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Complexities of Community Consultation in Chile's Lithium Industry

Isabella R. Whelan

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Complexities of Community Consultation in Chile's Lithium Industry

An Honors Thesis
Presented to
The Faculty of the Department of Global Studies
Colby College
In partial fulfillment of the requirements for the
Degree of Bachelor of Arts
By Isabella Whelan
Waterville, Maine
April 27, 2023

Examined and Approved on

By
Advisor
Department Chair

Reader 1
Abstract

Echoed by November’s COP27 in Egypt, the climate crisis has become an increasingly pressing and global issue, with the need to move away from fossil fuels more urgent than ever. In attempts to decarbonize the global economy, many countries and companies have turned to electrification—particularly within the transportation sector, one of today’s largest contributors of greenhouse gasses. A crucial component of energy storage and batteries is lithium, now considered a “critical mineral.” Demand for lithium has skyrocketed in recent years and is only expected to continue growing. More than fifty percent of the world’s lithium supply is found within Chile, Argentina, and Bolivia, located beneath the surface of salt flats, or “salares.” Extraction in this region—termed the Lithium Triangle—raises several critical questions about the global energy transition, including can extraction of these critical minerals, such as lithium, be mined in a just way? Who reaps the benefits of extraction and who pays the cost? Who gets to make the decisions surrounding mining? And how ecologically sustainable is extraction via evaporation of brine? These questions are explored within the context of the Salar de Atacama, a salt flat located in Chile’s Atacama Desert, which was the first site of lithium discovery and brine extraction. Globally and historically, Indigenous peoples have often borne the brunt of extractive industries. To ensure that extraction of a mineral, primarily utilized by consumers in the Global North, does not happen at the expense of Indigenous communities in the Global South, the right to and compliance with Free, Prior and Informed Consent (FPIC) is crucial. FPIC—recognized by the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and ILO Convention 169—obligates states to “obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources.”¹ Through the conceptual framing of the Just Transition, this paper analyzes how the Chilean consultation processes related to lithium mining align with four core principles of justice. Though existing literature addresses the variety of socio-environmental externalities through a range of perspectives, such as political ecology, emphasis surrounding consultation is lacking. Ultimately, through literature reviews, analysis of written policies, and interviews, Chilean consultation processes are evaluated within the framework of the Just Transition, exploring the tensions between state and corporate commitments with the lived realities of Indigenous community members.

Acknowledgements

There are many people that I would like to thank for their endless support throughout this process. Without them, this thesis would not have been possible. I first wanted to express my deep gratitude to my advisor, Professor Patrice Franko. Without her guidance throughout the past four years at Colby, I would not have traveled to Latin America or written a senior thesis. And I certainly would not have made it through this thesis process, without her patience, wisdom, time, and support. I’m so lucky to have had such an inspiring and supportive mentor during my time at Colby.

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Thank you to the Marylow Coffeehouse for providing endless, delicious, and much needed caffeinated beverages. And for the welcoming and motivating environment needed to get the words down on the page.

Finally, thank you to my friends and family for constantly listening to my unfinished thoughts, bringing me joy throughout all the chaos, and supporting me endlessly.
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## Relevant Abbreviations and Translations

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<th>Chilean Abbreviation</th>
<th>English Name</th>
<th>English Abbreviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corporación de Fomento de la Producción</td>
<td>CORFO</td>
<td>Chilean Economic Development Agency Or Production Development Corporation</td>
<td></td>
</tr>
<tr>
<td>Corporación Nacional del Cobre de Chile</td>
<td>CODELCO</td>
<td>National Copper Corporation of Chile</td>
<td></td>
</tr>
<tr>
<td>Ministerio de Medio Ambiente</td>
<td>MMA</td>
<td>Environmental Ministry</td>
<td></td>
</tr>
<tr>
<td>Bases Generales del Medio Ambiente</td>
<td></td>
<td>General Environmental Bases</td>
<td>GEB</td>
</tr>
<tr>
<td>Evaluación del Impacto Ambiential</td>
<td>SEA</td>
<td>Environmental Impact Assessment</td>
<td>EIA</td>
</tr>
<tr>
<td>Servicio de Evaluación Ambiential</td>
<td>SEA</td>
<td>Environmental Assessment Service</td>
<td>EAS</td>
</tr>
<tr>
<td>Comisión Nacional del Medio Ambiente</td>
<td></td>
<td>National Commission of the Environment</td>
<td>NCE</td>
</tr>
<tr>
<td>Reglamento del Sistema de Evaluación de Impacto Ambiental</td>
<td>RSEIA</td>
<td>Environmental Impact Assessment System</td>
<td>EIASR</td>
</tr>
<tr>
<td>Estudio de Impacto Ambiental</td>
<td>EIA</td>
<td>Environmental Impact Study</td>
<td>EIS</td>
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<tr>
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<td>DIA</td>
<td>Environmental Impact Declaration</td>
<td>EID</td>
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<td>Sociedad Química y Minera de Chile</td>
<td>SQM</td>
<td>Society for Chemistry and Mining</td>
<td></td>
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<tr>
<td>Sociedad Chilena de Litio</td>
<td>SCL</td>
<td>Chilean Lithium Society</td>
<td></td>
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<tr>
<td>Sociedad Minera Salar de Atacama S.A.</td>
<td>MINSAL</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sistema de Evaluación del Impacto Ambiental</td>
<td>SEIA</td>
<td>Environmental Impact Assessment System</td>
<td>SEIA</td>
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<tr>
<td>Comisión Chilena de Energía Nuclear</td>
<td>CCHEN</td>
<td>Chilean Nuclear Energy Commission</td>
<td></td>
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<tr>
<td>Observatorio Plurinacional de Salares Andinas</td>
<td>OPSAL</td>
<td>Plurinational Observatory of Andean Salt Flats</td>
<td></td>
</tr>
<tr>
<td>Consejo de los Pueblos Atacameños</td>
<td>CPA</td>
<td>Council of the Atacameño People</td>
<td></td>
</tr>
<tr>
<td>Consentimiento libre, previo e informado</td>
<td>CLPI</td>
<td>Free, Prior and Informed Consent</td>
<td>FPIC</td>
</tr>
<tr>
<td>Extracción directa del litio</td>
<td></td>
<td>Direct lithium extraction</td>
<td>DLE</td>
</tr>
<tr>
<td>Consentimiento libre, previo e informado</td>
<td></td>
<td>United Nations Declaration on the Rights of Indigenous Peoples</td>
<td>UNDRIP</td>
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<tr>
<td>Civil Society Organizations</td>
<td></td>
<td></td>
<td>CSOs</td>
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<tr>
<td>Just Transition</td>
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<tr>
<td>Extracción directa del litio</td>
<td></td>
<td>Direct lithium extraction</td>
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Chapter 1: Framing Lithium Extraction within the Just Transition

This thesis explores the theme of Indigenous community consultation related to lithium mining within the context of Chile’s San Pedro de Atacama, located in the northern Atacama Desert. More specifically, this chapter explores how lithium mining relates to our current climate crisis and Indigenous rights. This chapter also lays the conceptual groundwork, contextualizing this research within broader academic discussions, such as environmental justice and the Just Transition.

An Overview of the Climate Crisis

“Our planet is fast approaching tipping points that will make climate chaos irreversible. We are on a highway to climate hell with our foot on the accelerator,” exclaimed UN Secretary-General António Guterres during November’s COP27 in Sharm El-Sheikh, Egypt.\(^1\) Climate change is an increasingly urgent matter of global security and well-being, threatening places, cultures, livelihoods, public health, food systems, and national security. In February of 2021, Secretary Guterres announced that to limit global temperature rise to 1.5 Celsius, the world must cut global emissions by 45 percent by 2030, relative to 2010 levels; global emissions must peak by 2025, at the latest.\(^2\) In the context of today’s climate crisis, there is an urgent need to transform existing systems and sectors, such as energy, agriculture, infrastructure, and transportation to avoid the most catastrophic impacts of climate change. Lithium is central to this energy transition –yet, as we will see it incurs its own set of environmental and social costs.

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Decarbonization and Rising Lithium Demand

As companies and countries begin to shift away from dependence on fossil fuels—to align actions with their nationally determined contributions (NDCs) and climate legislation, such as the US’s Inflation Reduction Act—there is an increased demand for alternative sources of energy and storage to facilitate the energy transition. These renewable energy sources all rely heavily on minerals; figure 1.1 illustrates the “critical minerals” required for clean energy technologies. One critical mineral of increasing importance is lithium. Lithium-ion batteries—used to power phones, laptops, and electric vehicles—have become a crucial tool for energy storage as the world attempts to decarbonize via electrification. The transportation sector is especially crucial to the global energy transition, as there is an urgent need to reduce the footprint of the transportation sector; globally, the sector contributes to 15 percent of annual greenhouse gas emissions.³

Figure 1.1: Critical Minerals Needed for Clean Energy Technologies

| Source: IEA, 2021 |

Lithium’s many advantages have led development experts to present the mineral as a key component to unlocking a more sustainable future. These batteries have a higher power density, an advantageous small size, and are able to store energy for longer periods, relative to batteries that utilize other mineral compositions.4

As the world embraces electrification—of the transportation sector in particular—global annual lithium consumption and demand has grown rapidly, a trend that is only expected to increase as electric vehicles and energy storage systems become more widely adopted.5 The IEA’s estimates for 2040 Stated Policy Scenario (STEPS) and Sustainable Development Scenario (SDS), project EVs and battery storage account for half of the increased demand for critical minerals (out of total demand driven by the adoption of clean energy technologies).6 According to the IEA’s SDS estimations for 2040, lithium demand will increase by 40 times, the fastest projected growth rate across all the various critical minerals.7 The World Bank estimates five times the amount of lithium currently mined will be necessary to achieve global climate goals by 2050.8 As a result of this skyrocketing demand, particularly in the past two years, lithium prices rose 750% between January of 2021 and August 2022.9

More than half of the global lithium supply is located beneath salt flats, or “salares”, in Latin America; three countries—Argentina, Bolivia, and Chile—constitute Latin America’s

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5 Ibid.
7 Ibid.
Lithium Triangle.\textsuperscript{10} The region, as a result, has received increased foreign investment and policy attention, as countries such as the US and China vie for control of supply chains of renewable technologies.

**Figure 1.2 : Salt Flats in the Lithium Triangle**

![Salt Flats in the Lithium Triangle](image)

*Source: Jerez, et al. “Lithium extractivism.”*

In terms of the mining process within the context of the salt flats, companies drill holes into the salt flats, pumping the salty, mineral-rich brine water from the underground brine reservoirs to the surface. The brine mixture is left for months in rectangular ponds, while the water evaporates under the strong solar radiation unique to the desert climate – the Atacama Desert, specifically, is the driest desert in the world. What’s left is a mixture of potassium, manganese, borax, and lithium salts, which are then filtered and left in ponds to evaporate again. After a total of twelve to eighteen months, the filtering process is complete and lithium carbonate can be extracted.\textsuperscript{11} The process is illustrated below in Figure 1.3 and the evaporation ponds are


\textsuperscript{11} Harvard International Review, “The Lithium Triangle.”
demonstrated in a satellite photo in Figure 1.4. Chile is uniquely positioned within the lithium industry, as it is home to the world’s largest proven reserves, which will be explained in greater depth later.

**Figure 1.3: The Lithium Extraction Process via Brine Mining**

![Image of the Lithium Extraction Process](image)


**Figure 1.4: Aerial View of Evaporation Ponds in Salar de Atacama**

![Aerial View of Evaporation Ponds](image)

*Source: Google Maps*
The Complexities of Socio-Environmental Externalities

The catch associated with relying upon lithium to power the global energy transition is primarily the environmental degradation of the surrounding environment, echoing historical trends of exploitative extractive industries, particularly in Latin America. These salt flats, where the lithium is located, are ecologically unique and sensitive ecosystems home to rare species, such as flamingoes. The existence of the salt flats relies on limited supplies of freshwater.12 Another complicating factor is that the brine water is governed by Chile’s Mining Code, while freshwaters is regulated under the Water Code. This complicates water ownership and how the state allocates water sources to mining operations. While there is uncertainty about the exact ecological impacts of mining underground brine reservoirs, the extraction process undoubtedly uses vast quantities of water. As Balcazar et. al document, the estimates of water usage throughout the process vary greatly, from 400 liters per kilogram of lithium to 2 million liters per kilogram.13 Dr. Ingrid Garcés, a chemical engineering professor at University of Antofagasta who studies the salt flats, estimates 2,200 liters of water evaporate per kilogram of lithium produced.14 This variation in estimates reflects the lack of transparency throughout the industry and a gap in the production of scientific knowledge.

Despite the range in scientific estimates, intense water usage has significant environmental costs in such an arid climate. Ultimately, Indigenous communities in the Lithium Triangle disproportionately bear the environmental burdens of mining, which carries severe

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social, ecological, physical, and cultural implications. In a region that’s already extremely dry—receiving only four inches of rain a year—mining has very significant implications for the well-being of local communities and their livelihoods. In addition to water shortages, residents in Chile assert that mining pollutes water sources and leaves salt in the land. The resulting demands from these frontline communities’ center around the need for increased regulations of mining companies, adequate compensation, increased transparency within the industry, and enforcement of rights to consultation and consent. In our global energy transition, our use and extraction of alternative energy sources must be done in a socially responsible and just way; sustainable development in the Global North cannot happen at the expense of environments and communities in the Global South.

To ensure this energy transition is in fact just and sustainable, it is crucial that Indigenous communities are provided the right to Free, Prior and Informed Consent. Explained further in Chapter 3, the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and ILO Convention 169 articulate the inherent right to FPIC; Chile is a signatory to both. In Article 32, UNDRIP declares,

States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources. Indigenous communities within the Atacama must be provided this right to FPIC as a mechanism to ultimately exercise self-determination. To ensure justice, they deserve the right to participate in decision-making processes that impact their territory, livelihoods, and sovereignty. Indigenous

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territories cannot become sacrifice zones to propel clean and renewable energies; FPIC is a critical tool in preventing this.

This paper will investigate the complexities of sustainable development and the energy transition; it will question whether global decarbonization can truly occur— in practice, at the local level— in alignment with the principles of an environmentally- and socially-just transition. More specifically, my guiding research question is: how do the consultation processes and policies within Chile’s lithium industry reflect or fail to reflect the principles of the Just Transition?

To investigate these consultation mechanisms, interviews were conducted with individuals working within the lithium industry, experts that work with Chilean policy, members of civil society organizations (CSOs), and Indigenous stakeholders. Additionally, this project analyzed Chilean consultation policies and corporate policies and sustainability reports to explore the disconnect between policy and practice.

**Defining Key Concepts**

This section defines three key concepts, including the Just Transition, environmental justice, and Free, Prior and Informed Consent by analyzing existing literature, which will frame this research. The discussion surrounding the Just Transition is particularly critical to this investigation, as it will act as a framework to analyze the degree of consultation in lithium mining in Chile.

*Socio-environmental Externalities of Chilean Lithium Extraction*

As lithium demand and production increase globally, emerging literature has begun to address the various socio-environmental dynamics and externalities. Jerez et al. analyzes the global and local dynamics of lithium mining in the Salar de Atacama through a decolonial
political ecology, terming the current phenomenon “the colonial shadow of green electromobility.” With an emphasis on water justice, Jerez et al. argue that lithium extraction in the Salar de Atacama reflects the historical trend of extractivism, reinforcing Latin America’s “historically subordinate role in the international division of labor,” furthering structural inequality at the global level. In terms of the history of extractivism in Latin America and in Chile, examples include gold and silver during the colonial era, and copper more recently in the 1900s. Jerez et al. ultimately conclude the shift to electromobility—a component central to the green economy and a part of the Global North’s carbon mitigation efforts—perpetuates forms of colonialism and continues harmful forms of extractivism within Global South and, more specifically, within Latin America. They highlight how international climate mitigation measures emphasize carbon emissions, often failing to account for the ecological footprint and environmental justice. This is an important element in lithium extraction, as the primary externalities related to extraction are not released carbon emissions, but rather the depletion of water sources and broader ecological degradation.

In addition to the various costs of production, Lorca et al. explore how Indigenous mobilizations impact the perceptions and processes of lithium mining in the context of Chile’s Salar de Atacama. Indigenous resistance has shed light on the various externalities of the mining process, altering global perceptions and changing mining processes. Lorca et al. work focuses primarily on how the relationship between Indigenous communities and lithium mining influences the construction of Indigenous identities. For example, lithium mining brought socio-environmental transformations to the region, ultimately driving Indigenous claims for territorial

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18 Ibid.
control and mobilizing forms of resistance. Negotiating payments with mining companies has exacerbated inner community disagreements on social benefits and risks, illustrating another way mining has shaped indigeneity. In their work, Lorca et al. challenge simplistic narratives of Indigenous peoples that often present them as uniform actors, as either victims or resisters. Indigenous identity, within the context of San Pedro de Atacama, is a dynamic identity constructed through historical and current processes, including the past 30 years of lithium mining.19 Because my thesis explores the relationship between these mining companies and Indigenous communities, I believe Lorca et al.’s work is crucial to contextualize this complex and dynamic relationship. Understanding how perceptions of mining and of indigeneity are continually co-constructed in the context of the Salar de Atacama is important to avoid telling simplified narratives of the Indigenous community.

Barandiarán investigates three distinct visions of national development within the Lithium Triangle via lithium extraction, lithium as a market commodity, as a strategic resource, and finally as the center of a sociotechnical imaginary. The first vision of lithium as a market commodity is self-explanatory; global prices, reserves, projected demand, export profits are the center of discussion are metrics of focus. The second, lithium as a strategic resource, presents the mineral as a lucrative global commodity and strategic resource. Similar to oil and uranium, in this view, lithium can be used as a tool or weapon to leverage in global politics, an arena characterized by winners and losers engaged in a zero-sum battle. It was this view that prompted the US to stockpile lithium in the 50s and 60s. Chile followed suit and designated lithium with the status of “strategic national interest.” This approach characterizes many of Chile’s historical

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political actions, as will be explained in greater depth in Chapter 2. The third, a sociotechnical imaginary, presents lithium as a way to facilitate scientific and technical advancements. State actors, or other proponents, propose this new form of development as more sustainable and fair. This sociotechnical imaginary is demonstrated in Bachelet’s new approach to Chilean energy policy, as Barandiarán explains, “using language of science, the experts rejected past development plans based on dirty coal fired power plants, and projected new industries made modern by solar energy and lithium.” The language used to present these imaginaries highlights the potential opportunities that stem from new technologies. Another action Bachelet’s administration took, emblematic of this approach, was the renegotiated contract with Albemarle. This contract increased royalties and facilitated a benefit-sharing agreement with local communities; the increased royalties funded a “value-added lithium project” initiative by CORFO. These three contested views or approaches –related to how lithium mining relates to national development– are important to discuss for several reasons. It sheds light on historical approaches by Bolivia, Argentina, and Chile, and also reveals how states might approach extraction and development in the future. The strategic resource vision defines Chile’s historical approach, while the sociotechnical imaginary vision defines Chile’s future, as there is increasing talk of a state-owned lithium company.20

Each of these academic pieces inform this thesis. Jerez et al. explore lithium mining in Salar de Atacama through a global perspective, looking at how the context today reflects broader historical patterns of extractivism and colonialism. Barandiarán, on the other hand, focuses on how lithium extraction plays into state-led development at the national level. Lastly, Lorca et al. looks at the local level, investigating how mining shapes Indigenous identities and how

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Indigenous mobilizations shape perceptions of mining. This thesis will explore each scale as well—the international, national, and local scales—however, will do so through the lens of consultation rights, which is largely a gap in the existing literature.

*Unpacking the Just Transition*

The Just Transition, as mentioned above, is an increasingly relevant term, driven by demands for countries and companies to acknowledge the worsening climate crisis and the urgent need to decarbonize. As Newell and Mulvaney explain, the Just Transition is the idea that society must shift towards a low carbon future, while accounting for principles of equity and justice.21 Oftentimes the high costs of moving to clean energy are borne by local communities; in contrast, the concept of the Just Transition provides an opportunity to decarbonize the global economy in an environmentally sustainable and socially-just manner. As the term is applied—for good reason, may I add—to more initiatives and contexts, many have asserted its meaning has been lost in this “overstretching” of the concept. In light of this ambiguity, Abram et al. attempts to redefine and update the term Just Transition (JT) to operationalize the concept to analyze and evaluate the transformation of global energy systems.22

One reason this literature is particularly relevant to this discussion surrounding lithium mining is how the authors extend the concept of the Just Transition beyond issues of employment and fossil fuels; it is applied more broadly to include “the balance of costs and benefits between local and global effects, and between employment and business management; the distribution of risks; the interrelations between sectors and regions; the diversity of energy vulnerabilities; and the process and governance questions that accompany the drive towards the

whole-system decarbonization.”\textsuperscript{23} The JT within the context of lithium extraction lies outside the conventional domains of employment and fossil fuels. Instead, it requires that the costs and the benefits of ambitious climate action and decarbonization are allocated in a fair and equitable manner.

The authors explain that the JT is conventionally framed within reductionist terms, such as competition or efficiency; however, these approaches fail to challenge the interconnected and structural drivers of inequality. A reductionist approach—one that views environmental, economic, political, and cultural systems as separate—ignores the complexities and interconnectedness of socio-economic and socio-ecological problems: the result is siloed and sectoral approaches. Rather than addressing the structural root causes of inequality, technology is often seen as the solution, ultimately maintaining the “status quo” and existing power relations.\textsuperscript{24}

In contrast, a whole-systems approach views the Just Transition as a complex challenge, composed of interconnected and dynamic relationships and systems. It is a holistic approach that aims to ensure social justice as part of the sustainable energy transition, involving a variety of justice concerns and addressing inequalities at their complicated, historical, and interconnected root causes. A whole-systems approach to the JT is transformational, disrupting—rather than exacerbating—existing drivers of inequality.\textsuperscript{25}

As demonstrated in Table 1.5, Abram’s whole system approach embraces four forms of justice: procedural, distributive, recognitional and restorative.

\begin{flushright}
\begin{tabular}{l}
\textsuperscript{23} Abram et al., “Just Transition.”
\textsuperscript{24} Ibid.
\textsuperscript{25} Ibid.
\end{tabular}
\end{flushright}
Table 1.5: Defining Abram’s 4 Forms of Justice

<table>
<thead>
<tr>
<th>Form of Justice</th>
<th>Definition/Important Components</th>
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| Procedural justice     | • The process of “engaging a plurality of perspectives – in particular, those of marginalized communities and those most affected by policy decisions but often most silenced” as a “key to realizing decarbonization objectives that are adapted to local context and enjoy broad societal buy-in”  
  • The benefit is how “participatory approaches add to the multi-dimensionality of the policy and action challenge”                                                                                                                                 |
| Distributive justice   | • Accounts for “the full range of distributional consequences of climate change and decarbonization processes”  
  • Considering “issues of control and ownership”, as well as distributing benefits fairly and equitably, rather than “‘delivering’ benevolent services to deprived communities”                                                                                   |
| Recognitional justice  | • “Recognizing the importance of contextual and relational drivers of (in)justice” with “sensitivity to the lived experiences of different social groups in diverse spaces”  
  • Including “recognition that inequalities are conditioned by inter-scalar, socio-economic interactions that are often deeply embedded in global structures”  
  • Recognizing that “not all regions, countries, and communities are starting off from the same level”                                                                                                                                             |
| Restorative justice    | • This approach “moves the focus from narrow financial compensation schemes towards broader understandings of redistribution and repair,” by “first recognizing the various dimensions of loss (across different viewpoints and epistemologies) incurred by climate change and transitional policies”  
  • This will likely present “thorny questions of historical responsibility and unequal capacity”                                                                                                                                                             |

These four dimensions of justice bring application of the Just Transition beyond the reductionist approach to the whole-systems approach. This conceptualization of the JT accounts for justice across temporal scales. For example, recognitional justice acknowledges historical drivers of injustices and inequality, while distributive and procedural justice require justice to be accounted for in the present, through involvement in decision making processes and fair distribution of benefits. This conceptualization of the JT also ensures justice throughout all
stages of production, from project design via procedural justice to the unfortunate aftermath of a project-gone-wrong via distributive and restorative justice. Abram’s JT offers an overarching, comprehensive framework to evaluate various JT initiatives and applications. 26 These various forms of justice and their origin story within the environmental justice movement will be explained in greater depth in the following section.

    The application of Abram’s definition of the Just Transition to this specific context in Chile, raises questions such as who benefits from lithium extraction and who suffers the harms of the resulting environmental degradation, and who determines relevant policy? Decarbonization, in this framing, becomes an opportunity to facilitate an ecologically-sustainable and socially-just future.

    Environmental Justice

    Though Abram et al. provides definitions for the four principles of justice, I believe it is important to provide further clarity and contextualization. Through exploring Schlosberg’s work, his section expands on the origins and definitions of three of these principles. Schlosberg argues that previous definitions of ‘environmental justice’ are incomplete, as they focus solely on the distributive component of justice. In his attempt to better define ‘environmental justice’ within the global context, he builds on Rawls’ work that focuses on distribution, while claiming that recognition and participation are also crucial elements. Rawls had centralized his argument around fairness: how harms and goods are unequally distributed throughout society. Following his reasoning, equal distribution ensures justice. Schlosberg, however, adds that recognizing people's differences –such as culture, beliefs, race, legal status, socio-economic status, et cetera– is equally important to pursue justice. It is not sufficient to distribute harms and benefits evenly

26Abram et al., “Just Transition.”
across society; one must investigate the causes of the uneven distribution to address the root of the injustice. The third component of justice that Schlosberg advocates for – that will be central in this thesis – is participation: the idea that a shift is needed within political and social institutions, so everyone is able to participate. Participation, however, is contingent on the second element, recognition; one cannot participate in political and institutional processes without being recognized. In regards to participation, Schlosberg writes, “Environmental justice activists call for policy-making procedures that encourage active community participation, institutionalize public participation, recognize community knowledge, and utilize cross-cultural formats and exchanges to enable the participation of as much diversity as exists in a community.” Operating within Schlosberg’s framework of justice centered around distribution, recognition, and participation, I explore how local communities within the Atacama region can utilize participatory mechanisms to voice their concerns and demands.

*Free, Prior, and Informed Consent*

FPIC, or Free, Prior and Informed Consent is an international standard central to consultation processes and frameworks. MacInnes et al. provide the historical and legal context of FPIC, recounting the reasons for and emergence of extractive industry standards. MacInnes et al. explains the historical trend of human rights abuses against Indigenous peoples, perpetrated by extractive industries since the arrival of the Spanish. In recent decades, however, continued mining disasters and human rights abuses brought public pressure that compelled countries and the extractive industry to recognize Indigenous peoples’ right to Free, Prior and Informed Consent.

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As the authors explain, the origins of FPIC are rooted in “the principles of native title from common law, i.e. that native people have rights to their lands based on their customary law and sustained connections with the land.” Following this logic, it is not necessary for states to articulate these rights; Indigenous people already inherently possess these rights. The paper explains that the principles of FPIC have been articulated in the 2007 UN Declaration on the Rights of Indigenous Peoples (UNDRIP), the Convention on Biological Diversity, and the International Labor Organization (ILO) Convention 169. This is significant, as Chile has adopted both the UNDRIP and the ILO Convention 169, requiring the country to articulate, implement, and enforce these rights.

Though FPIC appears to be a right recognized and implemented within international and national spheres, there are compelling arguments in contemporary discourse to apply these obligations in upholding human rights (accountability or responsibility) to non-state actors, such as multinational corporations. In 2011, the United Nations Guiding Principles on Business and Human Rights (UNGP) demanded corporations recognize and uphold human rights, despite domestic state norms. Besides the moral case to respect human rights, there is a business case to do so as well; by adhering to the principles of FPIC, companies will benefit from improved long-term partnerships with local communities. In contrast, by violating these rights, they risk losing their social license to operate, ultimately threatening a project’s viability and timeline. Despite the formalization of this right, there is much to be done in terms of enforcement and compliance of FPIC. As the authors astutely explained, recognition of the right to FPIC and enjoyment of this right are two very different things; there is quite a large gap between the two, which will be a central part of my research.
It is within this existing literature—that establishes the foundational principles of environmental justice, the Just Transition, and rights to FPIC and consultation—that I will situate my research investigating the Chilean consultation processes within the lithium industry. FPIC will be used as the international standard or the basis of comparison, in relation to the national and corporate policies surrounding lithium. Abram et al. principles of justice will act to operationalize the Just Transition as a method to evaluate the successes and shortcomings of consultation in Chile.

Case Selection – Why Salar de Atacama, Chile?

To further explore these concepts, including the Just Transition, environmental justice, the Indigenous right to FPIC, and various socio-environmental externalities, this research will center around the case of Chile’s Salar de Atacama. This section will explain why the Chilean context will be investigated, over other lithium-rich countries, such as Bolivia and Argentina. It will also briefly explain why this site of lithium extraction, the Salar de Atacama, was chosen.

One compelling reason to investigate Chile is the longevity of its lithium industry. The Salar de Atacama is home to the world’s first large scale lithium brine mine, which started production in the early 90s, whereas production in Argentina only took-off in the 2000s. Furthermore, although Chile has half the resource potential compared to Argentina and Bolivia, it is the second largest global producer of lithium, lagging only behind Australia. Chile provides almost one-quarter of the world’s lithium supply. As explained earlier, the extraction and evaporation process in the salt flats—uniquely characteristic within the Lithium Triangle—is

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28 Gonzalez, “Explainer.”
29 Ibid.
significantly more convenient and cost-effective than mining lithium from hard-rock deposits. As a result—and in addition to Chile’s advantageous access to the Pacific and the specific solar radiation conditions of the Atacama Desert—production costs are a third of Australia’s.³¹ For these reasons, Chile’s long history of production and its advantageous environmental conditions, Chile will be the country of study.

The country’s lithium production has historically (and continues to be) concentrated within the Salar de Atacama, a salt flat located in the Atacama Desert. Figure 1.6 demonstrates the lithium and copper mining activity in Chile’s Salar de Atacama, as well as the presence of nearby Indigenous communities. Since it began in 1993, production in the Atacama Desert has been dominated by SQM and Albemarle, a US based company. ³² SQM alone—or Sociedad Química y Minera de Chile—produces one-fifth of the world’s lithium.³³ As lithium demand increases, there are national attempts for corporate bids for new mines to open and start production throughout the country, for example, in Maricunga. For this investigation, however, it is compelling to research the socio-political context of a 30-year-old extraction site.

³¹ Gonzalez, “Explainer.”
³² Ibid.
Another compelling facet of Chile’s lithium industry is the country’s current socio-political context. Following the *Estallido Social* of October 2019—a country-wide social revolt rejecting deeply embedded national inequality—Chilean citizens opted to rewrite the constitution via a national referendum. The majority of the country voted in favor of ridding the neoliberal 1980 constitution, written and implemented during Pinochet’s dictatorship, for a fresh slate; a new constitution. The Constitutional Convention—a convention of 155 Chileans, elected to rewrite the constitution—worked on the legislation for several months. In September of 2022,

34 Sengupta and Zegers, “Chile Writes a New Constitution.”
however, the proposed constitution was rejected. Now, the country is attempting to revise the 1980 constitution for the second time. These unfolding socio-political conditions are critical to the discourse surrounding the lithium industry in Chile because they may have far-reaching consequences. There’s a lot riding on the possibility of a new constitution, such as how will mining be regulated? What will become of the Water Code that unevenly favors business interests? Will brine water continue to be regulated under the Mining Code, or instead by water policies? How are Indigenous peoples recognized and what rights are they guaranteed? Within today’s context of constitutional reform, lithium and its accompanying socio-environmental implications must be addressed. I find this context of socio-political transformation intriguing because Chile –a country with a relatively long history of extracting lithium– has a chance to redefine and regulate the extractive industry and the accompanying consultation processes. This thesis, which explores the complexities of Indigenous consultation in relation to lithium mining, is therefore situated in Chile’s Salar de Atacama.

Methods

This research relies heavily on the use of qualitative analysis to explore consultation processes, mechanisms, and practices within the lithium sector. This qualitative data was collected over January 2022, in Santiago and San Pedro de Atacama.

In Santiago, San Pedro de Atacama, and on zoom I conducted semi-structured interviews that were usually around one hour in duration. I interviewed and held informal conversations with a variety of stakeholders, relying on ethnographic and ethical research practices established within the field of anthropology. First, I began by holding informal conversations with international energy policy and sustainability experts, many based in the DC area, to better
understand how Chilean lithium mining fits into broader discussions and the global context. These discussions addressed the rise of critical minerals, the emerging race between China and the US to control EV supply chains, contrasting business climates across the Lithium Triangle, and Chile’s role in global production. Upon my arrival to Santiago, Chile, I met with a representative at CORFO, Chile’s Economic Development Agency, who explained the history of the lithium industry, relevant Chilean legislation, Chile’s environmental impact assessment, and the state partnerships with both mining companies, SQM and Albemarle. I met with other individuals, many from the world of academia, who had background experience or research expertise on Chile’s environmental impact assessment, which is tightly related to their implementation of community consultation rights.

After gaining a clearer understanding of the international and national context of lithium production, I traveled to San Pedro de Atacama in an attempt to explore the local context. San Pedro is a small, predominantly Indigenous village located in Chile’s Atacama Desert, where brine lithium mining first emerged over 30 years ago. Here, I met with and interviewed a few community members, including a geologist and activists involved with CSOs. These CSOs included the Observatorio Plurinacional de Salares Andinas (OPSAL - Plurinational Observatory of Andean Salt Flats), the Consejo de los Pueblos Atacameños (CPA - Council of Atacameño People), and the Fundación Tanti. These conversations centered around the local impacts of the lithium industry and faults in the community consultation process. While conducting this ethnographic research, I relied on previous research methods and ethics courses to ensure participation was ethical and consensual, rather than harmful.

The final week, I returned to Santiago and culminated my fieldwork by conducting several interviews with representatives of SQM and Albemarle. These interviews discussed the
There are several limitations to this research, with time as the most significant constraint. Given the limited three weeks of field work in Chile, I was not able to interview as many stakeholders or develop deep relationships as I would have liked. Additionally, because this undergraduate thesis was completed in one year, relying on three weeks of field work, there are several topics and themes not included within the scope of this research, such as a detailed history of Indigenous peoples, Chilean politics, or Chile’s history with neoliberalism.

As a result of the limited timeline to complete fieldwork in Chile, these interviews and informal conversations were complemented by qualitative analysis of various documents. First, I explored the international frameworks – UNDRIP and ILO Convention 169 – that establish standards for the Indigenous right to consultation and FPIC, or Free, Prior, and Informed Consent. Then I completed an extensive literature review to explore the history of Chile’s lithium industry and relevant legislation, which supplemented many of the interviews I conducted in January. The next step of this literature review was exploring Chile’s environmental regulatory framework, which attempts to implement the right to consultation through their environmental impact assessment.

Finally, this qualitative analysis included exploration of corporate policies that lay out a company’s approach to community engagement, upholding Indigenous rights, or sustainability. These policies articulate a company’s goals. Next, I analyzed SQM and Albemarle’s corporate sustainability reports, which should hypothetically explain what they are doing in practice. There are inherent limitations, however, to relying on corporate reports; most importantly, companies have a financial interest in presenting themselves favorably. Although an important tool in
exploring the discussion surrounding Chile’s lithium industry, these reports and policies are not objective data; it is impossible to know if everything is entirely truthful or not.

Through this methodology, I sought to explore the perspectives of many stakeholders within Chile’s lithium industry. Much of the existing literature focuses solely on one group of stakeholders, whether that be the mining companies or community members. In contrast, this thesis puts the voices of various stakeholders in conversation with one another. By doing so, this research explores the tensions, contradictions, and complexities within consultation processes surrounding lithium mining in Chile.
Chapter 2: The Emergence of Chile’s Lithium Industry & Relevant Mining Legislation

This chapter identifies the public and private actors involved in lithium production and explores the history of public-private partnerships and corporate acquisitions. It traces the history of Chile’s lithium industry and relevant mining legislation. Later, the chapter weaves in broader political shifts and events, such as the Cold War, Pinochet’s dictatorship, and Chile’s adoption of a neoliberal economic development model. This history was gathered through a collection of literature reviews, exploration of legal declarations and precedents, as well as through interviews with representatives at SQM, Albemarle, and CORFO. These historical events and transformations have directly shaped the industry’s contemporary context; it also helps to explain how the country’s political economy has shaped Chilean extractivism and why it differs from neighboring countries that also possess reserves of lithium.

Lithium’s Discovery in Chile

Lithium was first discovered in the Salar de Atacama in 1962 by a copper mining company, Anaconda, who was searching for additional water sources for their operations. It is important to note here how central mining is to the Chilean economy and the country’s approach to development. In 2016, mining—mostly copper—accounted for around 12 percent of Chile’s GDP. Paralleling many other extractive models in Latin America, Chile exploits natural resources in the name of national economic development, which reflects one of the many lasting legacies of European colonialism. European rule established the foundations for extractive economies, such as the Spanish exploitation of Potosí’s silver supply in the sixteenth and

35 Jerez, et al., “Lithium Extractivism and Water Injustices in the Salar de Atacama, Chile.”
seventeenth century. The US perpetuated these extractive economies through developing and relying on exploitative structures, such as Central America’s banana republics. Today, our contemporary globalized economy encourages resource-rich countries to export their raw materials to other countries for processing that have more advanced technological capacities. Chile happens to be a very natural resource-rich country and has leveraged these resources to facilitate high levels of economic growth. Though many applaud their success, others have defined Chile’s current political economy as “neoextractivist.”

During the 1960s, CORFO, the Corporación de Fomento de la Producción, began developing the non-metallic mining sector, initiating exploration studies in the north to explore feasibility in the region. CORFO focused their mineral and hydrologic studies in the Atacama Desert and its salt flats. CORFO is the Chilean economic development agency, tasked with increasing competitiveness and diversification of Chilean production. To drive national development, the agency encourages investment, innovation, and entrepreneurship. As one participant explained, CORFO is part of the Ministry of Economy; it has played (and continues to play) a major role in the development of the lithium industry and in shaping Chile’s broader business climate.

At the same time, further south in Maricunga, CODELCO and ENAMI – two Chilean state-owned mining companies – led exploration projects. Though this information about Maricunga is important for broader context regarding industry stakeholders in Chile, this project will focus specifically on mining in the Salar de Atacama.

37 Ibid.
40 Ibid.
41 Interview #2. January 9, 2023.
42 Ibid.
Later, in the 70s, CORFO formalized its rights to subterranean non-metal minerals in the Atacama. By 1977, CORFO possessed 59,820 lithium mineral rights in the Salar de Atacama.\(^43\) Eventually, two lithium mining operations emerged, Sociedad Chilena de Litio (SCL) and Sociedad Minera Salar de Atacama S.A. (MINSAL); both partnered with CORFO who rented out national mining rights.\(^44\) Though the SCL and MINSAL followed distinct trajectories over the following decades, lithium production began for both companies in the 1980-90s.

**Corporate histories**

*Evolution of Albemarle*

The Sociedad Chilena de Litio (SCL) was a joint venture between CORFO and Foote Minerals, a US company, that began in 1980. Ownership was 55 percent Foote Mineral and 45 percent CORFO.\(^45\) CORFO granted SCL authorization to exploit 200,000 tons of lithium in 1984, marking the beginning of production.\(^46\) CORFO granted them exclusive rights to operate in the Salar de Atacama for 8 years.\(^47\)

In 1989, CORFO sold its shares in SCL to Foote Minerals, which later partnered with Chemetall, a German company, in 1998. In 2004, Rockwood Holdings Inc., a U.S. company, bought Chemetall and later, in 2012, the company became Rockwood Lithium Ltd. In 2017, Albemarle, a U.S. entity, bought Rockwood. This operation, which began as the partnership between SCL and CORFO, will be referred to as Albemarle from now on.


\(^{44}\) Lorca, et al., “Mining Indigenous Territories.”


\(^{46}\) Jerez, et al., “Lithium Extractivism and Water Injustices in the Salar de Atacama, Chile.”

\(^{47}\) Bonilla, *Estudio de caso sobre la gobernanza del litio en Chile*. 
In 2016, CORFO and Albemarle negotiated a new contract that went into effect in 2018, extending Albemarle’s production quotas through 2044.\(^{48}\) Other components of this contract—such as the royalties and community benefits—will be discussed later. As the CORFO representative explained, the changes in the market for lithium required the modernization of the contracts.\(^{49}\) Rising demand for lithium allowed CORFO and the Chilean state to leverage more beneficial contract terms, with significant increases in royalty payments and taxes.

*SQM’s Journey*

The only other corporate actor within the Chilean lithium sector today is SQM, whose origins also trace back to the 80s. Following feasibility studies in the north, CORFO eventually opened bids for an international project to produce potassium salts, boric acid, and lithium in 1983. US company, Amax Inc., won the bid. As is the case today with mining operations in the Lithium Triangle, Chile turned to international actors to access foreign capital and technical expertise.

As a result, in 1986 CORFO founded the Sociedad Minera Salar de Atacama Ltda—or MINSAL—with participation of the U.S. Amax Exploration Inc. and the Chilean company Molymet.\(^{50}\) In terms of ownership of MINSAL, Amax Inc. constituted 63.75 percent, CORFO 25 percent, and Molymet 11.25 percent. That year MINSAL began exploration in the Salar de Atacama; CORFO authorized an extraction quota of 180,100 metric tons over the course of the following 30 years.\(^{51,52}\) The lease agreement included a royalty of 6.8 percent that MINSAL was required to pay CORFO on the sale of lithium products.

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\(^{49}\) Ibid.
\(^{50}\) Jerez, et al., “Lithium Extractivism and Water Injustices in the Salar de Atacama, Chile.”
\(^{51}\) Ibid.
\(^{52}\) Bonilla, *Estudio de caso sobre la gobernanza del litio en Chile.*
The previously state-owned Sociedad Química y Minera de Chile –formerly SOQUIMICH, now SQM– became involved with MINSAL in 1993; in 1994, SQM became the sole owner.\textsuperscript{53} SQM began lithium carbonate extraction in the Salar de Atacama in 1996.\textsuperscript{54} Today, in Chile, SQM and Albemarle are the only two companies able to exploit and produce lithium carbonate.

The Chilean Political Context Surrounding Lithium Extraction

From the 1960s through the turn of the 21st century, the lithium industry was shaped by several external factors that influenced both market dynamics and relevant policy. This section will explain the various economic and political factors that played a role in shaping the late 20th century.

One significant factor was a shift in the role of the Chilean state. The history of both Albemarle and SQM illustrates the trend of decreased state participation within the industry over time. Furthermore, an increase in private investment and involvement characterized Chile’s lithium industry in the 80s and 90s. These shifts in the market were emblematic of broader socio-political changes. Salvador Allende, Latin America’s first democratically elected socialist president, attempted to nationalize many natural resources, such as copper.\textsuperscript{55} The nationalization effort was part of his broader economic, agricultural, and labor reforms. Following the US-supported military coup of 1973 which propelled Augusto Pinochet into power, the country underwent extreme political and economic transformations. Prior to Pinochet and his imposition of neoliberal economics, the state played a significant role in regulating industry and promoting

\textsuperscript{53} Lorca, et al., “Mining Indigenous Territories.”
\textsuperscript{54} Jerez, et al., “Lithium Extractivism and Water Injustices in the Salar de Atacama, Chile.”
\textsuperscript{55} Bonilla, Estudio de caso sobre la gobernanza del litio en Chile.
entrepreneurship, investment, and industrialization. This large state role is evidenced in the creation and mission of CORFO.\textsuperscript{56}

Under Pinochet’s military dictatorship, however, Chile adopted a framework of economic liberalization and privatization, embracing a business-friendly approach that emphasized free-market principles, deregulation, and a less involved state.\textsuperscript{57} Many policies drafted in the 80s were attempts to reverse the reforms implemented in the 70s. It was within this context, to liberalize the Chilean economy and appeal to foreign investment, that both the Mining Code and Constitution of 1980 were written and entered into effect.\textsuperscript{58} These two pieces of legislation will be explained in more detail below.

Despite the regulatory framework that ceded control of the mineral to the state, the military regime ultimately facilitated increased public-private partnerships. Although Pinochet likely would have preferred for Chile’s private sector to develop mining operations, Chile lagged behind in terms of technological capabilities and expertise. Through these public-private partnerships established in the 80s, the state provided the mining properties and rights, while multinational companies brought financial capital and their technical capacity to exploit and produce lithium.\textsuperscript{59}

\textbf{Broader Geopolitical Context & the Subsequent Regulatory Framework}

As new forms of nuclear and atomic technology developed during the Cold War arms race, lithium became a coveted material due to its nuclear capabilities. In the US, therefore, lithium became considered a “strategic resource” necessary for ensuring national security.

\textsuperscript{56} Ibid.  
\textsuperscript{57} Ibid.  
\textsuperscript{58} Ibid.  
\textsuperscript{59} Ibid.
Pinochet eventually followed suit.\textsuperscript{60} During this time, the US conducted geological surveys in the US and Latin America to identify potential reserves of lithium. Meanwhile, the regime in Chile conducted its own surveys and sought partnerships with transnational corporations, of US origin, to exploit their reserves.\textsuperscript{61}

Throughout the mid to late 70s, under Pinochet’s regime, Chile passed a series of policies that consolidated state control over lithium. The motivation was to preserve national security, while also providing certainty necessary to attract foreign investment. In 1975, lithium, amongst other minerals, was defined as a material of “nuclear interest” under the Regulation of Nuclear Terms. However, this did not change which entity or what legislation governed the mineral, as it was still concessional and regulated under the Mining Code.\textsuperscript{62} In 1976, Decree Law No. 1557 gave the state the power to control materials of “nuclear interest” through CCHEN (or the Chilean Nuclear Energy Commission), as well as the ability to declare these materials of “public interest.”\textsuperscript{63}

The ambiguity as to whether lithium was governed by the mining code or national security laws was clarified in 1979, when Decree Law No. 2886 reserved lithium for the state for the reason of national interest.\textsuperscript{64} This meant lithium was no longer part of the traditional mining concession framework governing other minerals, like copper. Now all actions and contracts pertaining to lithium had to pass through a separate, more extensive process governed by CCHEN. The only mining rights that were still concessional were the ones possessed before this decree came into effect in 1979, including the rights CORFO owned in the Salar de Atacama.\textsuperscript{65}

\textsuperscript{60} Ibid.  
\textsuperscript{61} Ibid.  
\textsuperscript{62} Ibid.  
\textsuperscript{63} Ibid.  
\textsuperscript{64} Ibid.  
\textsuperscript{65} Interview #2. January 9, 2023.
Those with ownership before 1979 have the right to exploit the mineral in compliance with relevant environmental regulations. These are the mining rights owned and exploited by SQM and Albemarle today in the Salar de Atacama, illustrating the long-lasting impacts of these policies. No other mining rights have been allocated under the more stringent nuclear interest classification. The table below demonstrates the owner and locations of the mining rights possessed before 1979.

Another factor in the governance of lithium is Chile’s constitution. Political dissatisfaction mounted in Chile throughout the 2010s. In October of 2019 a small increase in metro fare triggered the *Estallido Social* (which translates directly to ‘social outbreak’), nationwide political protests that rejected neoliberalism. These protests forced constitutional revisions that were later rejected in a nationwide referendum in September 2022. Today, Pinochet’s 1980 Constitution remains in place, while constitutional delegates attempt the second revision.

The 1980 Constitution laid the foundation for a neoliberal economic model in Chile, embracing principles of privatization and economic liberalization. Key elements of Pinochet’s 1980 market driven constitution established a framework that protects private mining property and gives the law the power to determine which minerals were and were not subject to concession. This framework also establishes that the exploration, exploitation, or benefit of the minerals (not subject to concession) could be carried out directly by the state or by its companies, as well as by administrative concessions or special operating contracts.

Yet the allocation of lithium rights to the state was contradictory to the market ethos of Pinochet’s neoliberal model. A technical report that accompanied the 1982 Organic Constitutional Law on Mining Concessions in January 1982, signed by the Minister of Mining
(at the time) José Piñera, explained the reason to reserve lithium for the state. According to him, the reasoning was based on “the convenience for national interest of maintaining control of the supply of a mineral in which Chile has a determining fraction of world reserves (40%) in an international market that is not very competitive due to the complex and incipient technology of exploitation existing at the time.” This statement reflects how lack of widespread technology drove the Chilean state into international partnerships to exploit the mineral, while simultaneously attempting to maintain control.

In October 1983, the government enacted the new Mining Code, one of many reforms during the military dictatorship. Again, like the Organic Constitutional Law and other earlier pieces of legislation, it confirmed the concessionability of all minerals except for lithium. The Mining Code established a regime of exception for lithium, as a mineral resource characterized as strategic and “reserved” for the state. As mentioned earlier, there were the mining rights possessed before 1979 and after. The Mining Code and the Constitution together established that for concessions after 1979, the President of the Republic maintains the power to establish exploitation via three specific avenues. The first avenue is exploitation by the state or by its companies, like CODELCO or ENAMI. The second route is via administrative concessions. Finally, exploitation can occur through a special operations contract, granted by the Ministry of Mining, in favor of a private party.

This series of decrees and policies, drafted and entered into force during Pinochet’s military dictatorship, have directly determined the governance of lithium for the past four decades. Due to this lasting regulatory framework from the 1980s, Chile struggles to initiate lithium-related business ventures with foreign companies, who are often averse to exploiting a state-owned resource, as is lithium with CORFO. Furthermore, tensions persist surrounding
ownership over territory and resources, like water and lithium, between actors, including the
Chilean state, corporate actors, individual citizens, and Indigenous communities. Though state
policies are subject to change with Boric’s administration – Chile’s new, young, leftist
president – and the potential rewritten constitution, these are the rules that dictate the lithium
industry today.

Figure 2.1: Chile’s Lithium Timeline

1962: discovery of lithium in the Salar de Atacama
1960s: CORFO leads exploration studies
1970s: CORFO formalizes rights to non-metal minerals
1973: military coup → Pinochet’s military dictatorship
1975: lithium becomes defined as material of “nuclear interest,” within broader global context of
the Cold War arms race
1976: Decree Law No. 1557 → gives state control of materials of “nuclear interest” via the
Chilean Nuclear Energy Commission (CCHEN)
1979: Decree Law No. 2886 → lithium becomes reserved for the state for the reason of nuclear
interest → lithium is no longer concessional under the traditional mining framework
1980: Pinochet’s new Political Constitution enters into effect, as Chile embraces principles of
neoliberalism under Pinochet’s rule
1983: the new Mining Code is established → the Mining Code and Political Constitution,
together, establish the right of the president to facilitate exploitation of lithium via three
specific avenues
1980s: SCL (=CORFO & Foote Minerals) and MINSAL (=CORFO, Amax Exploration Inc. &
Molymet) begin production in the Salar de Atacama
Chapter 3: Defining Consultation at the International Level, Implementation at the National Level

Lithium, we have established, stands as an exception to market based extractive principles. Instead, it is guided by national strategic imperatives, dating back to the Cold War context. But lithium is not mined throughout the country; instead, it is located largely in the northern territories of Chile's indigenous peoples in the Atacama Desert. In this context, the Chilean state’s goal to ensure national security intersects with the state’s obligation to protect Indigenous rights are upheld. This chapter will focus on the international right of Indigenous peoples to prior consultation and FPIC, a right that the Chilean state has committed to protect.

This chapter will explain how these Indigenous rights to consultation and Free, Prior, and Informed Consent are articulated within international conventions. The two conventions of focus are ILO Convention 169 and the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), both of which Chile has ratified. Then this chapter will explore how the Chilean state has attempted to implement this international commitment to consultation through their Environmental Impact Assessment process.

International Framework Surrounding FPIC & Consultation

International law articulates the fundamental principles of self-determination of all peoples. Two Indigenous rights, relevant to this project, emerge under this overarching, universal right to self-determination. First is the Indigenous right to lands, territories, and natural resources. Second, is the right to consultation and Free, Prior, and Informed Consent (FPIC).

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For broader context, international conventions or treaties are agreements between different countries that are legally binding once a state ratified it. The ILO, or the International Labor Organization, is a UN agency that strives to improve working conditions for citizens in its member states. In 1957, the ILO ratified the Indigenous Tribal Populations Convention (No. 107) to improve the living conditions of Indigenous peoples around the world; ILO Convention 107 was later revised and renamed the Indigenous and Tribal Peoples Convention (No. 169) in 1989. ILO Convention 169 –law within the states that have ratified it– recognizes the Indigenous right to self-determination within nation-states, giving them agency and requiring Indigenous participation in decision-making processes that affect their lives.67 ILO Convention 169 laid the foundations for the development of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). UNDRIP establishes a universal framework of minimum standards for the survival, well-being, and rights of Indigenous peoples, globally. The UN OHCHR describes UNDRIP as “the most comprehensive instrument detailing the rights of indigenous peoples in international law and policy.”68

Together several international legal instruments—including UNDRIP, ILO Convention 169, and the CBD—establish the normative framework surrounding consultation and FPIC.69 Consultation is part of the process to obtain FPIC. FPIC is a specific right that Indigenous peoples are explicitly entitled to, which allows them to give or withhold consent for projects that may impact their communities or territories; it is important to note that this consent can be revoked at any point during the operations. Furthermore, these three elements—free, prior, and

69 Ibid.
informed— are each crucial within the process of decision-making and consent. As the FAO explains, “consent should be sought before any project, plan or action takes place (prior), it should be independently decided upon (free) and based on accurate, timely and sufficient information provided in a culturally appropriate way (informed) for it to be considered a valid result or outcome of a collective decision-making process.”\(^{70}\) As implied with use of the word “prior,” FPIC is required before a project that may impact the lands, territories, and resources that Indigenous peoples own or collectively use is approved or begins.

In addition to state interventions, the practice of consent also applies to private corporate activities. There is a business case that incentivizes corporate actors to seek consent through these participatory decision-making processes. In engaging in these processes and eventually establishing a trust-based relationship with nearby communities, it prevents disputes and conflict between communities and companies. In today’s global context of increased attention on upholding human rights, genuinely engaging with these communities and avoiding potential conflict allows a company to obtain a social license to operate, and ultimately provides reputational value.\(^{71}\) In theory, fostering dialogue and relationships can act as a win-win for companies and communities, keeping in mind, however, that this should not be a transactional exchange.

Important articles from both ILO Convention 169 and UNDRIP are included in Figure 3.1 and Figure 3.2 respectively. Text that is especially important in defining consultation and FPIC is highlighted in yellow.

\(^{70}\) Ibid.  
\(^{71}\) Ibid.
**Table 3.1: Important Articles of ILO Convention 169**

<table>
<thead>
<tr>
<th>Article #</th>
<th>ILO Convention 169(^2) (1989)</th>
</tr>
</thead>
</table>
| 6        | 1. In applying the provisions of this Convention, governments shall:  
   a) 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;  
   b) establish means by which these peoples can freely participate, to at least the same extent as other sectors of the population, at all levels of decision-making in elective institutions and administrative and other bodies responsible for policies and programmes which concern them;  
   c) establish means for the full development of these peoples’ own institutions and initiatives, and in appropriate cases provide the resources necessary for this purpose.  
2. The consultations carried out in application of this Convention 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. |
| 7        | 1. The peoples concerned shall have the right 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, and to exercise control, to the extent possible, over their own economic, social and cultural development. In addition, they shall participate in the formulation, implementation and evaluation of plans and programmes for national and regional development which may affect them directly.  
2. The improvement of the conditions of life and work and levels of health and education of the peoples concerned, with their participation and co-operation, shall be a matter of priority in plans for the overall economic development of areas they inhabit. Special projects for development of the areas in question shall also be so designed as to promote such improvement.  
3. Governments shall ensure that, whenever appropriate, studies are carried out, in co-operation with the peoples concerned, to assess the social, spiritual, cultural and environmental impact on them of planned development activities. The results of these studies shall be considered as fundamental criteria for the implementation of these activities.  
4. Governments shall take measures, in co-operation with the peoples concerned, to protect and preserve the environment of the territories they inhabit. |
| 15       | 1. The rights of the peoples concerned to the natural resources pertaining to their lands shall be specially safeguarded. These rights include the right of these peoples to participate in the use, management and conservation of these resources.  
2. In cases in which the State retains the ownership of mineral or sub-surface resources or rights to other resources pertaining to lands, governments shall establish or maintain procedures through which they shall consult these peoples, with a view to ascertaining whether and to what degree their interests would be prejudiced, before undertaking or permitting any programmes for the exploration or exploitation of such resources pertaining to their lands. The 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. |
| 16       | 1. Subject to the following paragraphs of this Article, the peoples concerned shall not be removed from the lands which they occupy.  
2. Where the relocation of these peoples is considered necessary as an exceptional measure, such relocation shall take place only with their free and informed consent. Where their consent cannot be obtained, such relocation shall take place only following appropriate procedures established by national laws and regulations, including public inquiries where appropriate, which provide the opportunity for effective representation of the peoples concerned.  
3. Whenever possible, these peoples shall have the right to return to their traditional lands, as soon as the grounds for relocation cease to exist.  
4. When such return is not possible, as determined by agreement or, in the absence of such agreement, through appropriate procedures, these peoples shall be provided in all possible cases with lands of quality and legal status at least equal to that of the lands previously occupied by them, suitable to provide for their present needs and future development. Where the peoples concerned express a preference for compensation in money or in kind, they shall be so compensated under appropriate guarantees. Persons thus relocated shall be fully compensated for any resulting loss or injury. |

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As seen in this selection of articles from the ILO Convention 169, this international law requires government action that supports Indigenous self-determination. Quite notably, ILO Convention 169 is the only legally binding convention surrounding Indigenous rights that currently exists within international law. These actions include ensuring consultation, providing avenues for peoples to “freely participate” “at all levels of decision-making,” or allowing these peoples to develop their own institutions and institutions. As mentioned earlier it also articulates the right to FPIC, which guarantees Indigenous peoples the right to information and participation within decision-making processes of projects that may impact them. But a stated right does not mean that it will be operationalized or enforced.

Table 3.2: Important Articles in UNDRIP

<table>
<thead>
<tr>
<th>Article #</th>
<th>UNDRIP 74 (2007)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Indigenous peoples shall not be forcibly removed from their lands or territories. No relocation shall take place without the free, prior and informed consent of the indigenous peoples concerned and after agreement on just and fair compensation and, where possible, with the option of return.</td>
</tr>
<tr>
<td>19</td>
<td>States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free, prior and informed consent before adopting and implementing legislative or administrative measures that may affect them.</td>
</tr>
<tr>
<td>28</td>
<td>Indigenous peoples have the right to redress, by means that can include restitution or, when this is not possible, just, fair and equitable compensation, for the lands, territories and resources which they have traditionally owned or otherwise occupied or used, and which have been confiscated, taken, occupied, used or damaged without their free, prior and informed consent. Unless otherwise freely agreed upon by the peoples concerned, compensation shall take the form of lands, territories and resources equal in quality, size and legal status or of monetary compensation or other appropriate redress.</td>
</tr>
<tr>
<td>32</td>
<td>Indigenous peoples have the right to determine and develop priorities and strategies for the development or use of their lands or territories and other resources. States shall consult and cooperate in good faith with the indigenous peoples concerned through their own representative institutions in order to obtain their free and informed consent prior to the approval of any project affecting their lands or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources.</td>
</tr>
</tbody>
</table>


Given these obligations and rights articulated within UNDRIP and ILO Convention 169, Indigenous consultation is required when: 1) when legislative and/or administrative measures may affect them; 2) before a project is approved that may affect their lands, territories, or natural resources (like mining or water extraction); 3) before relocation of these peoples. The conditions necessary for proper consultation include: 1) communication through their representative institutions; 2) ensure free participation throughout levels of decision-making; 3) in good faith. Furthermore, Indigenous peoples have the right to determine and execute plans for development on their own lands and territories. Ultimately, consultations are executed “with the objective of achieving agreement or consent.” Consultation is therefore a mechanism to achieve the ultimate goal of Free, Prior, and Informed Consent.

Following the Chilean government’s ratification of these conventions, Albemarle and SQM –as miners of lithium under Chilean law– state their own support of UNDRIP and ILO Convention 169 in their corporate policies. SQM explains these conventions helped to inspire their “Sustainability, Ethics, and Human Rights Policy.” The company also explains in this policy that their “Indigenous Communities Approach” conforms and adheres to both UNDRIP and ILO Convention 169. Albemarle mentions they support the principles articulated in UNDRIP, as well as FPIC. But is corporate adherence substantial or performative? Has the Chilean state done its own due diligence in FPIC, along with holding the companies accountable? These are tensions that will be explored in this chapter and the following one.

**Chile’s Environmental Impact Assessment & Consultation**

Chile has implemented consultation policies through their environmental impact framework, however, there are shortcomings inherent within the environmental framework, as

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75 International Labour Organization, “Indigenous & Tribal Peoples Convention (No. 169).”
well as in the state’s implementation and enforcement of consultation. This section will
summarize the complex legal history of Chile’s environmental impact assessment framework,
while Chapter 5 and 6 will explore the tensions surrounding implementation efforts.
Environmental institutions emerged in the 90s –following the end of Pinochet’s dictatorship–
with the General Environmental Bases Law. Eventually, with the country’s ratification of ILO
Convention 169 in 2008, Chile implemented a mandated consultation process, which will be
explained below.

In 1994, Chile published Law 19.300, General Environmental Bases (Bases Generales
del Medio Ambiente). This created the National Commission of the Environment (Comisión
Nacional del Medio Ambiente) and recognized the importance of the environmental impact
assessment as a tool to facilitate environmental management.76

More broadly, the environmental impact assessment (EIA) is both a legal and
administrative tool to help identify, predict, and interpret the potential environmental impact of
an activity or project. It was first implemented in the US in 1970 via the National Environmental
Policy Act, widely known as NEPA. Several countries followed suit, and in 1992 the UN
Conference on the Environment proposed methods for implementation and recognized its
potential to mitigate adverse effects of various projects and activities. Following this UN
Conference, by 2012 environmental impact assessment procedures had been adopted by 191
countries.77 In 1997, Chile published the first Environmental Impact Assessment System
Regulation (EIASR, Reglamento del Sistema de Evaluación de Impacto Ambiental).78

76 Dante Rodríguez-Luna, Nuria Vela, Francisco Javier Alcalá, Francisco Encina-Montoya, “The Environmental
Impact Assessment in Chile: Overview, Improvements, and Comparisons,” Environmental Impact Assessment Review 86,
78 Ibid.
Following Chile’s ratification of the ILO (International Labor Organization) Convention 169 in 2008, Michele Bachelet’s progressive-leaning administration drafted Ley 20.417 in 2010. This law led to the establishment of institutional structures to address the environmental impacts of industrial development, including the Environmental Ministry (Ministerio de Medio Ambiente, MMA) and the Environmental Assessment Agency (Servicio de Evaluación Ambiental, SEA). The Servicio de Evaluación Ambiental was tasked with managing the environmental impact assessment system in Chile. Law 20.417 also introduced new policies regarding citizen participation, self-reporting, and termination of the environmental assessment process when relevant information was missing.

The revised version of the 1997 Environmental Impact Assessment System Regulation—which is currently in effect—was published in 2012 through Supreme Decree Nº40. This established the Environmental Impact Study (EIS) (Estudio de Impacto Ambiental, EIA) and the Environmental Impact Declaration (EID) (Declaración de Impacto Ambiental, DIA). The distinctions between these two different processes will be explained in Figure 3.3 below.

These processes are governed by the policy of Environmental Impact Assessment System Regulation and by the body of Servicio de Evaluación Ambiental (SEA). Additionally, Article 10 of Law 19,300 specifies which types of projects require to be entered within the Chilean environmental impact assessment system.

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80 Ibid.
82 Ibid.
83 Although in Chile, EIA and DIA are widely accepted abbreviations for the Environmental Impact Study and the Environmental Impact Declaration, respectively, this paper will use the English abbreviations: EIS and EID. The purpose of using these English abbreviations, adopted from Rodíguez-Luna, et al., is to avoid confusion by using the same abbreviation as the Environmental Impact Assessment, EIA.
84 Ibid.
Table 3.3: Summary of Study (EIS) vs. Declaration (EID) Processes

<table>
<thead>
<tr>
<th>Environmental Impact Study (EIS)</th>
<th>Environmental Impact Declaration (EID)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 10 of the environmental law defines the projects and activities that require an EIA. The environmental impact study (EIS) pertains to projects or activities that might have significant effects on certain environmental or human health factors, which are listed in section 11 of the law. With the EIS, formal citizen participation is explicitly required in articles 88 and 82 of the EIASR. An EIS is required with the following conditions: “I) health risks to the population, II) significant adverse effects on renewable natural resources, III) resettlement of human communities or significant changes in living systems and customs of human groups, IV) location and environmental value of the territory, V) scenic or tourist value, and VI) alteration of cultural heritage.” Giving the potential impacts, projects must implement mitigation, compensation, or repair measures. When citizen participation and community consultation occurs, it begins after the project is submitted. Additionally, all observations and comments must be considered and the project manager is obligated to respond to each observation.</td>
<td></td>
</tr>
<tr>
<td>In comparison, with the environmental impact declaration (EID) process citizen participation is only required for specific projects defined in article 94 of the EIASR. An environmental impact declaration (EID) demonstrates a project does not have significant impacts and meets all environmental rules, and therefore does not require an EIS.</td>
<td></td>
</tr>
</tbody>
</table>

Later, with Ley 20.600, the Environment Tribunals were created to foster judicial intervention in extractive and industrial development processes, via regional courts. Though this law came into effect in 2012, it is important to note that the regional Antofagasta Environment Tribunal – the region where San Pedro is located – did not open until 2017. With these new pieces of legislation, Chile began to institutionalize these social and environmental impact assessment processes into the regional government structures.

Though seemingly unrelated to Indigenous rights, this law is Chile’s only attempt at ensuring consultation for Indigenous peoples. These environmental laws, therefore, provide the basis for Indigenous participation and consultation. It is amongst the few avenues to hold

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86 Rodríguez-Luna et al., “The Environmental Impact Assessment in Chile: Overview, Improvements, and Comparisons.”

87 Ibid.

88 Carrasco and Moreno, “Indigenous Consultation and Participation under Chilean Environmental Impact Assessment.”

89 Ibid.
companies accountable for their environmental and social impact. The diagram below simplifies this evolution of environmental legislation.

**Figure 3.4: Relevant Environmental Legislation**

- 1994: Law 19,300 - Bases Generales del Medio Ambiente
  \[\text{Comisión Nacional del Medio Ambiente}\]

- 1997: first Reglamento del Sistema de Evaluación de Impacto Ambiental (RSEIA)
  \[\text{established Chile’s environmental impact assessment}\]

- 2008: Chile ratifies the ILO Convention 169

- 2010: Law 20.417 (under President Bachelet)
  \[\text{institutional structures to regulate envi. impacts.}\]
  - 1) creation of Ministerio Medio Ambiental (MMA)
  - 2) creation of Servicio de Evaluación Ambiental (SEA)
  \[\text{tasked with managing Chile’s envi. impact assessment}\]

- 2012: Law 20.600
  \[\text{Environmental Tribunals}\]
  \[\text{2017: Antofagasta Environmental Tribunal}\]

- 2012: new version of RSEIA

1) **Estudio de Impacto Ambiental**
   - Environmental Impact Study (EIS)
   - community participation required in article 82 and 88 when "significant effect" on human health, the environment, or resettlement of communities
   - appeals via: Council of Ministers

2) **Declaración de Impacto Ambiental**
   - Environmental Impact Declaration (EID)
   - study that demonstrates
     - 1. no significant impacts
     - 2. meets all environmental laws
   - appeals via: Executive Director of SEA
Chapter 4: Analysis of Corporate Policies and Sustainability Reports

This chapter begins by exploring both Albemarle and SQM’s corporate policies related to their engagement with local and Indigenous communities. By looking at these two corporate policies, this section seeks to identify corporate goals and commitments to certain principles or international standards, like those articulated in ILO Convention 169 or UNDRIP. This exploration of policies—that articulate aspirations and goals—is complemented by analysis of SQM and Albemarle’s most recent sustainability reports from 2021, which should hypothetically explain what companies are actually doing in practice.

Chapter 3 explains how the Chilean state has attempted to implement the Indigenous right to consultation, while this chapter explores corporate attempts to do so. In today’s context, where sustainability and corporate social responsibility have become basic expectations of transnational corporations, it is crucial to distinguish what companies claim to do from what they are doing in practice. To hold these two companies accountable, this chapter seeks to determine what companies claim they are doing and trying to accomplish by exploring these corporate policies and reports. There are inherent limitations, however, to relying on corporate reports as data; these companies have an interest in presenting themselves favorably. While these reports are a tool to incorporate corporate stakeholders into this investigation surrounding consultation, it is also important to acknowledge the reports may not be completely transparent or honest. Another limitation of this approach was time; these reports were both over 100 pages long, yet this qualitative analysis was completed within the span of two months.

Because of this time constraint, five keywords were chosen to find trends and patterns within these reports to assess corporate commitments. The words are 1) consultation, 2) FPIC/consent, 3) environmental impact, 4) benefits, and 5) justice/just. The first three key words
were selected, because they all relate to how a company implements consultation mechanisms within their operations. Environmental impact is included within that category, as it is the mechanism used at the national level in Chile to implement community participation and consultation. Compliance with Chile’s Environmental Impact Assessment legislation, therefore, requires community consultation to be conducted by the companies. Benefits is included as a keyword because it relates to the theme of distributive justice. How do companies attempt to redistribute their profits to benefit the territories and communities that their operations impact? ‘Justice’ and ‘just’ are included to explore companies’ approach or perspective on this principle. Is justice central to their operations or to their discussion surrounding human rights? By exploring corporate policies and analyzing sustainability reports, this chapter lays the foundation for the following chapters, which will discuss the realities of consultation practices in San Pedro.

**SQM: Sustainability, Ethics, and Human Rights Policy (2021)**

*Overview*

The policy’s opening paragraph emphasizes the company’s principles of excellence, sustainability, integrity, and safety. According to SQM, this policy articulates “strict standards for good corporate governance,” which are enforced through a “robust risk management system designed to guarantee full compliance.” Compliance here refers to all applicable legislation and regulations, in addition to the voluntary corporate commitments to national and international standards. Some overarching goals of the company include long-term sustainable development, shared social value, and a corporate culture of due diligence surrounding human rights. There are

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three pillars to SQM’s policy: 1) Ethics and Corporate Governance Pillar; 2) Workers Pillar; 3) Value Chain Pillar; 4) Environment and Sustainable Development Pillar; 5) Communities Pillar.

Environment and Sustainable Development Pillar

The environmental component of SQM’s policy, characterized in Figure 4.1, is important not only in terms of protecting the surrounding environment, but also because community consultation rights are inherently tied to the Chilean environmental impact assessment process. The company committed to evaluate its impact on the environment or surrounding communities in advance, as well as compliance with environmental regulations and international standards. Furthermore, SQM has committed to “promote citizen and community participation in the environmental management” of their projects, from design stages to implementation and monitoring.

Figure 4.1: SQM – Environment and Sustainable Development Pillar

Source: SQM Sustainability, Ethics, and Human Rights Policy (2021)
The Communities Pillar, which appears in Figure 4.2, articulates the importance of promoting shared social value, local development, and “joint diagnoses” with communities regarding the potential impacts of its projects. The company approaches respecting the autonomy of communities “through a process of ongoing participation and dialogue in view of reaching mutually beneficial agreements,” in conjunction with community programs and benefit plans. In terms of its commitment to consultation, SQM claims to “encourage the participation and consultation processes, whenever required by the legislation in force, particularly in the case of indigenous communities, incorporating to our performance the standards of Convention No. 169 of the International Labor Organization and of the United Nations Declaration on Indigenous Peoples.”

This implies compliance with Chile’s Environmental Impact Assessment process that requires consultation, in addition to ILO Convention 169 and UNDRIP. SQM further explains these consultation processes should be executed “in good faith”, “according to their culture”, “in a freely and informed manner”, and also in compliance with “current legal standards.” This echoes many of the principles central to the international standards listed above. The company strives for citizen participation, shared value projects, transparency, and permanent dialogue with communities.
In part 5.A titled “Indigenous Communities Approach”, SQM re-states many of the commitments explained above. It adopts the definition of Indigenous peoples articulated within ILO Convention 169. To incorporate Indigenous perspectives and facilitate “informed and good faith agreements” with communities, SQM “has incorporated various mechanisms for participation and dialogue, including the signing of relationship and cooperation agreements, the creation of working groups, rounds of meetings, information and complaint channels, and joint monitoring processes.” These are concrete examples of initiatives SQM has claimed to implement as part of their “Indigenous Communities Approach.” It is important to note that SQM only “encourages” and “promotes” consultation—rather than requires—in reference to the only two mentions of consultation within this document. Furthermore, dialogue, participation, and consultation are mentioned, while consent or FPIC is not included within these 19 pages. To
conclude this section, the company says that these commitments and initiatives must be evaluated to guarantee they meet international standards and exemplify best practices. Though it mentions these evaluations must occur periodically, there are no specifications about how often.

Conclusion

This “Sustainability, Ethics, and Human Rights Policy” acts as a corporate roadmap. It expresses the company’s commitments, principles, and plans for the future. This policy can therefore be used to hold the company accountable. Did SQM succeed in what they set out to do in 2021? What do mechanisms to ensure community participation look like in practice? How does the company measure or evaluate their successes or failures in relation to these commitments? The next section will search for some of these answers in the company’s sustainability report. If the “Sustainability, Ethics, and Human Rights Policy” frames SQM’s aspirations and commitments, the “Sustainability Report” should demonstrate its progress on these goals.

SQM: 2021 Sustainability Report

Immediately upon opening SQM’s 2021 Sustainability Report, one notices its conveniently deterring length of 330 pages, more pages than the average person would sift through. The report's length and its meandering and repetitive style (albeit with an aesthetically pleasing format) make it challenging to pin down the company’s specific approach, policy, or outcomes regarding any given topic. There are pages upon pages discussing stakeholders, community support, sustainability, human rights, and business responsibilities, yet starkly few specific examples about anything besides the firm’s finances.

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Given the time constraints of this study, 5 key terms were searched within the document in an attempt to find patterns and trends within this lengthy report: 1) consultation; 2) consent; 3) environmental impact; 4) benefits; and 5) justice.

**Consultation**

On page 26, the report delves into the company’s Sustainability, Ethics, and Human Rights Policy emphasizing in large, bolded font that they are “committed to sustainable development in harmony with the environment, business ethics, and respect for and promotion of human rights in accordance with national and international regulations.” In the paragraph below, SQM explains the 2021 publication of its Sustainability, Ethics and Human Rights Policy in an attempt to strengthen this commitment at the highest corporate level. This paragraph explains how international principles, standards, and laws, including ILO Convention 169 “inspired” the policy, which is further echoed in the Policy itself. Despite this inspiration, this is the only specific mention of ILO Convention 169 or UNDRIP within the entire 330-page document. It is also quite revealing that neither international law, which provide the foundation for basic rights for Indigenous peoples, are mentioned in the 37-page chapter titled “Supporting Communities.”

One sub-section that is particularly illustrative of SQM’s approach to community engagement and consultation is outlined in its “ESG Factor and Business Management” section on page 251, where it explains how human rights are related to business. SQM begins by explaining the importance of being a good employer and neighbor to nearby communities. Furthermore, it explains how these relationships with Indigenous communities “must be based on trust and respect for human rights and national and international law as well as the creation of shared social value.” Though seemingly admirable on the surface, there does not appear to be many actions taken by the company to reflect this commitment to human rights.
In SQM’s section addressing human rights, the company highlights the creation of an internal monitoring, oversight, and management structure on page 40. It also created and assessed a human rights risk matrix. SQM acknowledges that, “we know and understand that this exercise is part of an ongoing due diligence process that we hope to develop in 2022 and periodically over time. We live in a dynamic context in which human rights may be violated due to circumstances and urgencies, which is why we must protect them on an ongoing basis.” Words such as “ongoing,” “develop,” and “over time” convey this may be something that is pushed off to some unspecified future timeline. Furthermore, the use of passive voice in the phrase “human rights may be violated” removes all agency, responsibility, and accountability from any specific actor. It instead blames these violations on a “dynamic context”, as well as “circumstances and urgencies,” phrases that starkly resemble the language used by SQM to describe its business strategy. To complete this first evaluation of impacts on human rights, SQM relied on a literature report of documents including the Annual Report, the Sustainability Report, and the Environmental Assessment Resolution. It appears to have been an internal review, rather than an external review, which is something it mentions later in the Human Rights Risk Matrix. SQM acknowledges that most of the sources it reviewed were secondary sources and “that stakeholders were not consulted directly.” The company resolves to “consult stakeholders in the future when the risk matrix is reviewed in a participatory manner,” which is required according to the Sustainability, Ethics and Human Rights Policy.

On the following page, the company provides readers a Human Rights Risk Matrix (see figure 3); on this matrix they list who or what will be affect as “salient issues”, the more specific concern as “sub salient issues”, then the specific human right potentially affected, and finally “mitigation actions” that are planned to “mitigate or remedy” specific concerns. In addressing the
human rights related to cultural heritage, SQM mentions many important actions they plan to take to mitigate their impact. Interestingly enough, however, there is no mention of either of the international laws that Chile and SQM have staunchly pledged its support to; only “agreements with indigenous peoples” are mentioned. Furthermore, the company mentions “Implementation of, compliance with and monitoring of the Sustainability, Ethics and Human Rights Policy” in this list of mitigation actions. This implies this policy has not yet been implemented.

In reference to the international laws alluded to above –ILO Convention 169 and UNDRIP, which apparently “inspired” their Sustainability, Ethics, and Human Rights Policy– SQM does not mention either once in their 37-page chapter titled “Supporting Communities”. If these international standards truly guided its approach to community partnerships, the logic follows they would be mentioned within the “Supporting Communities” chapter.

This lack of a clear corporate policy regarding community consultation was confirmed by the interview with a SQM representative. When asked about benefits that communities receive via partnerships with SQM, she had a long and detailed response; she listed several community programs related to health, education, or agriculture. She also explained how there have been major changes in the past two years. Now, the CEO visits San Pedro de Atacama at least once a month to talk with community members and leaders; there is far more dialogue. The follow up question, however, “can you explain SQM’s policies related to community consultation?” received a far shorter response. The representative explained there is no formal corporate policy that requires or establishes guidelines for community consultation.92 This is reflected in the 330-page report that infrequently mentions consent or consultation –and even more rarely in relation

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to Indigenous communities. In contrast, there are 37 pages that focus almost entirely on the various community health, education, and development programs that SQM is involved with.

Later, on page 255, in the discussion surrounding SQM’s medium- and long-term goals related to business management and environmental compliance, it vows, “to submit all projects or expansions for environmental impact assessment or impact statements, complying with community consultations and current regulations.” Though this objective is crucial to ensure sustainability and community rights, it is unclear why this is listed as a medium- and long-term goal, when really it should be practiced currently or dealt with urgently in the short-term.

-Free, Prior and Informed Consent + Consent-

The only mention of consent within the entire 330-page report appears on a page that includes the Human Rights Risk Matrix, seen in Figure 4.3. Free, Prior and Informed Consent is listed as one of the sub-salient issues. Within this table, SQM explicitly recognizes the right to free, prior and informed consent as a human right. To ensure this right, SQM lists several mitigation actions to take in the future: “compliance with agreements with indigenous peoples,” “development of and follow-up with the Sustainability, Ethics and Human Rights Policy,” “complying with roundtable discussions and participation,” and “external reviews regarding the responsibility for heritage preservation and free, prior and informed consent through external entities based on certifications.” It is important to note that in this discussion surrounding FPIC, compliance with either international standard –UNDRIP or ILO Convention 169– is not included as a potential mitigation action. Furthermore, this table mentions the development and follow up of their policy. On page 40, however, as discussed earlier, this “follow up” appears to be completed internally by the company, and without the insight and participation of stakeholders.
Finally, although the company directly recognizes this right to FPIC within the Human Rights Risk Matrix, it is peculiar that it is not mentioned again within the report.

**Figure 4.3: SQM – Human Rights Risk Matrix**

<table>
<thead>
<tr>
<th>Stakeholders: Indigenous communities in the municipalities of Huara, Pozo Almonte, María Elena and San Pedro de Atacama located near SQM operations.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Salient Issues</strong></td>
</tr>
<tr>
<td>Indigenous Peoples</td>
</tr>
<tr>
<td>Indigenous Peoples</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Community</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

*Source: SQM Sustainability Report (2021)*

**Environmental Impact**

Environmental impact is mentioned 18 times throughout the report. It is first mentioned in reference to the IRMA certification, or the Initiative for Responsible Mining Assurance. This international business standard provides a guiding framework to foster responsible and sustainable practices throughout their value chain. SQM explains with this certification, they attempt to “promote a shift in mining toward a focus on sustainable production processes that generate positive social and environmental impacts.” As part of this process, in 2021 SQM began
an external audit, conducted by ERM CVS. Third party audits are a step in the right direction for companies to increase corporate accountability.

Later, as part of SQM’s discussion about responsible sourcing in “Value Chain and Sustainability” on page 160, it requires that possible environmental impacts are prevented, reduced, or mitigated “in a timely manner.” Furthermore, natural resources are to be utilized “responsibly and efficiently.” The terms timely, responsibly, and efficiently are not defined with specific timelines or quantities.

On page 168, in the “Sustainable Development and Climate Change” section, SQM explicitly mentions Chile’s Environmental Impact Assessment (EIA). Before explaining compliance with the system, SQM explains that it is able to determine the potential impacts of projects and if a project is “environmentally significant,” which is language included in Chile’s EIA legislation. As mentioned in the previous chapter, a project proposal proceeds as an Environmental Impact Study or an Environmental Impact Declaration depending on whether or not there are potentially significant impacts. SQM explains that it has expert knowledge about the ecosystems surrounding their operations. SQM explains this high-level knowledge facilitates its management and response to potential impacts in advance. The following paragraph explains how each of its projects is submitted through Chile’s EIA system. As of December 2021, 65 SQM projects had received environmental authorization; 14 went through the EIS process, while 50 were approved with the EID. This illustrates the tendency to apply through the EID process, rather than the EIS process. This allows corporations to bypass the consultation mechanism that is required within the EIS process. This means that only around twenty percent of SQM’s projects passed through the EIS mechanism, whereas the other eighty percent were passed without completing community consultation.
Another reference environmental impact is made on page 255 in the ESG Factor and Business Management section when SQM explains goals to facilitate the company’s risk management. The company explains a goal for the medium- and long-term is to “submit all projects or expansions for environmental impact assessment or impact statements, complying with community consultations and current regulations.” Though a seemingly legitimate goal, this calls into question whether or not the projects are currently being fulfilled, as this paragraph expresses its attempt to do so in the medium and long term.

The final mention of environmental impact is found in the appendices in reference to the environmental monitoring plan for the Salar de Atacama. Following the Environmental Impact Study process for a SQM project titled “Changes and improvements to the Salar de Atacama Mining Operation,” an Environmental Qualification Resolution (RCA) mandated an environmental monitoring plan. Ultimately, this plan would result in evaluating the status of the ecosystems within the Salar de Atacama over time. This implies this was not done previously and that the government required it, rather than initiated by the company. This plan includes “measuring the levels and physical and chemical qualities of water distributed among shallow and deep wells, metric rods at lagoon level and gauging stations.”

Benefits

Benefits appeared 19 times throughout the report; most uses of the word referenced employee benefits, but there are a couple mentions relevant to this discussion. In SQM’s “10 things to know about lithium” section, the company lists several benefits for Chile from the new CORFO-SQM agreement.
Taken directly from the text, these benefits include:

- Annual contribution of 1.7% of our sales to local governments in Antofagasta.
- Annual contribution of US$10.8 to US$18.9 million for R&D on clean technologies in Antofagasta.
- SQM gives over 50% of the gross margin (prior to finance costs) to the country to fund various public policies.
- Annual contribution of US$10 to US$15 million for the development of communities in Salar de Atacama.
- Quarterly lease payments to CORFO associated with the sale price of products of up to 40% in the case of lithium.

In reworking the CORFO contracts in 2018, the Chilean state has facilitated benefits sharing. This, in some ways, is a step towards distributive justice.

The next mention of benefits is in SQM’s section “Our Environmental Management.” The company explains its approach to environmental management, such as how they conduct evaluations to determine possible impacts of projects, have measures to prevent pollution, and practice responsible management of natural resources. These practices are to generate “shared social values that benefits local communities.”

*Justice + Just*

Despite the various sections and subsections pertaining to human rights, justice—a principle central to ensuring a Just Transition—is only mentioned once within the report referencing specific SDGs in the context of SQM’s business strategy goals. Just is mentioned three times, however, only one with any relevance to this paper. Once in the Appendices section, “ESG Factor and Business Management” in its discussion of human rights and business. SQM includes “establishing fair and just relationships and extending our sustainability commitments, best labor practices and human rights with our supply chain in order to promote responsible and sustainable sourcing” as one of its responses and actions related to business and human rights.
Albemarle: Community Relations and Indigenous Peoples Policy (2020)  

While SQM had one overarching policy that framed issues related to the environment and communities, Albemarle has a webpage where several different policies are listed, including “Health, Safety Security, and Environmental Policy,” their “Human Rights Policy,” a “Global Labor Policy,” and a “Anti-Corruption Policy.” This section, however, will focus on Albemarle’s “Community Relations and Indigenous Peoples Policy.”

Introduction

Like SQM, Albemarle opens by emphasizing their focus on sustainability and articulating their core values, which include “care, collaboration, courage, curiosity, humility, integrity and transparency.” In terms of involvement with local communities, the company strives to establish “mutually beneficial relationships” and conduct its operations based on both cooperation and shared value. Regarding international standards, Albemarle supports the principles UNDRIP and the International Council of Mining and Metals Position Statement on Indigenous Peoples and Mining.

Our Core Values in Action

Again, this section articulates the importance of establishing long-term relationships with communities. It also clearly recognizes the unique nature of Indigenous peoples with the surrounding environment, and articulates their goal to promote “culture, heritage, life systems, customs, beliefs, rites, and socio-cultural practices” of neighboring Indigenous communities. Albemarle also mentions they appreciate inclusion of Indigenous peoples in their workforce. In the following section, it explains that the Code of Conduct requires consultation with the company’s local community engagement employee and any country manager, before meetings
occur with community members. It also requires a summary of meetings with community representatives to be submitted to Government Affairs. Furthermore, the Code of Conduct mandates that any complaints or inquiries from the host community are immediately reported to the company’s local community engagement employee and the country manager, within the applicable grievance mechanism.

Figure 4.4: Albemarle – Our Core Values in Action

Our Core Values in Action
In accordance with our Code of Conduct (Engaging with Our Host Communities):

- We seek to establish long-term community relationships based on meaningful engagement, care, respect, trust, transparency, honesty, humility and good faith.
- We recognize the unique relationship of indigenous communities with their environments, and we respect and seek to promote the culture, heritage, life systems, customs, beliefs, rites and socio-cultural practices of neighboring communities, and especially those associated with indigenous communities existing in the areas of influence of our operations.
- We value the participation of indigenous peoples in our workforce.

To ensure a coordinated approach in interactions with community representatives, the Code of Conduct requires:

- Consultation with the employee responsible for local community engagement and any relevant country manager in advance of all meetings with community representatives;
- A summary of all meetings with community representatives to be prepared and provided to Government Affairs;
- Immediately reporting any complaints or inquiries received from host communities to the employee responsible for local community engagement and any relevant country manager, and in accordance with any applicable grievance mechanism;
- Following Albemarle’s review and approval processes if you are considering offering anything of value, including gifts or hospitality, to a community representative, or receiving the same from a community representative;
- Obtaining pre-approval from Global Ethics & Compliance before offering employment, a temporary contract or an internship to, or a contract to a vendor owned by:
  - a community representative in a position of influence or authority over Albemarle’s business;
  - a relative of such a community representative; or
  - an individual who was such a community representative in the past two years.
- Consultation with Global Ethics & Compliance, and notification to your supervisor, if you, your spouse, your partner or a relative becomes a community representative who has influence over Albemarle’s affairs;
- Immediately contacting Global Ethics & Compliance or the Legal Department if a community representative makes a request for a bribe, including a facilitation payment.

Source: Albemarle Community Relations and Indigenous Peoples Policy (2020)

Maintaining Relationships with our Host Communities

This section, detailed in Figure 4.5, lays out Albemarle’s commitments as it engages with host communities. It mentions the importance of establishing harmonious, respectful, and mutually beneficial relationships with the neighboring communities. Albemarle also mentions its commitment to “ensuring compliance with all obligations by law” as it engages in these
relationships. Albemarle seek to protect the dignity of people and promote sustainable development through these relationships. The company also emphasizes the importance of guidelines and policies that surround the interaction between employees and local community members. Albemarle claims to be “honest and transparent” in its “environmental and social management,” and seek to communicate this with neighboring communities so they are able to understand current operations and future plans. Finally, Albemarle explains it has processes for employees and community members to express feedback and concerns. Albemarle claims it will not retaliate against any individual who makes “community-related complaint in good faith.”

Figure 4.5: Albemarle – Maintaining Relationships with our Host Communities

- We seek to understand, recognize and accept the importance of establishing respectful relationships between the company and the communities neighboring its operations, placing special emphasis on those established with indigenous communities.
- We seek to promote a harmonious and respectful relationship of the company’s workers, contractors and subcontractors with the communities neighboring Albemarle’s operations, seeking relationships that safeguard the dignity of people and the sustainable development of communities, including through local procurement where appropriate. Under the Code of Conduct (Selecting and Managing Vendors) and the Global Procurement Policy, pre-approval is required before using a Compliance Sensitive Vendor – which includes any vendors who we know or suspect are directly or indirectly owned by a community representative or a close relative of a community representative, who engage with our host communities on our behalf, or who are recommended by a community representative.
- We seek to establish mutually beneficial agreements with our neighboring communities, ensuring compliance with all obligations by law.
- In locations where we routinely interact with indigenous communities, we seek to develop, implement, and continuously improve detailed procedures to provide company employees with practical guidance regarding community interactions, social contributions, and related matters.
- We are honest and transparent in our environmental and social management, and actively communicate this so that our neighboring communities understand our operations, plans and projects.
- We maintain processes for sharing feedback and raising concerns, and responding to concerns in a timely manner – we will not retaliate against any Albemarle employee or member of our host communities for making a community-related complaint in good faith.
- Under the Code of Conduct (Selecting and Managing Vendors) and the Global Procurement Policy, pre-approval is required for engaging vendors who provide site security services.

Source: Albemarle Community Relations and Indigenous Peoples Policy (2020)

Understanding and Mitigating Risks in our Operations

The company also explains how it mitigates risks related to its operations. Albemarle claims to assess and consider any “human rights, social, cultural, environmental and economic impact” related to its operations, and complete “due diligence” when applicable. Albemarle also
explains that it takes measures to prevent, mitigate, and remediate any adverse impacts directly associated with its operations.

*Free, Prior and Informed Consent*

Unlike SQM, Albemarle explicitly mentions FPIC in its Community Relations and Indigenous Peoples Policy. The company explains it is committed to respecting FPIC in its engagement with Indigenous communities when the company needs to expand its “activities via land use.”

**Figure 4.6: Albemarle – Free Prior and Informed Consent**

*Free, Prior and Informed Consent*

Whenever we need to expand our activities via land use, we are committed to respecting the principle of free, prior and informed consent (FPIC) in our engagement with indigenous communities and host governments.

*Source: Albemarle Community Relations and Indigenous Peoples Policy (2020)*

**Albemarle: 2021 Sustainability Report**

*Consultation*

Consultation is not mentioned at all in reference to community participation throughout the report.

*Free, Prior and Informed Consent*

FPIC and consent are also not mentioned throughout the report, despite its explicit mention within Albemarle’s Community Relations and Indigenous Peoples Policy.

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Environmental Impact

The first mention of environmental impact is included in the section titled “Lithium: Enabling the EV Revolution” on page 15. Albemarle explains its various lithium operations, facilities, and products around the world. The company claims its production of lithium is centered around “minimizing environmental and social impact and maximizing stakeholder benefit.” To mitigate its environmental impact, Albemarle has turned to solar energy and various forms of green electricity to reduce its carbon footprint.

Another mention of environmental impact is included within Albemarle’s discussion of its value chain. On page 37, Albemarle discusses its attempt to develop life cycle assessments or LCAs for its products to increase transparency for customers and stakeholders, and ultimately decrease greenhouse gas emissions. This intention is again echoed in the section titled “Value Chain Excellence” on page 70 when the company addresses transportation’s contribution to GHG emissions. To reduce this transportation-driven environmental impact, the company has attempted “logistics network optimization and consolidation.” In more concrete terms, Albemarle created a Distribution Safety Department to monitor emissions of its suppliers and a fuel surcharge program to also limit the impact of its suppliers. The following paragraph explains the company’s shift from truck transportation to distribution via railroads, as well as limiting the number of delivery visits.

Later, in the section “Product and Process Innovation”, the company explains Project Albemarle Intelligence. This multivariate machine learning model gathers data and facilitates analysis to improve efficiency, quality, yield, productivity, and raw material consumption. Albemarle also uses this tool to manage its environmental impact.
Benefits

Most times that benefits are mentioned it is in reference to employment benefits, however, twice they are mentioned referencing relevant stakeholders. Within the “Community and Stakeholder Engagement” section, Albemarle expresses its commitment to transparency and dialogue with stakeholders. Then Albemarle explains how it strives to share the benefits of their economic activities, to ultimately leave a positive impact in nearby communities.

Albemarle’s next mention of benefits is included within the discussion surrounding the Albemarle Foundation on page 57. The motto for the foundation, established in 2007, is “We grow the good for a better world.” This foundation facilitates Albemarle’s philanthropic activities, such as donations and volunteerism. The foundation strives to positively impact and strengthen communities, through mechanisms such as academic scholarships, volunteer work, and charitable giving. Albemarle explains that it leverages donations “to ensure maximum community benefits.”

Justice/just

Neither of these terms are mentioned in the report.
Chapter 5: Setting the Scene in San Pedro de Atacama

While free and prior consultation may be embedded in Chilean law and articulated within company annual reports, the reality for those living in lithium production zones indicates major gaps in the operationalization of consultation. Through a personal narrative from my time conducting field work in northern Chile, this chapter attempts to share the views of people living in San Pedro—which suggest a reality far from a just transition.

A Personal Narrative

Disembarking off the flight from Santiago to Calama, I watch many middle-aged Chilean men grab their backpacks from the plane’s overhead storage. Attached to their backpacks are the hardhats they wear for their various jobs at the mines. It is common for men to work in the mines in Chile’s northern region of Antofagasta and visit their homes and families back in Santiago during their time off.

Upon landing in Calama, a city located in Chile’s Antofagasta region, one immediately notices how dry it is. The vast, sandy, arid landscape stretches as far as the eye can see. Further along the road into Calama one will encounter a sign above the road that reads “la ciudad de sol y cobre,” the city of sun and copper. Like much of northern Chile, the city is very much defined by its relation to the mining industry. On average, mining accounts for 57 to 65 percent of Antofagasta’s annual economic activity.\(^5\) Antofagasta contributes to more than 45 percent of the country’s mining GDP.\(^6\)

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\(^6\) Ibid.
On the outskirts of the city, you will quickly notice the piles of trash and waste dotting the vast desert landscape. Chile’s Atacama Desert, located in Antofagasta, is home to what the BBC termed the “fast fashion graveyard.” Leftovers and unsuccessful trends of the Global North’s fast fashion industry are shipped down to various countries in South America. These massive heaps consist of mass-produced apparel that was not sold in the Global North or at secondhand markets within Latin America.

About ten minutes from the airport, wind turbines tower along both sides of the main highway, with solar panels scattered between the wind turbines, showing the country’s recent commitment to sustainability and green energy. This illustrates how even with the global shift to green energy, this region will remain a site of industrialized energy production. Many would characterize towns or smaller regions within Antofagasta as sacrifice zones, where polluting industry is concentrated, resulting in harm to the nearby environment and human health.

After an hour and a half of driving through the desert landscape you arrive to San Pedro de Atacama. San Pedro appears to be a small tourist town, characterized by streets lined with adobe buildings; however, as one of my interviewees informed me it has a population of 15,000, one of the many hidden truths of the region. Indigenous peoples have inhabited the region for over 10,000 years; today 18 Indigenous groups live in or near San Pedro. Another unseen feature to the average tourist visiting the Atacama Desert is the region’s growing lithium industry.

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If you pay closer attention, though, there are signs of the industry’s presence. Citizen resistance to the industry is seen on various tattered posters covering walls. Many public spaces are covered in posters like the ones seen on the right, some of which are translated below.

La culpa no es del litio, sino del que le saca el provecho → It is not the fault of the lithium, but of the one who takes advantage of it

This poster mentions the two lithium companies, SQM and Albemarle specifically, assigning the blame to those “who take advantage” of the mineral. It is important how the pig is used to symbolize the greed of the companies. The problem is not the presence of lithium or other minerals, rather the exploitative manner of extraction, often conducted by large transnational corporations.

This reflects a broader theme within Latin America, related to natural resources and economic growth, that many have termed the “resource curse.” Though there are emerging critiques, the resource curse hypothesis indicates countries rich in natural resources are more likely to struggle with economic growth and developmental problems.98 Latin America’s various boom-and-bust economic cycles of natural resources and endless case studies of environmental degradation serve as an example of this hypothesis.

This quote demonstrates the very real concerns of community members about thirst and hunger. As water becomes more scarce in the arid desert climate, due to a plethora of reasons related to mining and the growing tourism industry, Indigenous peoples have had to trek to higher elevations in the Andes to provide water for their alpaca and llama herds, for example. Additionally, with less water it is harder to cultivate staple traditional foods, such as quinoa, corn, and potatoes.

As will be discussed in Chapter 5, although there is no universal consensus within the scientific community about the correlation between lithium mining and increased water scarcity, many believe it to be true. And Indigenous community members are undeniably feeling the real-life impacts of increased water scarcity.
Again, this poster includes the specific abbreviation of SQM. The quote, “it is not development, it is plundering,” critiques Chile’s national approach to economic development via the extraction of natural resources. Chile’s extractive sector accounts for 61.3 percent of total exports (based on data of average values between 2005-2015), placing it amongst other extractive economies, such as Venezuela, Peru, Bolivia, and Colombia. Many experts have termed this model of economic development as “neo-extractivist.”

A mural covers a wall located in the center of town, next to various souvenir shops and tour companies. I walked past the mural a few times without noticing it. Copper jewelry at a vendor’s table stand always caught my eye. “This jewelry is handmade with Chilean copper,” vendors proudly explained as tourists walked by. Yet another symbol of the mining industry’s presence. I think on my third day in San Pedro I finally noticed the words on the wall. The mural, like the various posters, raises the issue of water scarcity related to lithium mining.

The top reads:
- *Puri-agua sagrada* → Pure sacred water
- *El maiz siempre creció con agua, no con litio* → The corn always grew with water, not with lithium

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Beyond drawing the correlation between water scarcity and lithium extraction, this quote references the sacred nature of water, as well as the traditional lifestyle of agro-pastoralism. For thousands of years, this way of life sustained the local Atacameños, but recently with increased drought and other economic pressures, many have turned to the mining and tourism industries as a source of employment.

Below other posters read:
- *Cuida el agua* → Take care of the water
- *Resistencia feminista a la economía extractivista* → feminist resistance to the extractivist economy
- On another poster, there are repeated words in a circle “*Ayni, recibir, dar, retribuir, redistribuir.*”

Ayni in the Indigenous Aymara language means reciprocity, which is a central principle to Aymara culture. The words above translate to “receive, give, give back, redistribute,” conveying the importance of reciprocity and giving within Indigenous culture in San Pedro. Furthermore, this demonstrates the importance of incorporating distributive justice.

**Relevant Contributions to the Conversation**

My observations were confirmed by other academic sources and posts on social media. Liu et al. explain how social movements related to lithium mining evolved over time (seen below in Figure 1); social movements were rare in the 90s, as the industry had only recently emerged. As the government granted more expansion permits and companies received criticism for environmental infractions through the 2000s, social awareness increased, mobilizing more social movements. Most local movements, like the posters above, centered around how water use by the mining operations threatened their livelihoods and the surrounding ecosystems. At the

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regional and national level, activism addressed corporate misconduct, corruption, and foreign investment; a common demand was re-nationalization of the lithium industry. Movements shifted to the national scale, following the increased production quota that CORFO granted to SQM in their renegotiated contract. Following the signing of this new contract, protestors rallied at the local, regional, and national level in Santiago.¹⁰¹

Figure 5.1: Social Movements Timeline

Since that article was published, CORFO opened several bids to international companies to expand lithium production and to facilitate value-added lithium projects, in alignment with what Barandiarán has termed a sociotechnical imaginary for development. According to one article, these potential contracts would allow for the exploration and production of 400,000 additional tons of lithium.¹⁰² Community resistance quickly emerged in response to this auction, as evidenced by countless social media posts.

¹⁰¹ Ibid.
Several posts from the Consejo de Pueblos Atacameños expressed their opposition to the new bid for 400,000 tons of lithium. Many of the posts reference concerns related to water use and extraction.

“We have hopes of stopping the bidding process for 400,000 tons of lithium. the protection appeal filed by the peoples' council in december is the hurdle for the government. Sign here.”

“Patricia Cigoña, CPA’s hydrogeologist, comments that currently 2,100 liters of water per second are extracted in the Salar de Atacama to produce lithium.”

Other posts illustrate how the CPA is trying to work with the Chilean government, like Congress, to prevent the new projects.

“Leaders of the Council of Atacameño Peoples met in the national congress with various parliamentary benches to demand transparency in the process and the cessation of the lithium bidding process.”
This post, by Fundación Terram, a civil society organization, references how the Chilean government did not submit an Indigenous consultation prior to opening the bid that would impact their territories.

Cristina Dorado Ortiz, a microbiologist who studies the salt flats and was very involved with the first Constitutional Convention, also posted in protest. She posted a picture of a flamingo with a broken heart and #lithium, alluding to the potential damage this increase in lithium production could inflict on the unique ecosystems and species in the Atacama.

Despite these posts on social media and the visual symbols of resistance I observed in San Pedro, one of my interviewees from the region who worked with several organizations –
OPSAI, Fundación Tanti, and the Consejo de Pueblo Atacameños—explained that there is little organized resistance against the mining industry. Just like any community, San Pedro’s population is not homogenous; some support the lithium or copper industry, while others adamantly oppose it. Think about coal mining in the US, for example. In San Pedro, many people rely on the industry for employment and others rely on these companies to provide fresh water. Furthermore, the mining industry, my interviewee explained, is seen as the engine for development in Chile. And this “development” brings very real consequences and benefits for many, such as access to the internet, water, or electricity. Mining in Chile, and particularly in the north, has become part of the culture, the regional identity, and a form of employment. As I entered a few of the several souvenir shops, there were little figurines of wagons filled with copper for sale. References to mining are seen everywhere in San Pedro. Mining in San Pedro occurs in an incredibly complex ecosystem in both the literal physical sense and more abstractly: socially, economically, culturally, and politically.

This personal narrative is a culmination of my reflections from when I conducted fieldwork for this research project exploring Chile’s lithium industry. By sharing this narrative, I hope to situate readers to the local context in which my research is grounded. This narrative contrasts the story told by corporate policies and sustainability reports in Chapter 4. It lays the foundation for Chapter 5, which explores what this right to consultation actually looks like in practice within San Pedro. In reality, consultation does not always happen, it is not always mutually beneficial, and it is not always reflective of what the communities actually want or demand.
Chapter 6: Complicating Chile’s Consultation Process

Where does this leave us? The opening chapter discussed the importance of incorporating justice within our global energy transition. Chapter 2 explored the discovery, exploration, and extraction of lithium and the various pieces of Chilean legislation that govern the mineral that emphasizes protection of national security. Chapter 3 set the foundation for defining consultation and principles of FPIC and described how Chile has attempted to implement these international principles. Chapter 4 explored the way SQM and Albemarle approach community engagement, how they attempt to implement consultation, and some of the disconnects between their corporate policies and sustainability reports. Pt 1 of Chapter 5 shared a narrative of community resistance, directly contrasting the story told by corporations.

This section attempts to explore some of these tensions by putting various pieces of literature, and independent, original research, such as interviews, in conversation with each other. How do community members or journal articles contradict statements or commitments companies have made? How is consultation discussed, how can it be improved, and what are its inherent complexities? How can the voices of community members or relevant organizations inform the direction of policies surrounding lithium mining and consultation in Chile, whether that be national or corporate policies? Discussing these various tensions is a crucial step to envision a more just future for Chile’s lithium industry.

Steps in the Right Direction, Room for Improvement

Private sector

It is important to note that both policies published by SQM and Albemarle were only established in the past three years. The emergence of these corporate policies demonstrate the more widespread shift in recent years towards corporate social responsibility and sustainable
business practices. An interview with a representative from SQM supports this. She explained how five years ago, sustainability was barely a thought in SQM’s strategy. Now, sustainability is at the core of what they do.\textsuperscript{103} She explains a specific shift in the perspective of SQM’s leadership; the new CEO, Ricardo Ramos –who transitioned from SQM’s CFO to CEO in early 2019– believes there is no future if the company does not embrace sustainability. In this interview, the representative repeatedly emphasized how SQM now goes above and beyond what is expected of them.\textsuperscript{104} Despite this increased transparency and sustainability that she explained, there seems to be a disconnect between SQM’s goals, articulated within their policy, with their actions. It is also evident, as seen in the posters in Chapter 5, that the local community do not share this same view of SQM or Albemarle. As one poster read, “It is not the fault of the lithium, but of the one who takes advantage of it.” There is blame directly assigned to the two companies mentioned on a diagram of a pig, a symbol of greed. Another poster in Chapter 5, shares statistics about the water use necessary for lithium mining, using the SQM abbreviation, and asserts this is “not development, it is plundering.” These visual demonstrations of resistance to the mining industry directly assign blame to SQM and Albemarle, illustrating the disconnect between the community demands and romanticized picture the companies have painted in their reports and policies.

Given how recent these corporate policies were established, some of the critiques mentioned in the previous chapter may be addressed in the future. Maybe in a decade the company’s goals and commitments will better align with corporate actions and initiatives. Implementation of accountability and participatory mechanisms may be further along. Monitoring and evaluation will be completed in a more rigorous and transparent matter. Various

\textsuperscript{103} Interview #1. January 9, 2023.
\textsuperscript{104} Interview #1. January 9, 2023.
stakeholders will be better integrated into various stages of project implementation and evaluation, rather than just listed in a visually aesthetic diagram. While more time might bring about positive change and improvements at SQM and Albemarle, it is possible to determine current shortcomings. Because although these corporate policies, goals, and strategies are a step in the right direction, there are undoubtedly lessons to learn and room for growth. In an attempt to determine these lessons, the rest of this chapter will discuss critiques, lived experiences, and various complexities inherent within Chile’s Environmental Impact Assessment (EIA) and current consultation practices.

_Critiques of Chile’s EIA and Complexities of Scientific Knowledge Production_

Although much of this paper has explored corporate approaches to community consultation, this responsibility to govern, implement, and enforce consultation rights ultimately falls onto the Chilean state, the actor who ratified the ILO Convention 169. The state should therefore address its own limitations and shortcomings to fulfill this responsibility to the international convention and its own citizens, particularly its Indigenous peoples. This section will explore some frequent critiques of the EIA, as well as the complex dynamics and implications surrounding the production of scientific knowledge in Chile.

A common discussion in the literature surrounding constraints of Chile’s EIA system is how most proposed projects bypass the Indigenous consultation process by conducting an Environmental Impact Declaration (EID), rather than an Environmental Impact Study (EIS). As explained in Chapter 3, EIS’s are required when a project potentially generates a “significant impact,” which triggers the requirement to consult communities. Upon searching in the Environmental Impact Assessment System’s online database, this trend of skipping consultation

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becomes clear. The search narrowed down projects that included the word lithium within the region of Antofagasta. Of the 14 search results, 12 were submitted through the EID, whereas two went through as EIS (both of which occurred in the 90s before consultation was mandated), illustrating how consultation is often bypassed.\textsuperscript{106}

This trend was also reflected in SQM’s Sustainability Report. As of December 2021, 65 SQM projects had received environmental authorization; 14 went through the EIS process, while 50 were approved with the significantly less thorough EID avenue.\textsuperscript{107} This illustrates the tendency to apply through the EID process, rather than the EIS process. This allows corporations to bypass the consultation mechanism that is required within the EIS process. This means that only around 20 percent of their projects passed through the EIS mechanism, whereas the other 80 percent were passed without completing community consultation.

In addition to skirting the regulatory framework, Javiera Barandiarán shows how the assessment is fundamentally flawed by using a degraded scientific baseline to establish water allotments, permits, and production quotas for mining operations. Barandiarán writes about how brine lithium mines in Nevada, Argentina, and Chile began extraction before environmental impact assessments emerged, which generates a very significant constraint for Chile’s EIA system. The result is a lack of baseline scientific knowledge and evidence needed to assess changes in water levels and ecosystems. She writes that, “here lies a major methodological and ideological flaw with EIAs: baseline studies used in EIAs document the present and transform it into the past. This, in effect, normalizes current conditions, which are already deeply


environmentally degraded.”

Because data collection only reflects recent and short-term changes, the science fails to demonstrate the long-term variability of hydrologic systems.

There is also the added uncertainty regarding how closely permitted water quotas align with the actual amount of water extracted from mining operations. Both companies, SQM and Albemarle, have been accused of extracting more brine than stated in their legal quotas. If EIAs had been required when mining began in the 80s, mining-driven changes or degradation would be obvious, allowing for and driving accountability of corporate operations. Instead, there is no way to scientifically prove mining has driven environmental degradation or increased water scarcity over time.

The lackluster scientific baseline relates to the discrepancies within current scientific knowledge pertaining to the impact of lithium mining on brine water and the hydrogeology of salt flats; there is currently no universal consensus on this relationship. This study also found that total water usage in the Salar de Atacama is exceeding the rate of resupply. This study, however, also acknowledged that lithium mining accounts for less than 10 percent of freshwater usage, trailing behind higher copper mining and agriculture allocations. Whatever the specific impact of lithium mining may be on freshwater supply, the changes in water supply are definitely being felt locally; and the community believes the lithium mining is to blame. This can be seen through

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110 Ibid.
the posters seen in Chapter 5 that explain, “the corn always grew with water, not with lithium.”

Another example can be demonstrated through a 2018 testimony of an Indigenous leader, included in a report sent to the National Commission of Inquiry, “It seems irresponsible on the part of the government, of the authorities, to keep installing mining projects in an aquifer, in a basin, which, in reality, no-one knows whether the recharge that it has is more or is the same as the level of extraction.”  

Whatever the correlation may be between water scarcity and lithium mining, there is undoubtedly a widespread belief that the lithium industry is to blame.

The lack of universal consensus surrounding lithium’s impact on water is partially due to the lack of baseline information, but also because of the complexity of the ecosystems within the Atacama Desert. Barandiarán writes, “Beyond some shared characteristics such as aridity and volcanic origins, each salt flat is geologically unique: the number of aquifers, their connectivity and porosity, brine chemistry, and local climates all differ in important ways. Averages don’t exist in a desert; rather, extreme aridity can be punctuated by floods. High heat gives way to freezing nights.”  

After conducting the first comprehensive study exploring the hydrological impact of lithium mining, Brendan Moran, the lead author of the paper, explained, “to understand the environmental effect of lithium mining, we need to understand the hydrology in the region the lithium is found. That hydrology is much more complex than previous researchers have given it credit for.”  

For example, more than half the freshwater that feeds into the wetlands and lagoons is at least 60 years old. According to the study, this age of the freshwater supply demonstrates that groundwater moves slowly, and the hydrological systems change over

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113 Babidge, “Consultation’s Overburden.”
114 Barandiarán, “Democratizing Science for Post-Carbon Lithium Futures.”
large periods of time.\textsuperscript{116} Although the physical complexities of the salt flats certainly contribute to the lack of scientific consensus, there are also other factors at play, such as who is positioned to produce scientific knowledge and how this data is made public.

These discrepancies and gaps within the established science are also tied to how and who produces scientific knowledge. Barandiarán’s research explores these dynamics, offering an explanation for who gets to produce scientific knowledge and who is considered an expert. Geologists, many of them government-employed, originally dominated this field of research, which was motivated by national interest in mineral exploitation. In recent decades, especially in Chile’s neoliberal framework, knowledge production has become increasingly privatized.\textsuperscript{117} Mining corporations control access to the salt flats, conduct monitoring, and collect data. This data is made public and given to state authorities, nonetheless, is not trusted as credible science by many members within local communities. This distrust has driven local communities to design their own studies and maps for the salt flats in an effort to establish credible and accessible knowledge.\textsuperscript{118}

In this context, different stakeholders produce different knowledge. For example, the SQM representative explained in his interview that brine extraction has no “direct impact” on freshwater, though acknowledged it is a very complex relationship.\textsuperscript{119} This message was echoed in the interview with an Albemarle representative, who claimed there was no direct interaction between the two bodies of subterranean water. He also noted how copper mining and the tourism industry play a more significant role in depleting freshwater supply in the region.\textsuperscript{120} These

\textsuperscript{116} Ibid.
\textsuperscript{117} Barandiarán, “Democratizing Science for Post-Carbon Lithium Futures.”
\textsuperscript{118} Ibid.
\textsuperscript{119} Interview #5. January 20, 2023.
\textsuperscript{120} Interview #6. January 20, 2023.
external factors were also referenced by a geologist in San Pedro de Atacama, who is an Indigenous man part of the Consejo de los Pueblos Atacameños (CPA). The geologist then explained, however, that although the brine water and freshwater are separate (because of their different densities), when one level is depleted, the other liquid compensates. Following this logic, when lithium operations pump brine water, this directly affects the levels and supply of freshwater, which directly contradicts the science explained by both of the mining representatives.

These contradictions are also evident in the scientific literature. As of March 2021, there were only 22 academic papers total discussing the impacts of brine lithium mining published in the Web of Science database and in Science of the Total Environment; most were published since 2017, again demonstrating the lack of historical scientific evidence about brine mining globally. Some articles claim there is no data proving the correlation between lithium mining and increased water scarcity, while others include statements by scientists that acknowledge the pumping of brine has reduced levels of underground aquifers.

This discussion surrounding the production of scientific knowledge in the Chilean context may seem irrelevant to the discussion of the EIA system. The entire EIA process, however, heavily relies on this scientific knowledge and data. First, projects pass through either the EIS or the EID based on whether or not they will produce “significant” impacts, which is a determination made with scientific evidence and models; that ultimately determines if the consultation requirement within the EIA process is triggered or not. Additionally, scientific evidence and data can be used as a method to hold companies accountable, through mechanisms such as the Environmental Tribunals.

122 Barandiarán, “Democratizing Science for Post-Carbon Lithium Futures.”
**Realities of Implementing Consultation in Chile**

Consultation may mean different things in different contexts. This section will explore several narratives about what consultation looks like in practice in Chile; it demonstrates the gap between consultation in theory and practice. Lesley Muñoz Rivera is a member of the Colla Indigenous community of Copiapó, as well as OPSAL, or the Plurnational Observatory of Andean Salt Flats. She spoke at the COP27 this past November in the Indigenous Peoples Pavilion, including an event hosted by the Ford Foundation and Cultural Survival titled “Who pays: Climate financing and the Real Cost of a Just Energy Transition.” For Muñoz Rivera, increased water scarcity has forced community members to search for water for their animals at higher elevations in the Andes, the nearby mountain range.123

There is a disconnect between established international principles and Chilean commitments with lived realities of Indigenous peoples. Muñoz Rivera claims, “In Chile, Indigenous peoples are not being consulted.” For example, two lithium projects had been recently approved by the Chilean government in the Maricunga Salt Flat, although one had been held up in court because these projects had failed to consult nearby Indigenous peoples. Though the companies had identified potentially affected stakeholders to the government, the nearby Indigenous communities had not been included on the list despite their obvious positionality as relevant stakeholders. Muñoz contends that neglecting to consult communities directly contradicts the requirements of ILO Convention 169, which Chile has ratified. Mining operations are often located on (or directly adjacent to) Indigenous territories, and the potential impacts on water supply are far-reaching, extending well beyond the direct production zone.

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Despite Chile’s ratification, she describes how FPIC does not work in Chile. Companies do not ask communities in advance of entering their territory. They enter the territory and then they “ask us whether what they’re going to do is good or bad and whether we have any comments about it.”\textsuperscript{124} Other interviewees and participants echoed this sentiment. A conversation with an individual at the Consensus Building Institute (CBI), an organization that facilitates multi stakeholder dialogue via the “Mesa Multiactor Salar de Atacama,” confirmed this pattern of early-stage neglect. He explained that because companies are often preoccupied with input from internal stakeholders, like the design, engineering, or finance team, that local communities are rarely included in the early project design process. The result is that when these companies show up in a community like San Pedro, the project appears to be a done deal; they are told what will happen, rather than involved. Communities then perceive the “dialogue” to be a waste of time. CBI’s Mesa Multiactor initiative therefore works to identify how companies can work more constructively with actors on issues of impact and design at the earliest possible stage. He believes this is a key opportunity for positive change.

This trend of companies glossing over consultation and jumping into transactional negotiations, mentioned by several participants, parallels broader critiques of Chile’s environmental impact assessment legislation. Though “prior” consultation is a central principle of FPIC, participation and consultation, according to Chilean environmental law, is only required after the project is already submitted within the EIA system. This lack of “prior” involvement of communities within Chile’s EIA process directly contradicts the internationally established principles of FPIC. This excludes Indigenous peoples from the early planning and design of the

\textsuperscript{124} Ibid.
project, despite how the ILO Convention 169 requires community involvement in these early stages.\textsuperscript{125}

Various interviews also shed light on the nature of communication between Indigenous communities in San Pedro and companies. The CBI representative explained that the “dialogue,” a term explicitly-mentioned by the representatives at both SQM and Albemarle, is typically a very transactional interaction, during which a benefits-sharing agreement is usually negotiated. According to the CBI representative, this transactional agreement is what both communities and companies have come to expect in these meetings. Another participant confirmed this dynamic, explaining that there is not consultation, instead there are negotiations.\textsuperscript{126} The consultation is essentially about apportioning outcomes, rather than incorporating genuine community participation in the process.

In contrast, CBI’s initiative has sought to provide a venue for dialogue between various stakeholders where important themes and concerns can be discussed; this includes discussing potential impacts, determining how to mitigate and compensate for those potential impacts, and developing benefits agreements in a more participatory manner. The Mesa Multiactor initiative also strives to get corporate actors to think about opportunities to include the people potentially impacted throughout the early stages of project design, proposal, and implementation.

An interviewee involved with OPSAL and CPA, or Consejo de Pueblo Atacameños claimed that “the projects always happen in the end.”\textsuperscript{127} A community member in San Pedro echoed this in an interview, explaining that whatever the community response may be, the companies will follow through with their plan anyways.\textsuperscript{128}

\textsuperscript{125} Cultural Survival, “Observations on the State of Indigenous Human Rights in Chile.”
\textsuperscript{126} Interview #4. January 19, 2023.
\textsuperscript{127} Interview #4. January 19, 2023.
\textsuperscript{128} Interview #3. January 13, 2023.
There have been a few rare examples of the government terminating a contract or project, because of community resistance. In early 2015, the Peine Indigenous Community engaged in a consultation process regarding a proposed copper mining project for the company Minera Delfín. Despite pressure from Minera Delfín, after community deliberation the Asamblea ultimately rejected the project, and the regional government upheld their decision. The company, however, appealed, sending the case to national review. Following a National Commission meeting, the commissioners ruled Minera Delfín’s consultation process did not occur properly, requiring the company to reengage with the Peine Community. In response, the Peine Community refused to meet with the company, claiming they had been clear with their original decision. The company attempted to resubmit their revised proposal, yet SEA surprisingly rejected the project. Though many community members were relieved, the length of the process and the external pressure exerted by Minera Delfín, exacerbated internal tensions within the community.

In terms of creating a vision for the future, Lesley Muñoz explains consultation with nearby Indigenous peoples must occur; moreover, it is imperative that “it has to be free, prior, and informed throughout the entire process and also has to be based on good faith.” She explains how although these principles have already been established, they must be better applied during the global energy transition and emphasizes how human rights “should be at the heart of everything corporations do” looking ahead.

Additional Critiques and Complexities of Community Consultation Mechanisms

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129 Babidge, “Consultation’s Overburden.”
130 Ibid.
There are deeper critiques beyond missing steps in the process and failing to consult Indigenous peoples. First, many have asserted that these consultation processes are not culturally appropriate. The Inter-American Court establishes conditions for appropriateness in the *Saramaka People v. Suriname* case. One dimension of this cultural inappropriateness is what Babidge terms a “temporal clash.” First, in today’s global context of neoliberalism, the rapid pace of industry which seeks the short-term accumulation of financial capital, conflicts directly with longer-term visions of life and well-being, a perspective shared by many Indigenous cosmovisions. Furthermore, the consultation processes and practices established within community organizations do not align temporally with the timeline required by Chile’s national EIA system. As she explains with the example of Peine, a small Indigenous community in Chile’s Atacama Desert, the community had established their own protocols for consultation, with the assistance of external consultants. It involved information provision, then community analysis via consensus and deliberation, and finally dialogue and agreement. This is a lengthy process of internal deliberation. In contrast, the Chilean EIA system mandates each stage of the process is completed in twenty working days, which disregards the community’s need for more time to diligently complete their internal process.

A dirty reality of consultation is coercion, bribery, and interference of Indigenous communities by private actors, such as mining companies. This interferes with their explicit right to make an informed decision. In these situations, leaders sometimes make a decision that does not align with the value or long-term vision of the rest of the community. Ultimately, bribery and coercion may result in inner-community tension. It is important to note here that Indigenous

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133 Babidge, “Consultation’s Overburden.”
135 Ibid.
communities are not homogenous. There are individuals employed by the mining companies, some willing to negotiate with companies for various benefits, and many others who oppose extractivism in its entirety. Lorca et al. writes “it is difficult to find a unified political stance for the ‘Atacameño’ people in the face of lithium mining, and indeed a singular, unambiguous meaning of ‘Indigenous’ identity itself.” Indigenous communities are not homogenous, and neither are their perspectives on lithium mining. Furthermore, there is not one definition of indigeneity that can accurately or appropriately fit all contexts. This touches on a point made in an interview, during which the participant complicated the notion of indigeneity. He explained that the Chilean state may identify citizens differently than an Indigenous community does, which might even contrast with the way an individual self-identifies. There is also the added complexity of transboundary movement into and from Argentina and Bolivia for various reasons, such as family ties, job occupation, or access to education. As these peoples inhabited the land for thousands of years before the emergence of nation-states, Indigenous peoples continue to operate through daily life without much regard for state boundaries. Indigeneity, however, is defined and recognized differently throughout these neighboring countries, including Chile, Bolivia, Peru, and Argentina. In summary, there is not one universal consensus about how to approach lithium mining—whether that be negotiate or resist or some alternative—within these dynamic communities. Even well intended consultation may go wrong when it is difficult to define Indigenous identities and stakes.

Babidge explains the various unintended consequences of Chile’s attempt to institutionalize consultation within the environmental impact assessment process, terming the

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136 Lorca, et al., “Mining Indigenous Territories.”
effect an “overburden,” typically a mining term. In addition to the issues of temporal clashes and external pressures, institutionalized consultation in the Chilean case increases the strain on already limited resources in poorer communities. Like most bureaucratic mechanisms, the consultation process requires resources, energy, time, and technical expertise. In many contexts these communities are already overextended and under-resourced. They are most likely to be asymmetrically equipped compared to wealthy mining corporations. Beyond the bureaucratic demands, there are language barriers. Translating these documents into various Indigenous languages – to ensure genuine community participation – requires even more time and expertise.

Babidge writes,

> Community response to progressive legislation necessitates participation in mundane bureaucratic matters, hours spent at a desk in report analysis, form-filling, and other administrative and technical tasks that are part of the everyday work of any trained professional. However, in many Indigenous communities such as Peine, trained professionals are few and the tasks to be performed exceed that of the bureaucrat. All tasks must be translated to local forms of communication and internal relationships in order to function.\(^\text{139}\)

Often these demands, required of a community engaging in these consultation processes, interfere with other administrative tasks and community priorities, such as health or education.

When a right is granted to people, such as the right to consultation, it should benefit these peoples, rather than cause additional pressures or harms. If and when the Chilean government amends its EIA system, these “overburdens” must be taken into account, so that a future system aids, rather than further constraints the resources and sovereignty of Indigenous peoples.

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\(^{138}\) Babidge, “Consultation’s Overburden.”

\(^{139}\) Ibid.
Complicating Principles of Consultation

As mentioned in the section above, it is complex to define indigeneity; recognition of rights—such as the Indigenous right to consultation—is also inherently complicated. In recent decades, various actors, such as CSOs and INGOs, pressured industry activity and operations to account for human rights. This pressure to account for human rights, resulted in increased recognition and protection of certain rights. This trend of increased recognition is demonstrated through examples such as UNDRIP or ILO Convention 169, which recognize the Indigenous right to consultation and FPIC. Babidge complicates and problematizes this trend, however, exploring what she calls the “dark side of recognition politics.” She explains, “Indigenous rights mechanisms that operate at the National level and which have their impulses in global conventions, may enable ‘accumulation by juridification’ a process of symbolic recognition of Indigenous rights in which extractive activity is enabled.”

This quote highlights how this “symbolic recognition” of Indigenous rights further perpetuates extractivism. This was also mentioned in an interview with a community member. From his perspective, giving communities the right to consultation does not address the root problem at hand. This is because recognizing these rights actually allows for the continuation of business as normal, neoliberalism, and extractivism, he explains. This discourse calls into question the legitimacy of consultation as a mechanism, which is definitely something to grapple with, as actors and experts encourage consultation and similar mechanisms to promote a just global energy transition.

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140 Babidge, “Consultation’s Overburden.”
Chapter 7: Looking Ahead

Although much of this paper has centered around the shortcomings of implementing free and prior consultation Chile’s lithium industry, there is hope for the future. There are new technologies on the horizon, offering companies like SQM and Albemarle more sustainable mining practices. The rewriting of Chile’s constitution (again) after recently triggered, widespread political disconnect with neoliberalism and a young progressive president create space for change. Community consultation can be amended to better protect Indigenous rights and sovereignty. Chile’s environmental impact system can facilitate true accountability. Let us turn to these opportunities, along with the limitations of the Just Transition and electric vehicles in addressing the climate crisis.

Principles of the Just Transition and Community Consultation in Chile

This section explores how the implementation of community consultation compares to the four forms of justice, articulated within Abram et al.’s conceptualization of the Just Transition (see table 1.3 for reference). As explained in Chapter 1, this conceptualization of the Just Transition offers an opportunity to decarbonize in a transformational, socially-just manner. Below, Table 6.1 summarizes and categorizes state and corporate actions and initiatives against Abram et al.’s four forms of justice, that are central to ensuring the transformational, whole-systems approach to the Just Transition.

Both the state and mining companies have recognized and acknowledged the presence of Indigenous communities in the Salar de Atacama. Their recognition of Indigenous peoples, however, fails to acknowledge or address historical injustices and inequalities. While companies and the Chilean state have taken steps towards procedural justice, in practice companies fail to truly “engage a plurality of perspectives.” “Dialogue” with Indigenous
communities, as company representatives referenced, is often a box to check to gain project approval, rather than a participatory process. Furthermore, the state fails to make their participatory mechanism—community consultation via the Environmental Impact Study—prior, culturally appropriate, and feasible given the very real financial and technical constraints of small, Indigenous communities.

Distributive justice appears to be happening on the surface, as one flips through SQM’s 30 plus page chapter on their approach to community engagement. There are a variety of projects, payments, and programs Albemarle and SQM have both initiated with local communities. As Abram et al. explain, however, distributive justice considers “issues of control and ownership”, as well as distributing benefits fairly and equitably, rather than “‘delivering’ benevolent services to deprived communities.” The reality of corporate engagement in San Pedro de Atacama is likely characterized by the latter, “benevolent services to deprived communities.” These services have even replaced state services and programs in some cases, leading critics to worry about the potential aftermath of a future bust (following today’s boom) in the industry.142

Restorative justice, as Abram et al. explain, “moves the focus from narrow financial compensation schemes towards broader understandings of redistribution and repair,” by “first recognizing the various dimensions of loss incurred by climate change and transitional policies.” Payments to Indigenous communities are compensating them for current or future mining operations. Taking the next step to understand and account for notions of redistribution and repair is far off, as companies and state actors struggle to take responsibility, especially for historical events and processes. While this evaluation via the four forms of justice highlights the

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faults in Chile’s consultation processes and environmental framework, the Chilean framework is significantly further along than that of its neighbors, Bolivia and Argentina. Chile’s recent steps forward should be celebrated and serve as a jumping off point for future actions by the state. In many ways Chile can serve as an example.

Table 6.1: Four Forms of Justice vs. Community Consultation in Chile

<table>
<thead>
<tr>
<th>Just Transition</th>
<th>SQM</th>
<th>Albemarle</th>
<th>Chilean State</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recognition</strong></td>
<td>SQM Policy: “SQM develops some of its projects in areas with a significant presence of indigenous communities”</td>
<td>Albemarle Policy: “We recognize the unique relationship of indigenous communities with their environments, and we respect and seek to promote the culture, heritage, life systems, customs, beliefs, rites and socio-cultural practices of neighboring communities, and especially those associated with indigenous communities existing in the areas of influence of our operations.”</td>
<td>• Ratification of ILO Convention 169 and UNDRIP • the creation of the Special Commission of Indigenous People (1993) • Law No. 19,253 (1993)</td>
</tr>
<tr>
<td><strong>Distributive</strong></td>
<td>SQM Report: “Annual contribution of 1.7% of our sales to local governments in Antofagasta. • Annual contribution of US$10.8 to US$18.9 million for R&amp;D on clean technologies in Antofagasta. • SQM gives over 50% of the gross margin (prior to finance costs) to the country to fund various public policies. • Annual contribution of US$10 to US$15 million for the development of communities in Salar de Atacama. • Quarterly lease payments to CORFO associated with the sale price of products of up to 40% in the case of lithium.”</td>
<td>Albemarle Report: “At Albemarle, we strive for transparent communication and ongoing dialogue with all our stakeholders while sharing the benefits of our economic activity to build a positive legacy in the communities in which we operate.”</td>
<td>CORFO agreement requires: • 27% corporate tax • 35% specific royalty • 10-15 million contribution to community • 1.7% to regional development</td>
</tr>
<tr>
<td><strong>Procedural</strong></td>
<td>SQM Policy: “Additionally, with the purpose of generating informed joint diagnoses with the communities in relation to the potential impacts of our projects, we pursue the provision of continuous and transparent information, and we encourage the participation and consultation processes, whenever required by the legislation in force, particularly in the case of indigenous communities, incorporating to our performance the standards of Convention No. 169 of the International Labor Organization and of the United Nations Declaration on Indigenous Peoples”</td>
<td>“Whenever we need to expand our activities via land use, we are committed to respecting the principle of free, prior and informed consent (FPIC) in our engagement with indigenous communities and host governments.”</td>
<td>Consultation required in Environmental Impact Study as part of the Environmental Impact Assessment process</td>
</tr>
<tr>
<td><strong>Restorative</strong></td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Promises of Technology

Technology may limit the externalities created from lithium mining. Widely known as DLE, or direct lithium extraction, this emerging technology could revolutionize lithium mining. As one source explains, the method uses “adsorbents, solvents, membranes, or ion-exchange materials” to separate the lithium mineral from the brine mixture.143 DLE technology would likely increase efficiency of extraction, with current brine mining, only 40-65 percent of brine’s lithium is extracted, while DLE would obtain over 80 percent.144 It would reduce use of the traditional evaporation process used across Latin America.145 Additionally, DLE technology would allow for brine to be reinjected underground after lithium extraction occurs, preserving water levels. With that said, however, lithium mining will still require significant volumes of water to filter the mineral; for example, a DLE process developed by Lilac Solutions (backed by Bill Gates) still requires 10 tons of freshwater, per ton of lithium produced.146 To address the inevitable challenge of water supply, companies will likely have to adopt new approaches to production. Albemarle, for example, signed a contract with CRAMSA, a local company, to build a desalination plant in northern Chile and distribute water to their operations.147

Both SQM and Albemarle representatives mentioned this technology in interviews, claiming it is part of their strategic plan for future decades. They also acknowledged that scaling it up to their large operations will take at least 10 years. A recent Reuters article, however,

144 Blois, “Lithium Firms Hope Direct Extraction.”
147 Ibid.
claimed that Albemarle plans to expand their operations in the Salar de Atacama by 2028 by utilizing DLE technology. The company intends to complete a brine reinjection pilot program by the end of 2023. Although operationalizing this technology remains to be seen at the commercial scale, it holds potential in reducing the costs of mining in Indigenous communities and arid landscapes.

The Future of Chilean Politics

Constitutional Revision

Chile is uniquely positioned by electing a left-wing administration and revising their 1980 constitution. Additionally, recently mobilized political will, following the Estallido Social can potentially provide pressure on state actors to drive socio-political change. Looking forward in Chile requires an understanding of the constitutional revision process. The first attempt at constitutional revision—which was ultimately rejected in a nationwide referendum—was drafted by a popularly elected constitutional assembly composed of 155 representatives. Due to widespread political discontent, following the protests of 2019, much of the elected assembly was largely unaffiliated with political parties. Many have asserted the assembly overrepresented the left-wing; the Frente Amplio and Lista del Pueblo constituted 35 percent of the assembly. Likely because there was no mechanism to ensure the assembly represented broader Chilean society (and a variety of issues with the draft itself), 62 percent of Chileans rejected the new draft.

The second constitutional process now consists of 50 members within two assemblies, a Council of Experts and the Constitutional Council. The Council of Experts was elected by the

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148 REUTERS
Senate and Chamber of Deputies on January 25, 2023, while the Constitutional Council will be popularly elected later this year. The Technical Committee for Admissibility will oversee both assemblies.\textsuperscript{150} Critics worry this new revision process prioritizes expertise over representation; however, others are hopeful this new Council will draft a more moderate constitution able to secure approval from the Chilean population, unlike the previous attempt. The vote for the new draft will be held on December 17, 2023.\textsuperscript{151}

Though predicted to be a more moderate piece of legislation, there are twelve articles that Congress agreed on in December that will act as a base for the draft. This includes constitutional recognition of Indigenous peoples as part of the Chilean nation, as well as a constitutional commitment for the care and conservation of nature and biodiversity.\textsuperscript{152} These two articles are certainly steps in the right direction for addressing some of the social and environmental externalities discussed within this paper. This could allow the state to redefine projects that require an EIS (to prevent the loophole through the EID) and to restructure what community consultation looks like in practice.

\textit{Boric’s National Lithium Strategy}

On April 20\textsuperscript{th}, President Boric announced Chile’s \textbf{National Lithium Strategy}, “Today we present a national lithium strategy that's technically solid and ambitious,” adding that it would contribute towards “a Chile that distributes wealth we all generate in a more just way.” The government will not terminate current contracts with SQM and Albemarle, but with this shift, future contracts would only be issued as public-private; the state would hold a majority share in

\textsuperscript{150} Ibid.
\textsuperscript{152} im.pulsa, “Paso a Paso: El Cronograma Del Nuevo Proceso Constituyente En Chile - Im.Pulsa,” im.pulsa, January 17, 2023, \url{http://www.impulsa.voto/es/materials/paso-a-paso-constitucional/}. 

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the projects. This would involve foreign partners as minority stakeholders, allowing Chile to access foreign capital and technical expertise while maintaining control of lithium reserves. As Willy Krach, the mining undersecretary, explains, “We do not have time to learn on our own account without bringing in that knowledge that is already in third parties,” demonstrating the continued need for partnerships with the private sector.

With this announcement, Boric included that the state-owned copper company, CODELCO, is tasked with determining the best approach for a state-owned lithium company. He plans to seek approval from Congress later this year. Under this new national strategy, the government will favor future projects that utilize DLE technology, over extraction via evaporation ponds. Boric also vowed to protect the salt flats and biodiversity and to share mining benefits with nearby Indigenous communities.

Though there are business-related concerns about the trajectory of Chile’s industry, the National Lithium Strategy establishes certainty within the sector and illustrates the government’s commitment to developing the industry; this strategy encourages exploration and production beyond the Salar de Atacama into Chile’s unexplored salt flats in other parts of the country. Additionally, although some critics worry a state-run company would discourage foreign investment from Chile’s lithium industry, recent news in the US tells a more hopeful story. The US recently released stricter EV tax credit requirements that prioritize battery sourcing,

153 Villegas, “Albemarle Aims to Expand Chile Lithium Mine in 2028 with New Technology.”
155 Villegas, “Albemarle Aims to Expand Chile Lithium Mine in 2028 with New Technology.”
assembly, and production in North America or with a free trade partner, like Chile.\textsuperscript{157} This demonstrates increased global attention to resilient and sustainable supply chains, which works in Chile’s favor because of the country’s relatively stricter environmental regulatory framework.

\textbf{Complicating the Just Transition}

While the Just Transition in theory is appealing, sustainable, and socially-just, it is important to discuss its limitations. While the global energy transition is a crucial step to avoiding the most severe consequences of climate change, producing and driving more electric vehicles is by no means the solution to our global climate crisis. Successfully combating the climate crisis in the next decade will require significant behavioral changes at the global scale: reducing mass consumption (seen in industries like fashion), shifting towards more plant-based diets, limiting long-distance flights, reducing our dependence on fossil fuels, and creating and using improved public transportation systems.

The reality is that much of Global North is fully dependent on cars. In the US, for example, we operate in a car-centric culture and public transportation remains inaccessible in many regions, like rural and suburban America. We must reimagine what personal mobility is.\textsuperscript{158} As one interviewee astutely pointed out, lithium in Chile is being mined for individuals in the Global North to continue driving cars. Lithium is not mined to facilitate a global transition towards improved public transportation and few people are driving electric vehicles around Chile.\textsuperscript{159}


\textsuperscript{159} Interview #4. January 19, 2023.
There are very real complexities and externalities involved in the production of EVs. In our globalized world—where extraction and production often occur someplace far away—we are often disconnected from the consequences of our actions, habits, and lifestyles. Lesley Muñoz explained, “many people think that clean energy is the solution for climate change, but this is a misnomer. It sounds like a solution, yet my territory and community are suffering as a result of these solutions put forth.” So again, it is time to reimagine what mobility looks like at the global scale. EVs can and should be part of the solution, though they are not the silver bullet solution to our climate crisis. As society turns to technology to combat climate change, we must be aware of the potential socio-externalities at the global and local level. While the Chilean state is responsible to an extent, consumers in the Global North are also responsible for holding transnational corporations accountable; joint responsibility can ensure that sustainability and human rights, especially Indigenous rights in this case, are successfully integrated within lithium’s complex supply chain. Local and Indigenous peoples must be accounted for in our global energy transition. Mechanisms, such as consultation, are a place to start.

Final Thoughts

This thesis sought to explore how consultation processes in Chile’s lithium industry align with the concept of the Just Transition. I began in Chapter 2 by examining the history of Chile’s lithium industry, including the discovery of the mineral, the trajectories of public-private partnerships and corporate acquisitions, the influence of the geopolitical context, and the state’s approach to lithium during Pinochet’s dictatorship. This chapter also explained how lithium’s status as a strategic resource to be reserved for the state continues to carry implications for

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lithium mining today. Chapter 3 defined the principles of FPIC and consultation by analyzing the two international conventions, UNDRIP and ILO Convention 169. Then, it explores how the Chilean state attempted to implement its commitment to these international principles through their environmental impact assessment process. Chapter 4 analyzed SQM and Albemarle’s corporate policies and annual reports, to determine their approach to community engagement and consultation. Chapter 5 shares a story of local community resistance to the lithium industry and reveals shortcomings of Indigenous consultation. Finally, Chapter 6 further investigated the complexities, challenges, and shortcomings of consultation. This chapter included an important discussion critiquing the way scientific knowledge is produced in Chile and how this acts as a barrier to corporate accountability.

The findings of this thesis reveal the gaps in the operationalization of consultation in Chile. In recent decades, Chile has undeniably begun to take steps in the right direction – by ratifying international conventions, increasing required royalties designated for regional development, and improving their environmental impact assessment process. Yet, as discussed in Chapter 5, there is more work to be done, such as producing credible scientific knowledge accessible to the public or mandating community consultation within both EIS and EID processes part of Chile’s environmental impact assessment. There is hope for public knowledge production with Boric’s National Lithium Strategy, which includes an action item to create a Public Technological and Research Institute of Lithium and Salt Flats. Ultimately, consultation must be better implemented and enforced, especially as the new national strategy strives to expand the lithium industry.
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