minería* (National Mining Company – ENAMI) in the Aguilar, Infieles and Cotodos salt flats, all located in the Antofagasta Region.

The current regulatory framework on lithium is established by the 1980 Constitution. Article 19(24), referring to property rights, provides that substances that cannot be the subject of a concession – including lithium – may only be explored and/or exploited, or benefits derived from their deposits, either "directly by the state or its enterprises, or by means of administrative concessions or *contratos especiales de operación* (special operation contracts)". This framework was further regulated by the 1982 Organic Constitutional Law on Mining Concessions (Law No. 18,097), which declares lithium as not eligible for mining concessions (Article 3). This was later reaffirmed by the 1983 Mining Code, which makes it possible to grant lithium concession permits with prior authorisation from the CCHEN (Article 9).

Based on the 1979 legislation, the 1980 Constitution and the Mining Code, the right to exploit lithium can only be granted to state-owned enterprises, through administrative concessions, or special operation contracts, which in the case of lithium are called *contratos especiales de operación de litio* (Special Lithium Operation Contracts – CEOLs). These require authorisation from the CCHEN and an Environmental Impact Assessment (EIA) approved by the *Servicio de Evaluación Ambiental* (Environmental Assessment Department – SEA) in accordance with environmental legislation in force.

Regarding indigenous peoples' human rights, Chile recognised their individual and collective rights by ratifying *ILO Convention No. 169* in 2008, which entered into force in the country in 2009. As mentioned above, this Convention establishes principles such as the right to free, prior and informed consultation in relation to projects that may directly affect indigenous peoples.

In addition to prior consultation, *ILO Convention No. 169* recognises indigenous peoples' rights of ownership and possession over the lands which they traditionally occupy (Article 14), as well as the right to participate in the use, management and conservation of the natural resources found on their lands and territories (Article 15(1)). As noted in Chapter IV, Article 15(2) of the Convention provides that, in the case of exploration or exploitation of state-owned mineral, sub-surface or other resources on indigenous lands or territories, governments must establish procedures for consultation with indigenous peoples to determine whether their interests would be prejudiced, prior to authorisation. In addition, they must ensure fair compensation for any damages which they may sustain as a result of such activities, as well as participation in the benefits of such activities.

The effective implementation of these rights in Chile has faced challenges, especially in terms of harmonising national policies with international standards and ensuring the participation of indigenous communities in decision-making processes that affect them.

At the constitutional level, Article 5(2) of the Constitution recognises the primacy of human rights enshrined in international treaties ratified by Chile, which includes the rights established in *ILO Convention No. 169*. This implies that these rights have a higher status than national laws, although in practice their effectiveness depends on judicial and administrative enforcement. This constitutional recognition of international

human rights treaties forms what has been called the *bloque de constitucionalidad* ("constitutional bloc"). This bloc integrates the human rights norms and principles contained in these treaties into the domestic legal system, granting them constitutional status and obliging state bodies to respect and promote them (Nogueira Alcalá, 2015). However, the effective implementation of this constitutional bloc faces complexities, especially in the harmonisation of domestic norms with international standards and in the training of legal practitioners for their proper application.

The 1993 Law on the Promotion, Protection and Development of Indigenous Peoples No. 19,253, known as the "Indigenous Law", establishes a specific regulatory framework for indigenous peoples in Chile. Among its provisions, Articles 63 and 64 recognise and protect fundamental rights related to indigenous land ownership and the use of water resources by indigenous peoples of northern Chile, where the salt flats exploited for lithium are located. Article 63 establishes that there are three types of ownership that the authority must take into account when developing land regularisation processes: individual ownership, communal ownership and patrimonial ownership. Article 64 refers to the use and exploitation of water by indigenous communities, recognising the ownership of water located on their lands, and guaranteeing the right of the communities to use the water they have historically used on their lands for traditional activities such as agriculture and livestock farming.

To date, however, unlike in Argentina and Bolivia, there is no explicit constitutional recognition of the existence and rights of indigenous peoples in Chile. This clearly limits the scope of these rights, since their implementation largely depends on legal and administrative interpretations. This has led to gaps in the effective implementation of indigenous communities' territorial and water resource rights, highlighting the need for legal and constitutional reforms to strengthen their recognition and protection.

Chile also has environmental legislation dating back to 1994: the *Ley de Bases Generales del Medio Ambiente* (General Foundations Law on the Environment) No. 19,300. This law establishes environmental management instruments, such as environmental impact studies (EIA) and environmental impact statements (EIS), which are required to assess and mitigate the impacts of projects on the natural environment. These instruments are the basis of Chile's environmental assessment system and are mandatory for any activity that may generate environmental impacts, such as lithium exploration and exploitation projects. Despite the precautionary principles established in this law, its implementation through subsequent regulations, as discussed in detail in Chapter VI, has limited the scope of environmental protection in the case of indigenous peoples. The right to consultation of indigenous peoples has been restricted to projects that generate "significant impacts", in which case applicants are obliged to carry out an EIA. For projects that do not generate such impacts, however, applicants are only required to submit an Environmental Impact Statement (Articles 10 and 11 of the General Foundations Law on the Environment).

Law No. 20,417 of 2010 created the *Superintendencia del Medio Ambiente* (Superintendency for the Environment), the agency in charge of overseeing compliance with environmental management instruments. The Superintendency is empowered to carry out sanctioning procedures and to supervise compliance plans, which are tools designed to make companies correct irregularities and realign with current regulations.

In addition, Law No. 20,600 of 2012 established the Environmental Courts, which are tasked with resolving disputes related to

administrative decisions and environmental damage caused by specific activities. This judicial framework complements administrative oversight and provides a forum for citizens and organisations to make claims about potential environmental impacts.

Chile faces significant challenges in terms of lithium management, especially in reconciling economic interests with environmental protection and the rights of the indigenous communities that inhabit the territories affected by mining activity. As mentioned in previous chapters, in the Salar de Atacama, lithium mining is carried out under a system of administrative authorisations granted by CORFO, the holder of the concessions for this resource. CORFO, through leasing and operation contracts, has delegated these activities to companies such as SQM and Albemarle, which currently dominate production. This scheme operates within the framework of concessions established prior to the 1980 Constitution, under the transitional provisions and the 1983 Mining Code. However, this model has been criticised for failing to meet contemporary sustainability standards and for not fully guaranteeing the protection of the rights of affected communities, leaving the state with a limited role in the effective supervision of the activity.

As mentioned in Chapter III, the National Lithium Strategy – introduced by the Chilean government in 2023 – seeks to establish a theoretically sustainable development model for the exploitation of this strategic mineral. This strategy promotes state participation through public-private partnerships, prioritising research, technological innovation and added value in the production chain. It also provides for the strengthening of governance and the implementation of international standards on sustainability and human rights, promoting a balance between economic development and the protection of communities and ecosystems (Government of Chile, 2023).

The core focus of the National Lithium Strategy is the involvement of the state in the entire production cycle, from exploration to manufacturing, with the aim of maximising state revenues, mitigating environmental and social risks, and generating technical and scientific knowledge that strengthens national capacities. In this framework, public-private partnerships are a key mechanism for combining state objectives with the experience, capital and technology of the private sector. Of particular note are the processes of modification and extension of the special operation contracts between SQM and CORFO, which incorporate state participation in the exploitation of the Salar de Atacama, through Codelco. In addition, calls for tenders are underway in relation to other salt flats in the rest of the country with the aim of establishing Special Lithium Operation Contracts (CEOLs). All these new agreement frameworks, both in the Salar de Atacama and in other salt flats, must be subject to indigenous consultation in accordance with current regulations, in order to ensure the participation of the communities in the development of this industry.

National Lithium Strategy.
In https://www.gob.cl/noticias/estrategia-nacional-del-litio-da-importante-paso-para-inversiones/

To realise these objectives, key implementation milestones were defined for the period 2023-24. These include the creation of the *Comité Estratégico de Litio y Salares* (Strategic Committee on Lithium and Salt Flats), led by the Ministry of Mining, which coordinates the implementation of scientific, technological and industrial policies, promoting productive linkages and local value addition. The strategy also included the creation of the *Empresa Nacional del Litio* (National Lithium Company), a state-owned entity intended to lead the exploitation and processing of lithium, from exploration to recycling, while promoting public-private partnerships and moving up the value chain. As noted in Chapter III, this role is currently played by the state-owned enterprise Codelco, which thus diversified its focus from copper to lithium. This shift was achieved through the signing of an agreement with SQM to form a joint venture in the exploitation of the Salar de Atacama, for the development of a new project ("*Salar Futuro*"), in which the state-owned enterprise will have a 50% + 1 shareholding from 2025 and will assume the general management of the operation from 2031 (Codelco, 2024). In addition, in 2024, Codelco acquired the Salar Blanco lithium development project in the Salar de Maricunga from the Australian company Lithium Power.

This strategy also envisages the establishment of a network of protected salt flats to safeguard biodiversity and ecosystems, with a commitment to protect at least 30% of salt flats by 2030, in line with the Global Framework for Biodiversity. These salt flats were identified by the government in 2024 (Council of Ministers for Sustainability and Climate Change, 2024).

Another aspect of Chile's National Lithium Strategy is the creation of the *Instituto Tecnológico y de Investigación Público de Litio y Salares* (Public Research and Technology Institute for Lithium and Salt Flats), in order to generate advanced technologies, knowledge on salt flats and promote scientific and technological research – a process currently underway. This institute will centralise information on lithium exploration and exploitation projects. Its governing body will include a member from the indigenous peoples affected by the exploitation, whether from the Quechua, Atacameño or Colla peoples.

VI. The Human Rights Impacts of the Lithium Industry

Women of the Atacama indigenous community in Olaroz, Jujuy, Argentina, 2003.
Photo: José Aylwin

As foreshadowed in previous chapters, the development of the lithium industry in the high Andean salt flats has generated significant adverse impacts on internationally recognised human rights. These are human rights that, as discussed in Chapter IV, have been given the highest status in the laws of the ABC countries. Although many human rights are affected by this industry, its impacts on the right to a healthy environment, including the rights of access to information, participation and access to justice in environmental matters, are particularly serious. Equally grave are the impacts on the rights of indigenous peoples and communities who have inhabited these territories since ancestral times. This chapter provides an in-depth analysis of these impacts, drawing on a review of existing academic and scientific literature on the subject, as well as the perspectives of the communities themselves who are directly affected by lithium operations in their territories.

1. Right to a Healthy Environment

As explained in Chapter III, lithium salt extraction in the salt flats of Argentina, Bolivia and Chile (ABC) uses a technology called *fractional crystallisation*, which can be generically referred to as "evaporation technology", "conventional" or "traditional" technology. This technology requires the pumping of saline water or brine from within the salt flats, and its disposal in open-air ponds or pools, thus taking advantage of the high solar radiation of the Puna and the desert. Through evaporation, the various salts are concentrated and separated based on their different solubilities: sodium precipitates first, in the form of sodium chloride (common salt), followed by salts composed of potassium, lithium and magnesium. This process takes more than a year, during which time more than 95% of the water evaporates and is lost to the atmosphere. After the evaporation stage in the ponds, in-plant processes are carried out, using the brine resulting from the evaporation pond process as raw material. This includes chemical and physical processes such as carbonation, salt precipitation and drying of the lithium crystals.

Traditional lithium processing technology from brine deposits was introduced in South America by the US-based Foote Mineral Company[35] in the Salar de Atacama in 1984. Since then it has been used in various salt flats in the region: Atacama (1984), Hombre Muerto (1997), Uyuni (2008) and Olaroz (2011).

As noted in previous chapters, Argentina has been implementing research and development programmes for new lithium salt extraction methods, as alternatives to conventional methods. These include Direct Lithium Extraction (DLE) technologies, which do not require extensive brine evaporation. These have been used since 1997 at the Salar del Hombre Muerto (Catamarca) by the company Livent, in conjunction with evaporation ponds, and since 2024 in the Salar Centenario Ratones (Salta), by the company Eramet (Bunel, 2024). Chile[36] and Bolivia[37] are also promoting DLE projects, but they are not yet in operation. Therefore, most of the lithium companies operating in the Andean salt

35 This technology was used by the Foote Mineral Company from 1966 onwards to extract lithium carbonate from brines in the Silver Peak Salar (Nevada). Before that it was used by the Foote Mineral Company and the American Potash Corporation (APC), in Searles Lake (California) from 1938 (Kunasz, 1986, cited in Lagos, 2012).

36 As a result of the Request for Information (RFI) process, the Chilean government reported that more than 80% of the projects submitted expressed interest in the use of Direct Lithium Extraction (DLE) technologies (Government of Chile, 2024).

37 In April 2021 and January 2024, the Bolivian government launched two international calls for proposals to study the applicability of different DLE technologies to the chemistry of seven salt flats, including Uyuni, Coipasa and Pastos Grandes (YLB, 2022; MHE, 2024).

flats in ABC continue to use the traditional technology, which has significant adverse effects on the environment, evident in those salt flats that have been exploited for the longest time, such as the Salar de Atacama.

Conventional technology has already been used in Atacama for four decades, with serious impacts on the existing aquifers. After long-term lithium exploitation using this method, research in the Salar de Atacama has shown that lithium mining is, in practice, "water mining" (see, for example, Lorca et al., 2023; Argento & Puente, 2019). This is due to the massive water losses from the aquifer as a result of evaporation. The evaporation of almost all the water in the brine produces an irreversible and irretrievable loss of large volumes of water from the aquifer, with severe impacts on wetland habitats that make up the salt flats.

The phenomenon of water loss, as a result of the brine's exposure to the sun, is aggravated by the fact that this ecosystem is subject to high levels of natural desiccation, amplified by climate change. The Salar de Atacama is classified as a hyper-arid desert, since in one year the sun's energy can evaporate 200 times more water than it receives in precipitation, meaning that it has a negative water balance (Ward, 2009). In addition, the first expansion of transnational mining capital in the salt flat from the end of the 19th century – which can be called conventional mining – until the recent period, generated a number of exogenous factors that exacerbated drought and environmental degradation (Campos-Ortega & Jorquera-Jaramillo, 2008; Morales & Azócar, 2015). Indeed, due to water consumption by copper mining operations, up to 89% of the freshwater in the Salar de Atacama basin is used (Lorca et al., 2023).

According to a recent study, mining activity in the Salar de Atacama is consuming 379,041 m^3/day, which is the combined volume of brine and freshwater pumped for industrial use declared by the companies, of which 49% is extracted by lithium and potassium mining companies (Lorca et al., 2023). The most recent phase of exacerbated desiccation in the Atacama basin coincided with the phase of brine mining and the expansion of potassium, boron and lithium mining operations. In the last two decades, the surface area quadrupled from 20.54 km^2 in 1997 to 80.53 km^2 in 2017 (Liu et al., 2019).

In recent years, it has been confirmed that the demand for water in this basin exceeds the supply of available resources, generating a deficit of 15 m^3/sec (ECLAC-OECD, 2016). This hydrological imbalance is accompanied by increased soil drying; a trend towards depletion of the water reserve; a drop in the water table due to the massive pumping of brine; additional water discharge beyond natural discharge due to evaporation of the salt flat; reduction of wetland surface area and the salinisation of freshwater bodies, affecting the quality of biodiversity habitat and the abundance of flamingos; and the gradual sinking of the salt flat structure, in sites with wells that have seen the greatest drops in aquifer levels, among other reported effects (see for example, Gajardo & Redón, 2019; Delgado et al., 2024; Liu et al., 2019; Liu & Agusdinata 2020; Marazuela et al. 2020).

The environmental impacts of lithium extraction, as a consequence of brine pumping and water loss through evaporation, are a central concern of the indigenous communities that inhabit the high Andean salt flats. In the case of the Salar de Atacama, this concern was expressed by various leaders of the Atacameño or Lickanantay people in a human rights impact assessment of the SQM company:

> For many Atacameño community members, the impacts on water resources are now visible, which in turn has meant modifying their ancient and traditional activities

> related to herding and small-scale agriculture. Some have described an impact on the life of local birds, such as flamingos, who are reportedly changing their nesting areas, which would seem to be related to the work carried out by SQM. Furthermore, some of those interviewed agree that there has been a drying out of certain vegetation cover, particularly in the "*Borde Este del Salar de Atacama*" (Eastern Edge of the Salar de Atacama) sector, and the alteration of some water bodies. There have been clear reports of damage in the Soncor sector, and to the carob trees near the wells of the Atacameño Community of Camar, located east of the Salar (Aylwin, Didier & Mora, 2021, p. 81).

The desiccation of aquifers in the basin is also a concern for academics. According to available research, to obtain lithium, the brine pumped from within the salt flat must be highly concentrated before being processed at a plant. For this purpose, the water component of the brine must be evaporated to a concentration 30 times higher (Garcés & Álvarez, 2020). Thus, it is estimated that the production of one tonne of lithium carbonate requires, on average, the evaporation of half a million litres of brine water, i.e. 500 m^3 (Flexer, 2018). This is in addition to freshwater consumption, which fluctuates between 5,000 and 50,000 litres for treatment plant operations (Garcés & Álvarez, 2020; Flexer et al., 2018). A recent study by the University of Chile, based on satellite data, shows that, as a consequence of brine extraction by the lithium industry, the Salar de Atacama is sinking at a rate of 1 to 2 centimetres per year. The same study found that groundwater levels in the salt flat have dropped by more than 10 metres in the last 15 years (Delgado et al., 2024). As a result, there has been a significant loss of vegetation cover in areas of agricultural development and herding, in addition to the loss of lagoons in the salt flat (Aylwin, Didier & Mora, 2021).

Inspection visit of SQM operations in the Salar de Atacama by the First Environmental Court, 2019. In https://www.1ta.cl/visita-inspectiva-al-salar-de-atacama/

The problems linked to consumption of freshwater and salt water are compounded by the large volumes of solid waste resulting from the extraction process, including salts containing sodium, chlorine, magnesium, sulphates and boron. These are piled up at the extraction sites, amounting to thousands of tonnes of waste each month. At the same time, the construction and expansion of the surface area of evaporation ponds has involved major land removal and the incorporation of up to 1,700 hectares, considering only one of the two companies operating in the Salar de Atacama (Garcés & Álvarez, 2020). Records indicate that this area expanded from 129.02 hectares in 1985 to 9,093 hectares in 2017 (Prieto & Sandoval, 2018).

The environmental impact stemming from the water footprint of lithium mining allows for an approximation of the possible cascade effects of water loss on the rest of the basin and components of the associated wetland ecosystem. Understanding the quality and scale of the impacts from this type of mining requires further research, given the huge gaps in information on hydrogeological and ecosystem characteristics of the basins linked to mining operations.

Although lithium development in Argentina started later, beginning in the 1990s in the Salar del Hombre Muerto in the province of Catamarca, and later in the 2010s in the

province of Jujuy (in the Salar de Olaroz), the environmental impacts of its exploitation, mostly through the conventional technology described above, have also been documented. Academics have denounced the serious problems associated with lithium extraction in the country, including the environmental impact on wetlands that are highly vulnerable to the climate crisis (Gallardo, 2011; Svampa & Viale, 2014; Grau et al., 2018). Furthermore, it has been underlined that even in its comparatively "clean" form compared to the mining of other minerals or hydrocarbons, "lithium extraction shares similarities with other extractive practices with respect to environmental liabilities: water consumption and contamination, the introduction of exploration roads in sensitive ecosystems, installation of infrastructure, and impacts on flora and fauna" (Argento, Puente & Slipak, 2017, p. 425).

Official recognition of these impacts has been much slower. However, in the Salar del Hombre Muerto (Argentina's first lithium mining site, as mentioned above), the Atacameño indigenous community filed a legal complaint in 2021 regarding the impact of six lithium mining projects in the area. According to the complaints, lithium extraction by the company Livent, now owned by the transnational mining company Río Tinto, allegedly caused the disappearance of the Trapiche River's watercourse and wetlands. In March 2024, the provincial Supreme Court issued a ruling ordering the provincial government to refrain from granting new permits in the area until a comprehensive environmental impact assessment has been carried out. In its ruling, the Supreme Court held that "environmental damage to the Trapiche River has been established" (*La Nación*, 2024).

In Bolivia, lithium development has been delayed and is still in a low production phase, run by the state-owned enterprise *Yacimientos del Litio Bolivianos* (YLB). This state programme has also raised concerns among the surrounding indigenous communities, civil society and the academic community. However, there are still no field studies that reliably reflect the scale of the environmental risks and impacts in the Salar de Uyuni, where the processing plants and evaporation ponds are located. This is mainly due to the strict control of the areas of operation by the central government, on which YLB depends, limiting the possibilities for universities or civil society research centres to collect independent data. Nevertheless, published works document concerns about large quantities of toxic sludge, due to the use of the lime application technique, which can increase the soil's alkalinity; the production of large quantities of residual salts, which are destined to be discharged back into the aquifer, in the absence of studies into the consequences; airborne dust emissions with large-scale collateral effects; and the deepening of the climate crisis in the territory due to water extraction (Hollender & Shultz, 2010; Calla et al., 2014).

Preparatory activities for the exploitation of the Salar de Pastos Grandes (Bolivia), November 2023. Photo: Manuel Olivera

In recent years, there has been increasing pressure from the state-owned enterprise YLB on communities for access to the basin's water reserves. Some local perceptions and documented impacts of this acceleration of lithium mining operations in the area include: (i) the desiccation, shrinking and gradual disappearance of *bofedales* (peat-forming wetlands), impacting the wildlife associated with these ecosystems (such as *vicuñas* [camelids] and birds); (ii) the appearance of microplastic residues in the local drinking water; (iii) the constant wave of diarrhoea reported by communal health centres; iv) an increased saline taste in the water consumed by families in the communities surrounding the plants; and v) the deterioration of the landscape and scenic beauty of the salt flat, including dust from the lithium plants and the weakening of the salt crust.[38]

Given these concerns, local populations are already identifying infringements of their right to a healthy environment. This is particularly serious, considering that the state programme is only just entering the industrial stage of production.[39] This highlights the clear need for local communities to have access to strategic information that allows them to monitor environmental changes, to understand their rights and their capacity to negotiate with managers of the state project, which is currently expanding with the involvement of multinational companies.

2. Rights of Access to Information, Participation and Justice in Environmental Matters

Although in different ways and with varying intensity, lithium development in ABC has also affected rights closely linked to a healthy environment in relation to the access of individuals and communities to information, participation and justice in environmental matters. As noted in Chapter IV, these rights are recognised in the *Escazú Agreement* signed by all three countries. Particularly in the cases of Argentina and Bolivia, the rights of environmental defenders are seriously affected by the adverse impacts generated by lithium exploration and exploitation operations, as well as by the policies or regulations adopted by the states to promote the development of this industry.

One of the most evident shortcomings is related to access to information on the environmental and social impacts of lithium projects, especially among potentially affected communities. This is closely tied to the rights to consultation and participation of indigenous peoples, which are analysed in more detail later in this chapter. In addition, access to information on the companies interested in developing projects, their background, ownership structures and the details of the contracts signed by them with the states is also deficient. Finally, there is concern about the imbalance in the capacity of different voices to make their perspectives heard in the public debate on lithium development, a debate that plays a crucial role in the adoption of decisions on the matter.

38 Perceptions and data collected during visits and interviews conducted by the technical team of the Lithium and Human Rights Project in ABC in the southwest region of Potosí, between the months of March and November 2024.

39 The Bolivian government inaugurated its industrial lithium carbonate plant in December 2023, which has an installed capacity of 15,000 tonnes per year. It is planned to add at least four additional plants negotiated with the direct participation of multinationals (MHE, 2023).

In the case of Argentina, this is exemplified by the consultation process with the communities of Salar de Olaroz, which was led directly by companies (Sales de Jujuy and Exar). A study by the *Fundación Ambiente y Recursos Naturales* (FARN) on this process – discussed in more detail later in this chapter – notes the communities' difficulties in understanding the technical information presented by company representatives on environmental impacts. This information, the only one made available (since the state made no effort to include other sources), was brief and incomplete. The same study also found that companies withheld information, particularly in relation to water and potential contamination (FARN, 2019).

Regarding access to information on companies, a study by the *Fundación para el Desarrollo de Políticas Sustentables* (FUNDEPS) on the levels of transparency in two lithium exploitation projects in Argentina (Salar del Hombre Muerto in Catamarca and Olaroz in Jujuy), based on the standards of the Extractive Industries Transparency Initiative (EITI), to which the country adhered in 2019, concludes that although it was possible to establish the ownership structure of the companies through the internet, requests for information submitted to companies and public agencies were not answered. In Argentina, information is fragmented, especially in relation to the identification of beneficial owners, since various state agencies (such as the *Unidad de Información Financiera* [Financial Information Unit] and the *Comisión Nacional de Valores* [National Securities Commission]) operate with different sectoral definitions of the beneficial owners. Moreover, none of the lithium producing provinces request this type of information from companies (FUNDEPS, 2023). The situation worsened in the months following the publication of the FUNDEPS study, as the government (which took office in December 2023) took steps to restrict access to public information. This was especially the case after the enactment of Decree 780/24, which expands the scope of information that is outside the public interest. This Decree increases discretion by leaving it to public officials to define what is considered a "public document" and which information can be considered as belonging to the private sphere of the authorities, giving them special protection (CELS, 2024).

With regard to public debate on lithium, there is a strong imbalance between the parties, since the main agenda-setting media (newspapers and online portals) systematically present a favourable stance towards lithium exploitation, making the social and environmental complexities of these processes invisible. The possible variations in the "development model" pursued through lithium exploitation are framed as a debate between various approaches, almost always leaving out information on territorial conflicts and environmental costs (Paterlini, 2023).[40]

In the case of Bolivia, although the constitutional normative framework recognises the right to access to information, in practice the enjoyment of this right has serious limitations. This is particularly the case with regard to the public's free access to environmental information, which is rarely disseminated or entirely unavailable. In general, the only documents on extractive projects that are publicly accessible (online) are the EIS,[41] whereas EIAs and

40 An exception in Argentina is *elDiario.Ar* (https://www.eldiarioar.com/), which systematically covers lithium conflicts. Meanwhile, portals such as www.mineriasustentable.com and www.litioargentina.com disseminate companies' points of view, presented as if they were in harmony with the interests of the indigenous communities and focusing on the supposed material progress associated with the arrival of the mining companies.

41 The Environmental Impact Statement (EIS) is the certificate that authorises the environmental licence. It is a document that gives permission for the execution of a work, activity or project in Bolivia from an environmental perspective.

Monitoring Reports are not. Studies on hydrogeology, basin characteristics and groundwater, undertaken by the state during the first pilot phase, have not been made available, even for environmental assessment processes, despite being key documents for informed decision-making. This situation is conducive to discretionary and opaque handling of information by the responsible environmental entities and the state-owned enterprise YLB, an approach that appears to have intensified since the first phase of installation of this extractive activity (Ströbele-Gregor, 2012; Olivera, 2017; Mondaca, 2022; Clavijo et al., 2023).

Participation processes in the most recent phase, as well as negotiations with transnational companies to attract investment for lithium exploitation in Bolivia, have become even more restricted and discretionary. Since September 2024, the national government has included in the parliamentary debate the handling and legalisation of two contracts signed by the state-owned enterprise YLB with the Uranium One Group (from Russia) and the CBC consortium (from China) for the implementation of lithium carbonate production plants in the Salar de Uyuni. The national government, through YLB, held so-called "*socialización de los contratos*" (contract socialisation) events, on a discretionary basis, with supportive organisations in the department of Potosí.[42] Civil society organisations, in both Potosí and La Paz, publicly denounced the favouring of transnational companies to the detriment of national interests, stating that "the contracts and their annexes presented to the Plurinational Legislative Assembly are incomplete, confusing and inconsistent. Their presentation makes it difficult to understand them properly and their approval as a single package raises uncertainty about their transparency" (*Brújula Digital*, 2025).

On the other hand, given that access to information is part of transparency management in government entities, it is important to analyse the potential impact of accountability processes of public entities. This includes the so-called *Empresas Públicas Nacionales Estratégicas* (Strategic State-Owned Enterprises), such as YLB, which are required to "publish information related to their operations in written and electronic media and public accountability hearings, as well as to implement other mechanisms that promote transparency in their business management".[43] Within this framework, YLB holds an annual public accountability event limited to a presentation of results or management progress. It lacks specific details about potential impacts on local populations, and does not have a deliberative character that would allow for public criticism to be heard. Until 2021, YLB's public accountability process was accompanied by the preparation of an Annual Report made available to the public. But this practice was discontinued that same year, and since then information has been limited to news releases from YLB's communication services and the Bolivian Ministry of Hydrocarbons and Energy, with content that is general and circumstantial in nature.

As a result, access to information is limited to the spaces for socialisation managed by the state and the state-owned enterprise, and to government propaganda. Local communities have been involved in the environmental assessment processes of lithium development projects through the implementation of baselines and public consultations, as part of this routine

42 *Noticias Fides* (2025).

43 Strategic State-Owned Enterprises, such as YLB, are required to fulfil accountability obligations under the Law on State-Owned Enterprises No. 466 of 2013.

procedure. In this scenario, the flow of information was reversed: it was the inhabitants of the consulted communities who provided the information required for the social baseline (established in the instrument for determining environmental impacts), which in turn was required by the team of consultants in charge of preparing these studies, without that information being binding in decision-making on the territory (Clavijo et al., 2023). Thus, not only is access to information about lithium mining investment projects in Bolivian salt flats limited, but it has become even more opaque in the recent phase of installation of new projects with the participation of transnational companies.

In the case of Chile, the current Environmental Impact Assessment system,[44] as well as its regulations (the shortcomings of which in terms of the right to consultation of indigenous peoples are discussed later in this chapter) allow public online access to information on lithium projects submitted for environmental assessment. However, such information tends to be of an excessively technical nature, making it difficult for communities affected by these projects to understand. In addition, the Law on Access to Public Information (Law No. 20,285 of 2008), based on the principles of transparency in public administration – which recognises the right of access to information held by state administration bodies and the duty of those bodies to provide it – has been used by communities affected by lithium development to access information not available through the environmental impact assessment system. Despite this, the strategy of lithium companies in Chile has not been characterised by transparency. There have been serious irregularities in SQM's conduct since its privatisation as a state-owned enterprise (SOQUIMICH) in the 1980s, during the military dictatorship. In recent years its executives have faced various criminal proceedings in both Chile and abroad for offences ranging from tax fraud to bribery and corruption, related to the irregular financing of political campaigns, offences that for the most part have met with impunity (Aylwin, Didier & Mora, 2023).

Although the policy of the current government (under President Gabriel Boric, 2022-26), as expressed in the National Lithium Strategy and in the process for developing the *Estrategia Nacional de Transición Socioecológica Justa* (National Strategy for a Just Socio-Ecological Transition – ENTSEJ), provides for participation of civil society and affected communities, a milestone in the absence of information and transparency was reached in the process through which the state-owned enterprise Codelco entered into a partnership with SQM to develop lithium in the Salar de Atacama. In the case of this agreement (initially signed in 2023 and ratified in 2024), the *Consejo de Pueblos Atacameños* (Council of Atacameño Peoples – CPA) had entered into a memorandum of understanding with the two mining companies, within the framework of the National Lithium Strategy, to ensure a participatory and transparent procedure for decision-making in the productive development of the Salar de Atacama. Yet, it was only informed of the agreement signed by the two companies by the press. This was denounced by the CPA as setting a poor precedent for a state-owned enterprise that, as stated in Chapter IV, has special responsibility in the area of human rights, including transparency.

With regard to access to *justice in environmental matters*, except in the case of Bolivia (whose Constitution recognises indigenous native peasant justice), judicial systems are not characterised by an intercultural perspective or by facilitating

44 General Foundations Law on the Environment No. 19,300 of 1994 (last amended by Law No. 21,660 in 2024).

access to justice for indigenous peoples and local communities. Nevertheless, these peoples and communities have made use of the justice systems to defend their rights affected by the lithium industry, with mixed results. In general, legal actions brought in the context of lithium development have been successful only in some cases where projects are already causing environmental impacts, but not as a preventive measure.

In the case of Argentina, the *Mesa de Comunidades Indígenas de Salinas Grandes y Laguna de Guayatayoc* filed a legal action before the Supreme Court of the Nation for non-compliance with the right to free, prior and informed consultation, due to the initiation of exploration in the area, without consultation, in 2010. The highest court declared that it lacked jurisdiction in the case, so the communities took it to the IACHR. They submitted a petition to the IACHR in 2013, which was declared admissible years later. In the meantime, the *Mesa* filed *amparos judiciales* (summary applications for constitutional protection) before the national courts to try to halt extractive projects awarded without an adequate consultation procedure. Although this strategy was effective for several years, since 2023 the provincial judiciary has been rejecting these applications, allowing companies to move forward with exploration in some communities.

Also in Argentina, as previously mentioned, indigenous communities from the province of Catamarca filed an *amparo ambiental* (summary application for constitutional protection of the environment) with the federal court in 2021. However, the court declared it lacked jurisdiction and referred the case back to the provincial court. In March 2024, the provincial Supreme Court ordered the provincial Ministries of Mining and Water, Energy and Environment not to grant any new permits or authorisations for exploration activities in the Salar del Hombre Muerto area, and to revoke a number of permits already granted, until a comprehensive environmental impact study has been completed.

In Chile, in recent years the courts have on more than one occasion upheld the claims of the Atacama communities for the environmental impacts caused by the lithium industry in the Salar de Atacama. An emblematic case was the claim filed by these communities before the environmental justice system against the Compliance Plan presented by SQM, which had been approved by the *Superintendencia de Medio Ambiente* (Superintendency for the Environment – SMA), after this body in charge of overseeing environmental permits initiated a sanctioning process against the company in 2016. SQM was found to have extracted more brine than permitted, resulting in ecosystem damage. The plan presented by SQM was challenged by the communities, who demanded its annulment on the grounds that it failed to remediate the environmental damage. The claim was upheld in 2019 by the First Environmental Court, which reactivated the sanctioning process against the company.

Another more recent case, in which the claims were upheld, was the constitutional action filed by the Atacameño community of Camar, asserting the need to develop a process of indigenous consultation with the Atacameño communities in relation to the distribution of the contributions established in the agreement signed in 2018 between the state entity CORFO (the mining rights holder in the Salar de Atacama) and the company SQM. As explained above, through this agreement CORFO leased mining rights to SQM until 2030, allowing it to continue its operations, despite their environmental and social impacts. This legal action led to the consultation process on the matter that is currently underway.

However, on more than a few occasions the judiciary has rejected legal actions

brought by communities affected by lithium development in defence of their rights. This was the case for the Atacameño communities, who, through the CPA, had to resort to the Inter-American human rights system after the Supreme Court, in 2019, rejected the application for constitutional protection against the lack of consultation on the 2018 CORFO-SQM agreement, in a clear example of denial of justice.

Finally, and no less importantly, it is important to consider the impact on the rights of environmental defenders in the context of lithium development, rights that the ABC countries have committed to protecting by signing the *Escazú Agreement*.

In a strategy aimed at discouraging social protest, two provinces in northern Argentina (Jujuy and Salta) issued regulations in 2023 to limit or prevent public demonstrations. In the case of Jujuy, a law was passed prohibiting any type of demonstration that would imply any kind of disruption to circulation in public spaces. This was in a context of major protests demanding better wages across various sectors, to which were added demonstrations against the constitutional reform approved that same year without consultation. The reform notably weakened indigenous peoples' rights, with the clear intention of facilitating mining development, particularly lithium extraction, on the province's "public" lands. Although the legislation banning protests was later repealed, the restriction on the right to demonstrate became part of the new provincial constitution, which enshrines a so-called "right to social peace". Under this framework, the exercise of fundamental rights such as freedom of assembly is subordinated to the condition that they do not affect "social peace'". This (provincial) constitutional reform also mandates legislators to develop a new law to regulate demonstrations, which must include a total ban on blocking streets or roads as a form of protest, in clear contradiction to the national Constitution. Jujuy has also developed a system of penalties for misdemeanours punishments over the last few years, in parallel to the criminal law, which is systematically applied to protestors, with no defence guarantees, and can result in prison sentences or fines.

Protests against constitutional reform were violently repressed through the indiscriminate use of less-lethal weapons, arbitrary arrests and the disproportionate criminalisation of protesters. Several hundred people were injured, including three cases of serious eye injuries caused by rubber bullets fired in the faces of demonstrators. At least 90 people were arrested in separate protests, many of whom face ongoing legal proceedings for crimes or misdemeanours. Indigenous communities, whose rights are threatened by the constitutional reform, held protests and partial roadblocks in various parts of the province for several weeks. From the moment the reform came into force, constant harassment by the police and the government's lack of response weakened these demonstrations (International Federation for Human Rights, 2024).

Meanwhile, on 1 June 2023, the legislature of Salta passed a so-called "*antipiquetes*" (anti-picketing) law, imposing restrictive requirements on demonstrations, such as providing prior information about the organisers and reserving the right not to allow protests to take place. In addition, it conditioned the protection of protests (a state duty) on the prevention of violence, despite it being the state itself that is responsible for preventing violence and protecting demonstrators (CELS, 2023). The provincial executive branch partially vetoed the law, especially provisions on the requirement for prior information. However, it maintained the idea that demonstrations involve a "collision of rights" that must be balanced by the state (Brizuela, 2023).

Protest by indigenous and peasant communities in Punamarca regarding the constitutional reform in the Province of Jujuy, Argentina, which promotes the lithium industry.
Photo: Jose Aylwin, 2023

In December 2023, the newly inaugurated national government of Javier Milei announced, through the Ministry of Security[45], a "Protocol for the maintenance of public order in response to roadblocks", which replicates and expands the types of limitations established in Jujuy a few months earlier. The protocol considers any public demonstration that slows down the movement of vehicles as a crime in flagrante delicto, and authorises security forces to repress, evict and detain demonstrators without a court order. It also permits police to gather information on individuals and organisations participating in protests for the purposes of criminal prosecutions (CELS, 2024). Since then, there have been repeated incidents of repression, excessive use of force, arbitrary arrests, ill-treatment and humiliation of detainees, and their subsequent prosecution. The most violent crackdowns took place in front of the National Congress (in Buenos Aires), especially when the so-called "Ley de Bases" (Foundations Law) was passed, which, among other things, approved the above-mentioned *Régimen de Incentivo de Grandes Inversiones* (Large Investment Incentive Regime – RIGI), relaxing requirements for the installation of extractive companies, including lithium companies.

Obstacles to the work of environmental rights defenders in the context of lithium development have also been present in Bolivia, a country with a long history of social mobilisation in defence of natural resources.[46] In the case of southwest Potosí,

45 Res. 943/23. Available at: https://www.boletinoficial.gob.ar/detalleAviso/primera/300917/20231215

46 Social mobilisation has met with heavy repression in Bolivia in the past. One example is the so-called "Gas War," a protest movement that took place in 2003 following then-President Gonzalo Sánchez de Lozada's announcement of plans to export natural gas to the US. Police forces violently cracked down on demonstrations in the streets, even resulting in deaths (Ornelas, 2004).

the social mobilisation actions promoted by the *Federación Regional Única de Trabajadores Campesinos del Altiplano Sud* (FRUTCAS), as part of the historical struggle in defence of natural resources such as water reserves and lithium, reflect a tradition of strong organisational and union-based mobilisation – factors that were well leveraged during the formation of the *Movimiento al Socialismo* (Movement for Socialism – MAS). Likewise, social organisations, including FRUTCAS and the *Comité Cívico Potosinista* (COMCIPO), played a key role in the late 1980s in mobilisation for protests against the direct invitation to the US transnational company, the Lithium Company of America, known at the time as Lithco, for the exploitation of lithium in the Salar de Uyuni (Iño Daza, 2017; Olivera, 2017).

Since the installation of the state lithium programme in 2008, there have been several instances of major social mobilisation, as well as phases of systematic repression. In 2019, the mobilisation led by COMCIPO in protest against the creation of the mixed company YLB-ACISA (the latter, a German company), by presidential Supreme Decree, involved significant and predictable pressures on social leaders and their entourage. However, a particular feature of the most recent stage, under the government of President Luis Arce, is the use of the state apparatus for the judicial repression of leaders and environmental defenders. Cases of intimidation and legal persecution began in March 2023, when FRUTCAS mobilised to demand the transfer of YLB's legal headquarters to Uyuni; respect for YLB personnel from southwest Potosí; priority hiring of personnel from southwest Potosí in decision-making positions; and the approval of a law for the industrialisation of lithium, among other matters.[47] Similarly, legal proceedings have been initiated against the leaders who mobilised in April 2024, in the community of Río Grande, in protest against the breach of the agreement signed years earlier with the YLB company. The prosecution and persecution of leaders also effectively contributed to the demobilisation and partial dismantling of COMCIPO, a process that began in 2021 (Tapia Callao, 2022).

It should be noted that legal persecution in Bolivia has not only targeted social organisations and leaders defending the environment, but also professionals involved in the state-run lithium programme, including current and former public officials. This is the case of former directors and other officials of the *Gerencia Nacional de Recursos Evaporíticos* (National Management of Evaporative Resources – GNRE), the entity that preceded the creation of YLB. They faced allegations of corruption related to the installation and poor maintenance of the evaporation wells system in the Salar de Uyuni, leading to a lawsuit for economic damage to the Bolivian state, amounting to 425 million bolivianos (Bolivian currency).[48] In this regard, a June 2024 CEDIB report[49] supports the characterisation of these actions as persecution, citing two specific examples of rights abuses linked to the lithium evaporation pond project. First, the case of the former YLB executive director, Luis Alberto Echazú, who to this day remains under house arrest, and who "was arrested and charged in record time for alleged irregularities". Second, the report

47 *Los Tiempos* (2023)

48 Bolivian Information Agency (2024). These events came to light after the national government declared that the evaporation pond technology had serious drawbacks and was the reason for delays to the overall project, thus justifying the launch of international calls to foreign companies for the implementation of Direct Lithium Extraction (DLE) technology (Ministry of Hydrocarbons and Energy, 2024).

49 The *Centro de Documentación e Información Bolivia* (CEDIB), a civil society organisation based in Cochabamba, publishes periodic reports monitoring human rights violations in Bolivia.

Residents of the Río Grande Community in a protest at the facilities of the water treatment plant, used for lithium industry.
Photo: Donny Ali Flores, 2024

points to the case of the ex-manager of YLB, Juan Carlos Montenegro, who "died in unclear circumstances. The media published an alleged posthumous letter in which he claimed that the government was attempting to forcibly incriminate him in acts of corruption" (CEDIB, 2024, p. 3).

In the case of Chile, repression and criminalisation of environmental defenders from the Andean peoples, in the context of their opposition to mining development in their traditionally occupied territories, has not been as frequent as in the south of the country, where such measures have been used – for at least two decades – against the Mapuche people in conflicts over the adverse impacts of forestry and hydroelectric projects.[50] However, one case of persecution of an environmental defender affected by mining in the high Andean area is that concerning Ercilia Araya, president of the Pai-Ote Community of the Colla people, whose territory includes the Salar de Maricunga, where several lithium exploration projects are currently underway. Ercilia Araya was subjected to harassment, accusations, pressure and even imprisonment of family members due to her opposition to mining projects in the territory traditionally occupied by her people.[51] In the Atacameño territory, where lithium has been developed for decades, indigenous organisations and their leaders are concerned about potential reprisals by state officials or companies in response to communities' defence of the environment.

Given the above, it is not surprising that global civil society organisations monitoring civic spaces have identified deficits in relation to the rights of environmental defenders in the three countries that are the focus of this report. Indeed, the Civicus Monitor, developed by the NGO Civicus, which ranks countries in five categories based on decreasing openness of civic space (open, narrowed, obstructed, repressed

50 The state's response to the Mapuche protests against investment projects affecting the environment in their territory has included police repression of their communities and criminalisation of their leaders, many of whom have been prosecuted under a law on terrorist conduct (Law No. 18,314 of 1984). The IACtHR found this law incompatible with the right to due process (IACtHR, Judgment *Norín Catriman et al. v. Chile*, 2011). Leaders have been sentenced to long prison terms.

51 See https://observatorio.cl/ercilia-araya-la-lideresa-pai-ote-criminalizada por-luchar-contra-las-mineras-canadienses-en-chile/

and closed), classified Argentina and Chile in 2024 as countries with a "narrowed" civic space, while Bolivia was classified as having "obstructed" civic space.[52]

The trend in all three countries is towards the restriction of civic space, in many cases driven by state interests in promoting the extraction of natural resources, including minerals such as lithium, thus affecting the rights of environmental defenders. In the case of Argentina, a country with a long tradition of street mobilisation as a form of social protest in defence of rights, there have been significant setbacks since the Milei government took office, both in terms of legislation and police practices, which are of international concern. As noted above, this restriction is partly related to the government's interest in attracting short-term foreign investment, by offering extremely advantageous conditions to companies, but at great risk to communities and the environment (RIGI Law). The civic environment has been further affected by decisions such as the regulation by a decree of necessity and urgency of the law on access to information, which restricts the definition of "public information".[53] Additionally, pro-government groups, in some cases with public funding, have increasingly targeted journalists and dissidents on social networks.[54] This is compounded by the reduction of the network of *Centros de Acceso a la Justicia* (Access to Justice Centres – CAJ) under the National Ministry of Justice, which also substantially affects the possibility of access to justice, especially for those who live in the provinces or rural areas.[55]

A similar situation is unfolding in Bolivia where, paradoxically, the plurinational state, despite normative progress in the expansion of the rights of previously marginalised social groups, has adopted authoritarian traits, promoting strategies of judicial repression, persecution, intimidation and harassment against groups opposed to state intervention programmes (Tapia & Chávez, 2020), raising the concern of the international community.[56]

In both Argentina and Bolivia, the situation of individuals and organisations defending environmental rights that oppose government-promoted lithium development plans could worsen, and the processes of judicial persecution and demobilisation could intensify, during a period marked by the expansion of transnational interests in the most important lithium deposits. In the case of Chile, the outcome will depend on the political direction of those who take office in 2026. However, given the state's interest in lithium development and the growing awareness and mobilisation of communities in defence of their rights, it is not unlikely that Chile may face a scenario similar to that seen in Argentina and Bolivia.

52 See: https://monitor.civicus.org/

53 Decree 780/2024, available at: https://www.boletinoficial.gov.ar/detalleAviso/primera/313139/2024090

54 See: https://revistacrisis.com.ar/notas/las-milicias-digitales-de-la-ultraderecha

55 Of the 110 centres that were in operation, 86 have been closed. "Sin acceso a la justicia: el gobierno cierra 81 CAJ en todo el país" (Without access to justice: the government closes 81 CAJ nationwide), *Tiempo Argentino*, 10 June 2024. Available at https://www.tiempoar.com.ar/ta_article/acceso-justicia-gobierno-cierra-caj/

56 This situation has been observed in at least seven reports addressed to the Bolivian state by international bodies, including the UN, Special Rapporteurs, IACHR, and the Interdisciplinary Group of Independent Experts for Bolivia (Cantoral, 2024).

3. Rights of Indigenous Peoples

Given that the high Andean salt flats where lithium is extracted in ABC are territories traditionally and currently occupied by various indigenous peoples, where these communities sustain their economies, ways of life and cultures, the activities of the lithium companies operating there have impacts on these populations that require analysis.

In each context, to different degrees, depending on how long the lithium companies have been operating, their community engagement strategies and the regulations and policies in force, there have been abuses of the rights of indigenous peoples, as recognised in the legal systems of all three countries. There have been severe infringements of their rights of ownership over the lands and territories traditionally occupied by them, which have been left unprotected by the states, particularly in the cases of Argentina and Chile, where the lack of recognition and legal titling mandated by *ILO Convention No. 169* has facilitated the installation of lithium companies. Other rights of indigenous peoples most affected by this activity include the rights to participation, consultation, consent and self-determination. They also include the rights to benefit-sharing and compensation for damages. This section analyses the main adverse effects of the development of the lithium industry on the rights of indigenous peoples.

3.1. Participation, Consultation, Consent and Self-determination

Except in exceptional cases, lithium operations in the Andean salt flats have not been the subject of consultations with the indigenous peoples who may be directly affected, in good faith, in an appropriate form and with the objective of achieving agreement or consent, as required under Articles 6(2) and 15(2) of the *ILO Convention*. In the few cases where consultation processes with indigenous peoples have been carried out in relation to state-approved lithium operations, appropriate mechanisms to ensure free, prior and informed consent have not been used. According to the standards of the IACtHR (discussed in Chapter IV), such consent must be sought by states in cases involving large-scale development or investment projects that would have a major impact on indigenous territories (*Case of the Saramaka People v. Suriname*, 2007).

In Argentina, the national Constitution, as well as *ILO Convention No. 169* (ratified by the state), require the implementation of free, prior and informed consultation processes in order to obtain the consent of the communities affected by extractive projects. However, the absence of a national law setting out clear parameters allows the various provinces to pass legislation or implement procedures that fail to comply with the minimum standards. This is the case when decisions are made without consultation or consent.

In relation to lithium mining, the most well-documented cases of non-implementation or inadequate implementation of this right concern the province of Jujuy. In the Salar de Olaroz, the aforementioned study conducted by FARN assessed the impact of lithium mining operations on two communities. By retracing the process through which community consent to start lithium extraction was obtained, the study found, among other issues, that the state was not present during the process, as required by *ILO Convention No. 169*. As a result, negotiations were carried out directly between the companies (Sales de Jujuy and Exar) and the communities, without any state oversight. The meetings did not meet minimum standards in terms of timing, form, or intercultural respect.

Workshop with indigenous communities from Argentina, Chile, and Bolivia affected by lithium. San Pedro de Atacama, September 2024. Photo: José Aylwin

The communities did not participate at any stage in project design or in the monitoring of project impacts. As noted in the study, the extreme material needs of the communities created a highly asymmetrical relationship. In addition, in order to obtain consent, the companies committed to carrying out infrastructure works and distributing resources that are in fact obligations of the state (FARN, 2019). In other words, the initial lack of state presence in these communities clearly worked in favour of the companies' interests. Moreover, the role played by various state agencies in promoting a "pro-mining" discourse was another key factor in securing the communities' consent to the project (Pragier, 2019).

The Salinas Grandes-Guayatayoc basin is another geographical area that has attracted the interest of lithium mining companies. However, in this case, the process was different. In 2010, local indigenous communities formed a political board which, using various mobilisation, legal and communication strategies, resisted the arrival of the companies, and demanded that the consultation processes align with international standards. Among other issues, the communities composing this board argued that the basin should be considered as a single space, so that consultation and potential negotiation should be collective. These communities developed general principles and implementation principles that should guide a respectful and intercultural consultation and consent process (Indigenous Communities of the Salinas Grandes and Laguna de Guayatayoc Basin, 2015). However, the provincial government responded with a series of measures, such as the creation of the Secretariat of Indigenous Peoples, aimed at concentrating decision-making power over consultation processes.

Similarly, the reform of the impact assessment procedure for mining activities, enacted through Decree 7,751 of February 2023,[57] distorted consultation procedures by limiting them to communities unilaterally identified as "affected", in breach of *ILO Convention No. 169* and the *Escazú Agreement*. Moreover, the reform went against the

57 Available at: https://boletinoficial.jujuy.gob.ar/wp-content/uploads/2016/Boletines/Varios/Dto.%207751-DEyP-2023.pdf

proposal of the communities to consider the entire water basin as a single affected unit.[58] Following this decree and the reform of the provincial constitution in July 2023, and after more than ten years of resistance, the companies, with the complicity of the provincial government, began to obtain the first consent agreements from some communities in the basin.

This included the Lipán community, which in November 2023 gave its consent to Lition Energy (owned by Pan American Energy) and the state-owned enterprise JEMSE to begin exploration on its territory. Lition Energy obtained this permission through non-transparent mechanisms, including an irregular assembly. As a result, the process is now the subject of legal action. Despite this, the company's installation in the territory was not halted (Delfino, 2024). In June 2024, the community of Rinconadillas, in the Laguna de Guayatayoc, which had previously opposed the mining projects, also gave its consent to Tecpetrol, following an assembly held in breach of standard procedures, the validity of which has also been questioned by sectors of the community (Correa & Delfino, 2024).

The Province of Jujuy also failed to respect consultation procedures with indigenous peoples during the crucial reform of the Provincial Constitution in 2023. As noted above, this reform aimed to facilitate the establishment of extractive projects on community territories or public lands, weakening environmental safeguards and excluding those related to participation and consultation. Furthermore, the process of adoption of the reform, which affects the vital interests of the communities, did not include spaces to inform or engage in dialogue with indigenous peoples. In the words of one representative, this step was "completely ignored" (International Federation for Human Rights, 2024). The Office of the UN High Commissioner for Human Rights echoed this assessment, noting that the reform process "lacked meaningful and sufficient participation of all stakeholders, in particular indigenous peoples" (UN, OHCHR, 2023). After an expediated debate lasting less than a month, the constitutional reform was approved on 20 June 2023, giving rise to a series of protests that were violently repressed (CELS, 2023).

As detailed in Chapter III, in the case of Bolivia, the lithium development agenda has been the subject of more than half a century of studies, plans, negotiations, and social conflicts (see, for example, Iño Daza, 2017). However, the progress of the programmes proposed by the state during the plurinational period reveals the challenges of developing an industry of this scale relying solely on public investment. These challenges are related to a series of limiting factors or obstacles, including access to or development of an adequate technology for lithium salt extraction; the specific characteristics of the Salar de Uyuni, such as its high concentration of magnesium; access to energy sources; and poor governance, including relations with local communities (Olivera, 2017; Obaya, 2019; Zuleta, 2022).

The social dimension of the implementation of this investment programme by the Bolivian state has been addressed in various studies, most of which focus on the territorial dynamics resulting from the establishment of the industry and its possible links with the value systems of these communities, how they participate in the implementation of these projects, and their impacts within

58 In August 2024, the communities of the basin and a group of civil society organisations filed a petition with the Jujuy province Supreme Court requesting that Decree 7,751/23 be declared unconstitutional. See: https://www.cels.org.ar/web/2024/09/solicitamos-a-la-justicia-de-jujuy-que-declare-la-inconstitucionalidad-del-decreto-7751-2023/

Meeting between representatives of communities from the Salinas Grandes and Laguna de Guayatayoc basin and members of human rights organizations. Jujuy, Argentina, May 2025. Photo: CELS team

the territories (see, for example, Sánchez-López, 2019; Romero, 2018; Calla et al., 2014). Although these studies do not contain an in-depth analysis of the impacts of state lithium projects on the participation and consultation rights of indigenous peoples in Bolivia, they do provide important data on the relationship between the state programme and social actors during the first ten years of implementation.

The territorial dynamics in the southwest of Potosí, where lithium production sites are located, reveal precedents from the community experience of poor agreements with external companies and institutions. A common trend in these experiences is the cyclical recurrence of two types of situations. On the one hand, the possibility, despite some difficulties, of establishing agreements with external actors, such as mining companies, private hoteliers and quinoa traders. On the other hand, disappointments, deception, failure to fulfil commitments, actions not covered by the agreements, unforeseen disasters, internal conflicts with authorities due to inexperience in negotiating agreements, adverse impacts of agreements on vulnerable groups within the same communities, among other issues (see, for example, Olivera, 2017; Muriel & Fernández, 2014; Nielsen et al., 2003). Experiences in the tourism sector provide important lessons about the forms of community participation, interactions with external actors, links and disagreements with the private business sector, the role of the state, etc.[59]

In the case of Bolivia, it is essential to consider the historical experience of communities and actors in the region in other sectors, such as conventional mining, quinoa and tourism, in order to identify possible trends in the management of social participation in the development of agreements with external actors, particularly in relation to

59 Some of these agreements include the transfer of community land for the construction of hotels or the use of fresh water in exchange for road maintenance, local development projects and other forms of compensation for the use of community spaces. In general, these agreements are not fulfilled, which leads to increased conflict.

access to, use and distribution of benefits derived from the exploitation of natural resources (such as lithium) and common goods (such as water). The southwest of Potosí is characterised by a high level of political, social and productive organisation. Community leaders and members analyse and monitor agreements in detail, to the point of having developed a collective opinion on agreements made with external actors. Other historical characteristics include: a certain pre-eminence of economic rights, productive vocations and rent capture from the exploitation of natural resources for the region; disinterest or disregard by companies in relation to risk and negative impacts on biodiversity and community livelihoods; significant inequality in access to strategic information; breaches of compensation agreements; problems with access to and availability of water for human consumption (Romero, 2019; Olivera, 2017; Calla et al., 2014; Ströbele-Gregor, 2012).

This context forms the background to the following analysis of the signs and evidence of violations of indigenous peoples' rights caused by the expansion of lithium salt production facilities. As discussed in more detail in previous chapters, in Bolivia, the defence of land, territory and natural resources, as well as broader demands for respect for the rights of indigenous peoples, have mobilised their representative organisations for decades. Since the historic march of indigenous peoples from the lowlands in 1990, more than ten indigenous marches have been organised in the country. These efforts led, starting in 1991, to the consolidation of the regulatory framework that supports the processes of Free, Prior and Informed Consultation (FPIC) and respect for territorial rights through land regularisation and titling: the Community Lands of Origin (TCO), under the 1996 Law on the Creation of the National Institute for Agrarian Reform (INRA Law), now known as Indigenous Native Peasant Territories (TIOC). Currently, the state of Bolivia recognises, protects and guarantees individual and communal land ownership (Constitution 2009, Articles 393-403). In addition, mention should be made of Law No. 073 on Jurisdictional Demarcation, passed in 2010, which regulates Indigenous Native Peasant Jurisdiction, the Framework Law on Mother Earth and Integral Development, No. 300 of 2012, and Supreme Decree No. 4,719 of 2022, which aims to consolidate the ancestral status of Indigenous Native Peasant Nations and Peoples over their lands.

The Inter-Salar region (between the departments of Oruro and Potosí), where the Uyuni and Coipasa salt flats are located, has been part of the struggles to defend land, territory and natural resources. Today, there are nine indigenous territories in this region directly linked to the salt flats that are being exploited, piloted and explored, five of which already have a title recognised by the Bolivian state. Among these indigenous territories, the *Central Única Provincial de Comunidades Originarias de Nor Lípez* (CUPCONL) TIOC is the closest to the main YLB facility, in the province of Nor Lípez, south of the Salar de Uyuni. The Nor Lípez TIOC is not only the largest in the Altiplano subregion, but also in the entire country, with 1.99 million hectares of land titled. This indigenous territory is also registered as the Lliphi indigenous people, with ownership held by the CUPCONL.

Although, as previously mentioned, Bolivia approved and ratified *ILO Convention No. 169* in 1991, when work began on the lithium pilot plants in the Salar de Uyuni in April 2008, during the first term of President Evo Morales' government, there was still no Bolivian regulatory or procedural framework for implementing prior consultation in the mining sector. Law No. 1,777 (Mining Code) of 1997 made no mention of prior consultation. Despite this procedural gap in the period prior to the enactment of the Mining and Metallurgy Law (No. 535), Bolivia already had a Regulation on Consultation

Peaceful mobilisation by the Río Grande community, requesting compliance with the prior, free, and informed consultation regarding the drilling of underground water wells located within the Río Grande community territory. Photo: Donny Ali Flores, 2024

and Participation for Hydrocarbon Activities (Supreme Decree No. 29,033 of 2007).

Between 2015 and 2016, contracts were signed for the construction of the industrial potassium chloride plant and the design of the lithium carbonate plant in the Salar de Uyuni. By that time, there was already a sufficient regulatory framework in place to carry out prior consultation processes, beyond the participation provisions in the Law on the Environment. For example, the 2009 Constitution (Article 30) and the 2010 Electoral Law (Article 39) include specific mandates. In addition, a 2015 regulation on observation and accompaniment of prior consultation processes[60] provides for "prior consultation processes *convened by the Plurinational State*, through public institutions, *on a mandatory basis and prior to decision-making* regarding the implementation of projects, works or activities related to the exploitation of natural resources" (Article 1, emphasis added).

Despite this, there is no record of any FPIC process, as mandated by *ILO Convention No. 169*, with the indigenous communities of Uyuni in relation to lithium, for the construction of evaporation ponds or lithium salt processing plants in the so-called "industrial" phase. According to local accounts, there has been no proper consultation process with indigenous peoples, but rather "socialisation" events, on the one hand, and public consultation processes, on the other, carried out within the framework of Environmental Impact Assessments. Given that there are indigenous territories within and adjacent to the areas reserved for YLB facilities, there is no doubt that this company's activities in the area directly affect the communities living there. This clearly constitutes a violation of the right to consultation recognised in *ILO Convention No. 169*.

It should be noted that indigenous communities partially participated in the public consultation processes carried out as part of the Environmental Impact Assessments. Despite this, the community demands and claims raised during these events were not effectively taken into

60 Approved by Resolution No. 118 of the Plenary Chamber of the Plurinational Electoral Body of Bolivia on 26 October 2015.

account in the decision-making process on the project (Romero, 2019). There are doubts about the effective applicability of the proposals made in these participatory events, which take place in a context of unequal power relations among participants, between those who provide or narrate the information and those who listen, as well as between those who possess and understand the information and those who lack sufficient analytical tools or technical support to interpret what is being communicated. This situation of inequality or imbalance in decision-making, and the use of this type of legitimacy-building event, are characteristic of the extractive and mining sector (see, for example, Li, 2017).

Participatory processes implemented in Bolivia for lithium exploitation have mostly taken place in so-called "socialisation" spaces. These events have been aimed at promoting the activities of the state programme unilaterally, without any possibility of consultation, deliberation, and even less, challenge. In this way, social participation has been limited to attendance at presentations and passive support from grassroots organisations, which are generally aligned with the political leadership of the *Movimiento al Socialismo* (Movement for Socialism – MAS), Bolivia's ruling party since 2006.

Consultation and participation are part of the social fabric of this region. There is a significant history of self-organisation and development planning from an endogenous development perspective, promoted, for example, by FRUTCAS, the representative body of the southwest Potosí region. Demands for participation are evident and have intensified following the lack of impact of the high level of mobilisation of social actors in Potosí, including the departmental political centre, on the draft Lithium Law.[61] This process stalled in the Legislative Branch, where a regulatory framework was unilaterally established in line with the expansion plans of mining companies, now in partnership with transnational actors. As a result, there is scepticism and mistrust among the peasant and indigenous communities who may be affected by lithium mining expansion with regard to the exercise of their rights to participation and consultation.

In Chile, despite the entry into force of *ILO Convention No. 169* in 2009 and the enactment in 2013 of regulations governing the right of indigenous peoples to consultation (both in the context of the Environmental Impact Assessment system for investment projects and in general in relation to administrative and legislative measures that may directly affect them),[62] until recently, none of the lithium development projects in the Salar de Atacama had been subject to a consultation process with indigenous peoples, despite a proliferation of lithium exploration and exploitation projects.

As noted in Chapter V, the absence of consultation is largely due to the fact that, according to the provisions of the regulations governing implementation of *ILO Convention No. 169*, the right of indigenous peoples to consultation is limited to projects that have a "significant impact". In such cases, applicants are required to carry out an Environmental Impact Assessment (EIA), whereas for projects not deemed to cause significant impacts, applicants are only required to submit an Environmental Impact Statement (Articles 10 and 11 of the General Foundations Law on the Environment). Several of the

61 For a comparative analysis of the proposals contained in the preliminary draft Lithium Law, see Solón (2024).

62 Supreme Decree No. 40 of 2013, issued by the Ministry of the Environment, which establishes the Regulation on the Environmental Impact Assessment System (Articles 85 and 86); and Supreme Decree No. 66 of 2013, issued by the Ministry of Social Development.

lithium mining projects in the Salar de Atacama that have been through the Environmental Impact Assessment system have done so with a statement rather than an assessment, thus avoiding consultation with the Atacameño or Licknanantay people.

Other contracts not subject to consultation include those entered into by the *Corporación de Fomento de la Producción* (CORFO), the lithium mining rights holder in the Salar de Atacama, with the companies operating there, Rockwood Lithium (now Albemarle) in 2016, and SQM in 2018, for the leasing and extension of operations. In the first case, the contract extends until 2043, and in the second, until 2030. A critical omission in this regard was the absence of a consultation process in the context of the signing of agreements between CORFO and SQM in 2018. As a result of the failure to consult on this second contract, the *Consejo de Pueblos Atacameños* (Council of Atacameño Peoples – CPA) filed a constitutional claim to enforce this right, which was rejected by the courts. This led to the submission of a petition with the IACHR to demand enforcement of this right, which is still pending (Aylwin, Didier & Mora, 2021).

In recent years, however, several consultation processes have been carried out, both for projects already operating in the Salar de Atacama and for new lithium mining projects proposed in the Salar de Atacama and the Salar de Maricunga. In the case of the Salar de Atacama, the Atacameño or Lickanantay people have experienced various indigenous consultation processes of differing nature, at the national, regional and local level, covering different instruments, such as legislative or administrative measures, including investment projects. With regard to lithium, the first of these processes took place in 2023 and concerned the distribution of contributions established in the 2018 CORFO-SQM contract to the Atacameño communities, which had not been distributed at that time. It should be underlined that this consultation process was the result of an application for constitutional protection brought by the Atacameño communities themselves, which they won in court, and was not the result of a decision by the state administration.

In addition, there is an ongoing consultation process in relation to CORFO's contracts with Codelco and its subsidiary Codelco-Tarar for the lease and operation contracts corresponding to the *Empresa Nacional del Litio* (National Lithium Company – ENL), for the years 2025-30 and 2031-60, also mentioned in previous chapters. Finally, in 2023, the indigenous consultation process began for the Environmental Impact Assessment entitled *Plan de Reducción de Extracciones en el Salar de Atacama* (Plan for the Reduction of Extractions in the Salar de Atacama), led by SQM, one of the two companies currently extracting lithium-rich brine in the Salar de Atacama.

In the case of Colla territory, the first consultation process was initiated by the environmental authority in the context of the Environmental Impact Assessment of the Blanco Project, promoted by the mining company *Salar Blanco* (Lithium Power), which has since been acquired by the state-owned enterprise Codelco in the Salar de Maricunga. This consultation process, carried out in 2019, was limited to one Colla community (Diego de Almagro) and excluded other communities in the territory, such as the Pai-Ote community, leading to a challenge by the Pai-Ote community before the environmental court. Indigenous consultation processes are also underway in relation to Special Lithium Operation Contracts (CEOLs) for the Salar de Maricunga and the Aguilar, Infieles, Las Parinas, Grande and La Isla salt flats, all located in the Atacama Region. In this case, the public entity responsible for these processes is the Ministry of Mining and the *Empresa Nacional de Minería* (National Mining Company – ENAMI).

Despite these consultations, various problems have been identified in their implementation. On some occasions, communities directly affected by the projects have been excluded from the consultation process. This is the case with the consultation on the Blanco Project for lithium development in the Salar de Maricunga, from which, as mentioned, the Colla Pai-Ote community, which has both historical and ongoing occupation of the salt flat for pastoral activities, was excluded.[63] In addition, the simultaneous development of multiple consultation processes in the same territory with the same communities creates confusion and prevents communities affected by lithium development projects from participating adequately to represent their views and interests in relation to measures taken in projects that may directly affect them (Mora, Campos & Cayo, 2024).

Finally, as a result of limitations in Chile's current regulations on the right to consultation regarding investment projects with environmental impacts (Supreme Decree No. 40, 2013), according to which if no agreement is reached on the measure which is the subject of consultation, it is considered completed, none of the consultation processes carried out in the context of the lithium industry have respected the right of indigenous peoples – in certain cases, such as large-scale projects – to free, prior and informed consent.

In conclusion, most of the operations of lithium companies in the Andean salt flats of ABC have not been subject to consultation with the indigenous peoples inhabiting the areas, and that when consultations have taken place, they have not been properly conducted to obtain the free, prior and informed consent of the communities directly affected through appropriate mechanisms, with the participation of the states, and in good faith. It follows that the right of these peoples to self-determination and autonomy, recognised in the *UN and American Declarations on the Rights of Indigenous Peoples*, as well as the right to determine development priorities, as provided for in *ILO Convention 169* (Article 7.1), have not been respected. This constitutes a serious omission by the three countries, which are thus failing to fulfil their obligations under international treaties and legal frameworks, which in all cases have been given superior status in their domestic legal systems.

3.2. Benefit-Sharing and Compensation for Damages

Another indigenous right that has been clearly overlooked in the development of lithium exploitation in ABC is the right, recognised under international standards applicable in the three countries, to participate in the benefits derived from the exploitation of minerals located within their territories of traditional use and occupation. Added to this is the absence of compensation for these peoples for the serious damage caused by the mining companies, particularly with regard to the environment and water.

In the case of Argentina, neither the state nor companies consider indigenous communities as rights-holders entitled to participate in the benefits obtained from economic exploitation in their territories or to receive compensation for the resulting social and environmental sacrifices. The historical dispossession of land and legal uncertainty in land tenure, on the one hand, and the absence of prior consultation and consent processes, on the other, have been key factors in this disregard: indigenous communities were considered to have no rights to the land, therefore they were not to

63 This led to a legal complaint being filed with the Antofagasta Environmental Court..

be consulted, and much less was their share in the benefits envisaged. Paradoxically, when basic rights were recognised at constitutional level and through framework legislation in the 1980s and 1990s – meaning that legal foundations were in place to advance the effective recognition of these rights – the growing interest of mining and hydrocarbon companies to expand into lands traditionally occupied by indigenous peoples (and the interest of provincial governments in promoting these processes) began to operate as an insurmountable obstacle to the effective fulfilment of these rights.

In this context, negotiations between companies and communities have not followed a rights-based logic of benefit-sharing, but rather a logic of corporate handouts aimed at securing consent, thereby rendering participatory processes meaningless. The poverty of indigenous communities is a key factor in understanding the asymmetrical position in which they find themselves. Jobs, economic benefits for certain leaders, or the construction of basic infrastructure neglected by the state (schools, roads) are the types of incentives that companies are willing to offer in exchange for consent.

An exception to this pattern can be seen in some cases of tourism ventures in which communities are involved, generally through the management of activities or through the payment of a fee. These cases involve a few communities that have managed to obtain surface-level land rights, meaning that activities carried out on the land surface require the involvement of the communities. However, the situation is different for sub-surface natural resources, such as lithium salts, over which the rights of communities have not been recognised. At best, companies seek to reach an agreement to enter and set up operations through the above-mentioned strategies, which were used in the Salar de Olaroz by Sales de Jujuy and Exar, offering infrastructure works and the distribution of resources that are obligations of the state.

In the case of Bolivia, in the southwest of Potosí, where lithium production sites are located, experiences of communities in their relations with mining companies and other external actors, including those in the tourism and agricultural (quinoa) sectors, have generated a number of lessons learnt. Although communities in this part of Bolivia have a high level of political, social and productive organisation, problems persist in their relations with companies involved in the development of lithium in the Salar de Uyuni. This continues to hinder the realisation of the rights to participate in the benefits generated by this industry, as well as to compensation for the damage it causes, rights that are often violated through distortion of and non-compliance with agreements with the communities.

The most significant case is that of the Río Grande Community (Nor Lípez Province, Potosí), whose population is located closest to the lithium mining operation in the Salar de Uyuni, currently operated by YLB. In the first stage of the state-run programme, which began in 2008, this population had a distant relationship with the government administration. As noted, although informational meetings were held about the company's operations, these cannot be considered effective socialisation processes, let alone prior consultation (Olivera, 2017).

Later, this relationship changed when the state-owned enterprise needed a water source for its initial facilities and salt production phases. In 2014, an agreement was signed[64] between the company and the community, which authorised the use of a

64 Agreement framed within the concept of a direct relationship between the company and the community, and what would be referred to as "the achievement of a social license," in the form of an informal agreement; that is, not framed within environmental regulatory frameworks or prior consultation mechanisms.

freshwater source for this purpose. As part of the company's policy, a contract was signed with a local company (Delta), in which all members of the Río Grande community are associated, for the provision of transport services and additional materials for YLB (Argento, 2018).

In April 2024, a decade after the initial agreement, the Río Grande community decided to take action, marching and blocking access to the lithium plant in Uyuni and the Potosí-Oruro railway line in protest at the failure to comply with the agreement signed years earlier.[65] Among the issues of concern to the community was the termination of the contract with Delta, a blow to the economy of families who depended on this income. In addition, there were protests against the company's failure to consult the community about the drilling of water wells, which threatened the livelihoods of the population and other economic activities, including *vicuña* livestock farming and wool shearing.

According to information provided in 2024 by the Río Grande community, although the population authorised the use of water from the San Jerónimo spring, YLB allegedly dug wells for extraction using power generators and 8- and 10-inch pipes, which are larger than agreed. In addition, YLB intended to drill 13 additional wells, which led to protests by local residents. Furthermore, YLB failed to fulfil other commitments, such as reforesting the area where water is extracted and building four drinking troughs for *vicuñas*, of which only one has been completed. The community's distrust was also fueled by the designation of estancias (rural settlements),[66] sources of fresh water – such as La Chincha– as Public Reserves. As mentioned above, the status of Public Reserve has been used to circumvent the state's obligation to hold prior consultations, allowing it to intensify the use of land and aquifers in line with the needs of its operations.

On 13 April 2024, after a period of negotiation, the terms of which were imposed by YLB, a new agreement was signed between the company and the Río Grande community (Ibáñez, 2024). It was in this context, as mentioned above, that members of the community's Mobilisation Committee reported being intimidated, both through threats of arrest warrants and lawsuits and through the initiation of legal proceedings for damages suffered by the state. This example of the Río Grande community illustrates the obstacles preventing both fair sharing of the benefits generated by the lithium industry in Uyuni and compensation for the damage caused by this activity.

In Chile, until recently, the lithium industry developed its operations in the Andean salt flats without considering any form of benefit-sharing or compensation for the damage caused by these operations. Particularly noteworthy is the case of the Salar de Atacama, where lithium operations, as mentioned above, have been ongoing for several decades. With the exception of limited agreements proposed by the companies,[67] it was only in 2016 that a genuine agreement was reached between one of these companies (Rockwood Lithium,

65 *Noticias Fides* (2024).

66 *Estancias* are areas of transhumance for local populations, used for the seasonal rest of families and the movement of llama herds, according to the annual calendar.

67 One such agreement was that signed by Rockwood (predecessor of Albemarle) with the Atacameño community of Peine in 2012, in the context of an EIA for a project to increase brine extraction and install solar evaporation ponds. The agreement provided for an estimated USD 200,000 per year to be transferred to the community. Another such agreement was proposed by Lithium Power, in the context of the EIA process for the Blanco Project, located in the Salar de Maricunga, to contribute 0.3% of annual sales, with a minimum of USD 300,000, to three Colla communities in the Salar de Maricunga (see Carmona, 2023).

The Peine community explains the impacts of lithium operations in the Tilopozo wetlands at the Salar de Atacama, Chile, September 2024. Photo: Juan Carlos Cayo

predecessor of US-owned Albemarle), which provided for the Lickanantay people to share in the benefits of lithium mining.[68] This agreement was signed by the company with the *Consejo de Puebos Indígenas* (Council of Indigenous Peoples – CPA) and the 18 indigenous communities that comprise it. Despite its confidential nature, it is known that the company committed to providing the Council and its member communities with a contribution of USD 70,000 each. The transfer of resources depended on the environmental rating of the project *Modificaciones y Mejoramiento del Sistema de Pozas* (Modifications and Improvements to the Well System), which was then under review. If the *Resolución de Calificación Ambiental* (Environmental Rating Resolution – RCA) was unfavourable, from 2017 onwards the company's total annual contribution to the CPA and the communities would be 51,894 *Unidades de Fomento* (Chilean inflation-indexed monetary unit – UF).[69] If the resolution was favourable – as was the case – starting in 2018, the contribution would be 3% of annual sales of lithium produced from brine extraction at the company's Salar plant. The distribution of the funds between the CPA and the communities was to be determined by the communities themselves. In addition, the agreement provided for the transfer of 0.5% of annual sales to the CPA to finance studies, plans and indigenous entrepreneurship projects, as well as annual amounts for grants and to finance projects of irrigation associations (Carmona, 2023).

The agreement also recognises the fragility of the salt flat ecosystem and the communities' interest in protecting water resources, establishing an environmental monitoring system with the participation of the CPA communities.

The 2018 agreement between CORFO and SQM, authorising SQM to continue operating in the Salar de Atacama until 2030

68 This refers to the 2016 *Convenio de Cooperación, Sustentabilidad y Beneficio Mutuo entre el Consejo de Pueblos Atacameños, Comunidad Atacameña de Río Grande y otras y Rockwood Litio Ltda.* (Agreement on Cooperation, Sustainability and Mutual Benefit between the Council of Atacameño Peoples, the Atacameño Community of Río Grande and others, and Rockwood Litio Ltd – Albemarle-CPA Agreement).

69 As of 1 March 2025, the value of the UF was 36,663 Chilean pesos, approximately USD 35.

and granting SQM higher extraction quotas under a lease arrangement, is also relevant. According to this agreement, which was not subject to consultation and is therefore challenged by the CPA, SQM committed to contribute between USD 10 and 15 million annually from sales of products derived from the salt flat brine, to state-recognised communities in the basin, for investment and development projects that promote their sustainable development. The fluctuation between the two figures, with a cap of USD 15 million per year, depended on the sales prices obtained by the company for these products. The contributions, to be disbursed upon fulfilment of requirements established by the company, would be channelled through foundations that promote investment in the Atacama La Grande ADI, whose statutes include mechanisms for governance and appropriate use of resources (Aylwin, Didier & Mora, 2021). Finally, and subsequent to the benefits envisaged in the CORFO-SQM Agreement, in 2020 SQM signed agreements with the communities closest to its operations in the Salar de Atacama (Camar, Toconao and Talabre) (Carmona, 2023). The Camar agreement, which is confidential, was concluded in the context of a sanctioning procedure by the environmental authority (SMA) against the company for environmental infringements in its operations.

As noted above, this agreement was challenged by the CPA due to a lack of consultation, which highlights the shortcomings of the private agreements reached to date between companies and communities affected by lithium development in Chile.

In conclusion, based on the information gathered in this research, it is clear that lithium development to date in ABC has been carried out with serious violations of human and environmental rights, particularly affecting indigenous peoples who have been inhabiting the high Andean salt flats that constitute their traditional territory since time immemorial. This situation is in blatant contradiction to the international obligations that the three states have undertaken by adhering to treaties that protect the rights of indigenous peoples, as well as the rights of environmental defenders. It also contradicts the globally accepted principles on corporate responsibility in the field of human rights, which have been accepted not only by states but also by most companies, including state-owned enterprises, that exploit lithium in the Andean salt flats. It is therefore deeply concerning that these rights are not considered as a fundamental part of lithium development plans and policies in ABC, especially in light of the growing interest of states in exploitation of lithium to meet increasing international demand in the context of the so-called energy transition.

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