Indigenous Environmental Rights, Participation and Lithium Mining in Argentina and Bolivia: A Socio-Legal Analysis

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For my family,
on Earth and in Heaven.

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ABBREVIATIONS

ACHR	American Convention on Human Rights (Pact of San José)
ACHPR	African Charter on Human and Peoples Rights
ADRDM	American Declaration of the Rights and Duties of Man
CEDLA	*Centro de Estudios para el Desarrollo Laboral y Agrario* – Centre of Labour and Agrarian Development Studies
CEDIB	*Centro de Documentación e Información Bolivia* – Centre of Documentation and Information Bolivia
CONAMAQ	*Consejo Nacional de Ayllus y Markas del Qullasuyu* – National Council of Ayllus and Markas of Qullasuyu
COMIBOL	*Corporación Minera de Bolivia* – Bolivian State Mining Corporation
CPLI	*consulta previa, libre y informada* (free, prior and informed consultation)
CSJ	*Corte de Suprema de Justicia* – Supreme Court of Justice (Argentina)
CTUCSB	Confederación Sindical Única de Trabajadores Campesinos de Bolivia – Unified (or Sole) Syndical Confederation of Rural Workers of Bolivia
ECHR	European Convention on Human Rights
ESCR	economic, social and cultural rights
EMRIP	Expert Mechanism on the Rights of Indigenous Peoples
FARN	*Fundación Ambiente y Recursos Naturales* – Environment and Natural Resources Foundation
FRUTCAS	*Federación Regional Única de Trabajadores y Campesinos del Altiplano Sur* – Unified (or Sole) Regional Federation of Rural Workers of the Southern Altiplano
FPIC	free, prior and informed consent
GNRE	*Gerencia Nacional de Recursos Evaporíticos* – National Management of Evaporate Resources
IACHR	Inter-American Commission of Human Rights
IACtHR	Inter-American Court of Human Rights
ICCPR	International Covenant on Civil and Political Rights
ICESCR	International Covenant on Economic Social and Cultural Rights
IHRL	international human rights law
ILO	International Labour Organisation
IPCC	Intergovernmental Panel on Climate Change
JEMSE	*Jujuy Energía y Minería Sociedad del Estado* – Jujuy State Energy and Mining Society
MAS	*Movimiento al Socialismo* – Movement toward Socialism
NGO	non-governmental organisation
NOA	*Noroeste Argentina* – Northwest Argentina
OAS	Organisation of American States
OAU	Organisation of African Unity
OECD	Organisation of Economic Cooperation and Development
TCO	*Tierras Comunitarias de Origen* – Native Community-owned Land
TIPNIS	*Territrio Indígena y Parque Nacional Isiboro Secure* – Isiboro Sécure National Park and Indigenous Territory
UDHR	Universal Declaration of Human Rights
UN	United Nations
UNGA	United Nations General Assembly
UNDRIP	United Nations Declaration on the Rights of Indigenous Peoples
UNHRC	United Nations Human Rights Council

UNPFII	United Nations Permanent Forum on Indigenous Issues
WCED	World Commission on Environment and Development
WGIP	Working Group on Indigenous Populations
YLB	*Yacimientos de Litio Bolivianos* – Bolivian Lithium Deposits State Company

GLOSSARY

altiplano	high plain
andino	Andean
apacheta	rockpile [Quechua]
buen vivir	living well / good living
cal	lime (calcium oxide)
calumnias	slander
campesino/a	farmer / peasant (/female)
colectivo	collective
comunero/a	community member or leader (/female)
comunidade	community
comunitário	community-owned
consentimiento	consent
consulta	consultation
consulta previa	prior consultation
consulta previa libre y informada	free, prior and informed consutlation
criollo	Eurodescendent
cuenca	basin / watershed
de origen	native / indigenous
encalado	liming
gobierno	government
huellas	footprints
indígena	indigenous
kachi yupi	footprints in salt [Quechua]
lechadas de cal	lime slurries
Madre Tierra	mother earth
minería	mining
originario	native / indigenous
Pachamama	Mother Earth / Mother Nature [Quechua]
participación	participation (primarily in an economic sense)
pozo	well (water)
puna	Argentinean high Andean plains
salar	salt flat
salero	salt gatherer (in Bolivian Spanish)
salinero	salt gatherer (in Argentinean Spanish)
salmuera	brine
servidumbre	easement / servitude
socialización	information meeting
suma qumaña	living well / good living [Aymara]
sumac kawsay	living well / good living [Quechua]
sur/sud	south
tierra	land
vivir bien	living well

SUMMARY

The focus of this thesis is the lithium-brine mining industries developing on three salt flats: two in Argentina (Salinas Grandes and Olarozi-Cauchari) and one in Bolivia (the Salar de Uyuni). In particular, I focus on the environmental human rights of indigenous communities living near the salt flats upon which the mines are located.

At the heart of their rights is participation in decision-making over mining which is likely to affect them and their lives. This includes decisions made by mining companies and state authorities that will affect their environment, and the land they occupy and use for their traditional livelihoods, such as salt gathering and quinoa agriculture.

To understand what is at stake, the thesis also examines the potential environmental impacts of lithium mining at scale in these regions, particularly in terms of water use and contamination. Lithium is a valuable commodity in the emerging low-carbon economy due to its increasing use in electric cars and renewable energy storage batteries. Over half of the world's lithium is found in the high Andean plains of the "Lithium Triangle", at the border regions of Argentina, Bolivia and Chile. This thesis is based on qualitative socio-legal research conducted 2015–2019, including six months of fieldwork in the region in January–June 2017. The research found that little reliable information about lithium mining's environmental impacts have been made available to indigenous communities, and that consultation has been weak. Some Argentinean communities have organised a successful resistance however, making full use of their rights under international law. In Bolivia, the industrialisation of lithium is a key goal of the socialist regime (2006–present), meaning an increasingly centralised state project and a lack of transparency over potential contamination for communities in the region.

"The salt lake is a sacred place for us, a part of our family. We can't destroy it."

"*Nosotros no comemos batería, se llevan el agua, se va la vida*"

Salinero/as of the Salinas Grandes Communities, Argentina

"We don't know about it – zero. We don't have any kind of explanation. We don't know how much lithium they are taking, nor of what quality. It's worrying for us for lack of water. Long before, many years ago, the salar used to have a lot of water and I would take a lot of salt. It's absorbing all of the water from the salar. It lowers the production of salt. It's a little worrying for us. We don't blame the company, but…"

Salero, Colchani, Bolivia

CHAPTER 1: INTRODUCTION

1.1 Overview of the thesis

This thesis analyses the extent to which the human rights of indigenous communities have been complied with, specifically relating to environmental participation rights, within the growing lithium industries of Argentina and Bolivia. In doing so, the thesis documents the current and potential socioenvironmental impacts of lithium mining on communities in this region and contextualises the current lithium mining industry within the broader socio-political developments within the sector and region. This introductory chapter addresses the importance of analysing lithium mining (and why now), before identifying the differing approaches being adopted towards mining lithium in Argentina and Bolivia, as well as the wider implications of such natural resource extraction for indigenous communities.

Lithium is probably the most important metal of today, being a crucial primary commodity for a future low-carbon economy. However, the benefits of using lithium to reduce our reliance on fossil fuels, will not come without a price – and that price is likely to be paid by the local indigenous communities living in the vicinity of lithium mining in the high Andean plains of Argentina, Bolivia, and Chile. Lithium is an unusual metal in that it can be extracted in two very distinct ways. One involves extraction from rock, which is how it is mined in Australia, the world's largest producer.[1] Unusually, it can also be extracted from brines found under salt flats, by evaporating brine (drawn from under the salt flat) in pools which have been cut out

[1] USGS, 'Lithium' (Unites States Geological Survey, 2018), https://minerals.usgs.gov/minerals/pubs/commodity/lithium/mcs-2018-lithi.pdf.

from the salt flat itself. This method is understood to be more economical than extraction from rock.[2] Further chemical processing is required to separate the lithium from other metals contained in the brines. All salt flats' brines are slightly different in composition, requiring a period of testing to check how long the evaporation stage might take, and what chemical compounds are needed for further processing. There are many lithium-rich salt flats around the world, located in some of the world's poorest and most politically unstable places, such as Afghanistan and Tibet.[3]

The largest deposits of lithium are found in the high Andean plateaus, where the borders of Argentina, Bolivia and Chile meet (see Map 1), known as the "Lithium Triangle".[4] This area is, therefore, where the current study is located.

This study focuses on three sites: two in Argentina and the third in Bolivia. In Argentina's northernmost Jujuy Province, there are two operational lithium mines on the Olaroz-Cauchari salt flat. Lithium mining has been proposed on another salt flat, the Salinas Grandes. Both salt flats are also surrounded by numerous but geographically dispersed indigenous communities. Some of the communities here have used the Salinas Grandes for salt-gathering, to use and trade as part of an economic structure that has existed since pre-Columbian times.[5] On the two mines established on Olaroz-Cauchari, many communities are currently working closely with or for the lithium companies, namely Sales de Jujuy and Exar. On the Salinas Grandes, in contrast,

[2] Henry Sanderson, 'Lithium: The next Speculative Bubble?', Financial Times, 6 January 2017, https://www.ft.com/content/4fd165d6-d274-11e6-9341-7393bb2e1b51.
[3] Gabriel Lafitte, *Spoiling Tibet: China and Resource Nationalism on the Roof of the World*, Asian Arguments (London ; New York: Zed Books, 2013); Simon Denyer, 'Tibetans in Anguish as Chinese Mines Pollute Their Sacred Grasslands', *Washington Post*, 26 December 2016, https://www.washingtonpost.com/world/asia_pacific/tibetans-in-anguish-as-chinese-mines-pollute-their-sacred-grasslands/2016/12/25/bb6aad06-63bc-11e6-b4d8-33e931b5a26d_story.html.
[4] Economist, 'A Battle for Supremacy in the Lithium Triangle', *The Economist*, 15 June 2017, https://www.economist.com/the-americas/2017/06/15/a-battle-for-supremacy-in-the-lithium-triangle.
[5] Nina Bertone, 'Salinas Grandes, Explotación del litio y demandas comunales', 2013, http://repositorio.ub.edu.ar/handle/123456789/2030; Andres Schipani, 'Hard Life of Bolivia's "Salt Plains Guardians"', 18 July 2010, sec. Latin America & Caribbean, https://www.bbc.com/news/world-latin-america-10282499.

communities have resisted plans to mine lithium since unannounced prospecting took place in 2010.

In comparison to Argentina, neighbouring Bolivia's fledgling lithium industry consists only of one state-owned pilot lithium extraction plant on the Salar de Uyuni. The project has been spearheaded by the government's socialist regime, led by indigenous President Evo Morales (2006–present), head of the *Movimiento al Socialismo* (MAS) political party. Pilot plants were completed in 2012 to test potential extraction methods of lithium and potassium chloride, a valuable fertiliser, to eventually scale up to full exploitation of these evaporate resources. The Salar de Uyuni is the largest salt flat in the world and a popular tourist destination in one of the poorest countries in South America. Again, there are numerous indigenous communities in the region around the coast of the salt flat, mostly engaged in quinoa cultivation, a traditional Andean grain dating back to the Inca civilisation.[6] Located on the eastern edge of the salt flat is one local community that uses the salt flat to harvest common salt to maintain their livelihood, similar to the Salinas Grandes communities. While estimates vary, Bolivia is understood to contain among the world's largest lithium deposits.[7]

The Salinas Grandes salt flat, the fourth biggest in the world, is also a major tourist destination in Argentina, but on a more modest scale than Uyuni. Like Uyuni, however, it is used by local indigenous people to "sow and harvest" common salt.[8] This means

6 Seema Patel, 'Resurgence of Interest in Ancient Grain Quinoa (Chenopodium Quinoa): An Appraisal', in *Emerging Bioresources with Nutraceutical and Pharmaceutical Prospects*, ed. Seema Patel, Applied Environmental Science and Engineering for a Sustainable Future (Cham: Springer International Publishing, 2015), 91–100, https://doi.org/10.1007/978-3-319-12847-4_9.
7 Sagárnaga López, 'Bolivia's Lithium Boom: Dream or Nightmare?', *OpenDemocracy* (blog), 21 December 2015, https://www.opendemocracy.net/democraciaabierta/rafael-sag-rnaga-l-pez/bolivia-s-lithium-boom-dream-or-nightmare; Laura Millan Lombrana, 'Bolivia's Almost Impossible Lithium Dream', 3 December 2018, https://www.bloomberg.com/news/features/2018-12-03/bolivia-s-almost-impossible-lithium-dream.
8 Marcela Valente, 'Native People in Argentina Demand a Say in Lithium Mining', *Inter Press Service*, 29 March 2012, http://www.ipsnews.net/2012/03/native-people-in-argentina-demand-a-say-in-lithium-mining/.

potentially severe implications for this traditional indigenous livelihood when lithium mining damages the salt flats. Lithium prospecting on the Salinas Grandes occurred in 2010 sparking alarm among the local communities living in the salt flat's watershed. Shortly after this, the communities organised themselves into a "Roundtable" of 33 concerned communities from the Salinas Grandes and Guayatayoc basin and went before Argentina's Supreme Court in 2012 claiming a legal right to be consulted.[9] They lost the case, but developed a "consultation protocol" for such projects, the principles of which are based on their rights as indigenous peoples in international law.[10] This protocol is thought to be one of the first of its kind in the world.[11]

Consequently, the thesis will proceed to assess the legal rights of informed consultation in relation to proposed lithium mining projects. In order to determine if those rights are being actioned on the ground, between 2015 and 2019, I conducted qualitative socio-legal research, including extensive documentary research and a six-month period of fieldwork at the three sites in Bolivia and Argentina (January–June 2017). During this time, I interviewed key actors within the industry and members of indigenous communities bordering three salt flats: the Salinas Grandes and the Olaroz salt flats in Jujuy Province, Argentina and the Salar de Uyuni in the Potosí Department of Bolivia. I used observation and semi-structured interviews to help determine whether those indigenous communities have enjoyed the right to participate in decision-making in respect of lithium mining projects occurring in the territories that they have traditionally inhabited. In brief, I aimed to understand the level of

9 Valente.
10 The 33 Communities of Salinas Grandes and Guayatayoc, 'Kachi Yupi / Huellas de Sal [Footprints in the Salt]: Procedimiento de Consulta y Consentimiento Previo, Libre e Informado Para Las Comunidades Indígenas de La Cuenca de Salinas Grandes y Laguna de Guayatayoc' (Jujuy, Argentina, August 2015), https://farn.org.ar/archives/20277.
11 Jael Makagon et al., 'Balancing the Scales - Community Protocols and Extractive Industries: Lessons from Argentina, India, Kenya and Zimbabwe' (Heinrich Böll Stiftung Southern Africa, 19 December 2016), https://za.boell.org/2016/12/19/balancing-scales-community-protocols-and-extractive-industries.

consultation that had taken place, the level of consent sought, and whether these processes had been "free, prior and informed" in accordance with international human rights norms. Due to limitations of word length I selected rights to land and environment for analysis, however other rights that might be implicated by lithium mining include rights to health and water, and potentially the right to life.

In total I conducted 40 interviews, the bulk of these with community members and leaders across 28 communities located in the vicinity of the three salt flats in the two countries. I also interviewed three government mining officials, two company representatives, the lawyer for the 33 Salinas Grandes communities and three independent researchers. Triangulating the data with other studies, my observations, documentary sources and interviews have enabled me to draw conclusions regarding indigenous environmental participation in lithium mining in the two countries.

1.2 The importance of lithium in an age of climate change

Lithium-ion batteries are ubiquitous in modern life in many parts of the world, used in mobile phones and other portable electronic devices such as laptops and cameras. Lithium-ion battery technology is also used to power electric vehicles, and as a way to store energy generated by wind turbines and solar panels,[12] meaning usage of renewable energy no matter the weather. Although the use of electric cars or storage batteries is still not ubiquitous, they are considered an important part of reducing harmful fossil fuel emissions and thus climate change, which is the most urgent environmental issue facing humanity.[13]

12 National Research Council Canada, 'Mining the Green Economy: Working with Lithium and Graphite Miners to Strengthen Canada's Energy Storage Opportunity', 31 January 2017, https://www.nrc-cnrc.gc.ca/eng/stories/2017/mining_green_econo.html.
13 IPCC, 'Special Report: Global Warming of 1.5°C', 8 October 2019; Justin Worland, 'UN Warns We Are Nowhere Close to Averting a Climate Crisis', *Time*, 8 October 2018, http://time.com/5418134/ipcc-climate-change-report-2030-crisis/.

The Intergovernmental Panel on Climate Change (IPCC) in October 2018 issued a warning that unless carbon pollution is cut by 45 percent by 2030, and to zero by 2050, the world has little hope of staying within 1.5C of warming, the limit agreed at the 2015 Paris climate talks.[14] The consequences of breaching these targets are alarming. According to the IPPC, a global shift towards electric transportation is essential for achieving this goal.[15] Lithium-ion is the only battery technology ready to facilitate this transition on a large enough scale. It is therefore being deployed rapidly in the development of new vehicles in China (lithium's biggest market), the US and Europe, in both public and private transport, with the dual goals of reducing the carbon emissions and urban air pollution from petrol and diesel vehicles. Lithium demand is therefore increasing rapidly, and supply is struggling to keep up: The Economist in January 2016 reported a trebling in the spot price of lithium carbonate (a common compound used in batteries) in the last quarter of 2015, giving an indication of the imbalance between demand and supply.[16]

Electric transportation has become increasingly popular worldwide. The rapid adoption in China of electric bicycles alone is said to be the largest increase in use of an alternative-fuel vehicle in the history of motorisation, with numbers going from near zero to more than 150 million on Chinese roads between 2005 and 2015.[17] It is easy to see from such developments how in the first quarter of 2016, the price of lithium on the global market tripled.[18] The price remains volatile, however, and subject to shocks, as more lithium mines come into production (their output unpredictable), and Chinese

14 IPCC, 'Global Warming of 1.5oC'.
15 Ibid.
16 Economist, 'A Plug for the Battery - The Battery Era', accessed 20 October 2018, https://www.economist.com/leaders/2016/01/16/a-plug-for-the-battery.
17 Christopher Cherry, 'Electric Bikes: What Experiences in China Can Tell Us| Christopher Cherry', *The Guardian*, 20 November 2013, sec. Public Leaders Network, https://www.theguardian.com/local-government-network/2013/nov/20/lessons-electric-bikes-china.
18 Economist, 'A Plug for the Battery - The Battery Era'.

manufacturing slows.[19]

1.3 The South American "Lithium Triangle"

The three countries of the Lithium Triangle are the Republic of Chile, the Republic of Argentina and the Plurinational State of Bolivia. The international mining and finance media coined the term "Lithium Triangle" due to the large, valuable and relatively economically-extractable deposits of lithium found in the brines under the salt flats located in these three countries' high Andean plains.

The salt flats and communities of the Lithium Triangle are geographically remote from the countries' capitals and urban centres, at the borders between Chile, Argentina and Bolivia. Altitude in the region ranges from between 3,500–4,400 metres above sea level. They are overwhelmingly indigenous areas in all three nations. While ethnicities are often mixed and groupings are hard to determine precisely, Argentina and Chile's indigenous communities in this region self-identify as Atacama and Kolla peoples. The 2012 Bolivian Census states that around Bolivia's Salar de Uyuni, 54 percent first learn the indigenous language Quechua.[20] Quechua and Aymará are not specifically ethnic groupings, but the two most-widely spoken indigenous languages of Bolivia.[21]

Precise reserve figures by country are regularly revised by the United States Geographical Survey (USGS) as prospecting, testing and production produces more information, but the region is generally understood to be the most lithium-rich on

19 Gabriel Wildau and Edward White, 'China Manufacturing Gauge Points to Worsening Economic Slowdown', Financial Times, 31 October 2018, https://www.ft.com/content/c5b13c48-dcab-11e8-9f04-38d397e6661c.
20 INE, "INE: 54,4% de los potosinos aprendieron a hablar en quechua" (La Paz: INE, 2012), accessed 22 February 2019 https://www.ine.gob.bo/index.php/component/phocadownload/category/64-notas-de-prensa-2016?download=942:ine-54-4-de-los-potosinos-aprendieron-a-hablar-en-quechua
21 Ricardo Calla Ortega, 'Impactos de La Producción Industrial Del Carbonato de Litio y Del Cloruro de Potasio En El Salar de Uyuni', in *Un Presente Sin Futuro: El Proyecto de Industrialización Del Litio En Bolivia* (La Paz: Centro de Estudios para el Desarrollo Laboral y Agrario (CEDLA), 2014). p.41.

Earth, with some 54 percent or more of world lithium reserves.[22] However, the unusual mining technique of extraction-by-evaporation depends on appropriate weather conditions over the evaporation period (of a few months to over a year). As such, yields can rise and fall unexpectedly, subject to variations in precipitation.[23] While the region is generally dry, in recent years, *El Niño* and climate change have disrupted typical rainfall patterns, leading to prolonged droughts, flash floods and the unusual phenomenon of flowering desert plains in the Atacama Desert, the driest place on Earth.[24]

In northern Chile, there has been lithium production on the Salar de Atacama since the 1980s.[25] In northern Argentina, the first company began production in Catamarca Province in 1997, the second and the third in Jujuy Province in 2015 and 2018 respectively.[26] In Bolivia, discussions about lithium have been ongoing since discovery in the 1970s, with unsuccessful negotiations in the 1990s and a hiatus until 2010 when the project was boosted by the socialist regime.

Chile and Argentina both produce lithium for the international market, with Chile the most advanced producer. According to the USGS in 2018 Chile produced 16,000 tonnes of lithium and Argentina produced 6,200.[27] Despite this, lithium is not considered particularly lucrative in Chile, particularly compared to copper: "in 2011

22 Ellsworth Dickson, Resource World, "Lithium Triangle", 11 May 2018
23 Frik Els, Lithium price: Weather takes more tonnes off the market, Mining.com, 20 February, 2019, accessed 21 February, 2019, http://www.mining.com/lithium-price-weather-takes-tonnes-off-market/
24 BBC News, 'World's Driest Desert in Bloom', 23 August 2017, sec. Latin America & Caribbean, https://www.bbc.com/news/world-latin-america-41021774; Rosalba O'Brien, 'Chile Desert Rains Sign of Climate Change: Chief Weather Scientist', *Reuters*, 27 March 2015, https://www.reuters.com/article/us-chile-weather/chile-desert-rains-sign-of-climate-change-chief-weather-scientist-idUSKBN0MN2N520150327.
25 The Economist, 'A Battle for Supremacy in the Lithium Triangle'.
26 Futuro Sustentable, 'Cristina Kirchner Inaugura El Yacimiento de Litio Sales de Jujuy', *Futuro Sustentable*, 3 December 2014, http://www.futurosustentable.com.ar/cristina-kirchner-inaugura-el-yacimiento-de-litio-sales-de-jujuy/; TECH2, 'Minera EXAR Started Its Lithium Production at Cauchari Olaroz', *TECH2* (blog), 6 August 2018, https://tech2.org/argentina/minera-exar-started-its-lithium-production-at-cauchari-olaroz/.
27 USGS, 'Lithium' (Unites States Geological Survey, 2019), https://minerals.usgs.gov/minerals/pubs/commodity/lithium/mcs-2018-lithi.pdf.

copper exports were worth US$43,614 million while lithium accrued just US$204 million", according to a government report.[28] While there were only two lithium mines in Argentina in 2018, 60 projects are due to come online in the coming years, and the government suggests that by 2023 Argentina could be producing 290,000 tonnes per year of lithium.[29] There is no commercial-scale production in Bolivia. However, due to the great potential for a central role in a growing world market, there is a large appetite for extraction of lithium, and a deal was signed in late 2018 with German ACI to help Bolivia exploit its reserves.[30]

All three countries of the Lithium Triangle are former Spanish colonies. Nine percent of Chile's population is indigenous; in Argentina the figure is 2.38 percent.[31] In Bolivia, by contrast, 42 percent of the population self-identify as indigenous.[32] This figure dropped by 20 percent from the Bolivian Census of 2001 to that of 2012 following changes in the available categories for self-identification in the census.

Indigenous communities live across all three countries' remote, mountainous lithium regions, practising subsistence farming, quinoa agriculture and, for some communities, salt harvesting from the salt flats. Some communities of the region also rely on work in tourism and mining, and migration is common to where work can be found.

[28] Javiera Barandiarán, 'Lithium and Development Imaginaries in Chile, Argentina and Bolivia', *World Development* 113 (1 January 2019): 381–91, https://doi.org/10.1016/j.worlddev.2018.09.019.
[29] The Economist Intelligence Unit, Argentina, "Argentina's lithium boom", 7 November 2018, accessed 5 October, http://country.eiu.com/article.aspx?articleid=1287322512&Country=Argentina&topic=Economy&linkId=100000004025421

[30] Mitra Taj, Michael Nienaber, "In the new lithium 'Great Game,' Germany edges out China in Bolivia", January 28, 2019, Reuters, https://uk.reuters.com/article/us-bolivia-lithium-germany/in-the-new-lithium-great-game-germany-edges-out-china-in-bolivia-idUKKCN1PM1LS
[31] INDEC, Censo Nacional de Población, Hogares y Viviendas 2010: Pueblos Originarios: Región Noroeste Argentino: Serie D No 1 (PDF) (in Spanish).
[32] Bolivian Census 2001 and 2012, INDEC: La Paz.

1.4 Differing approaches to lithium industrialisation

In 2017, The Economist noted that, "[t]hree South American countries have much of the world's lithium" and "[t]hey take very different approaches to exploiting it."[33] Successive Chilean and Argentinean governments have invited foreign companies to mine lithium, continuing to extract within the neoliberal extractive model common across Latin America.

Across Argentina's Provinces of Salta, Jujuy and Catamarca, around 30 projects are being developed across numerous salt flats. On Jujuy's Olaroz-Cauchari salt flat, a lithium industry has been working towards extracting lithium since 2010. Two lithium companies, Sales de Jujuy and Exar, have been commercially mining on this salt flat since 2015 and 2018 respectively. Ten indigenous communities live within the Olaroz basin, near the border with Chile, including the small town of Susques, which sits at 3,986 metres above sea level. Many members of these communities are working with or for lithium companies Sales de Jujuy and Exar. Despite prospecting on Argentina's Salinas Grandes in 2010, there is still no lithium mining taking place on the Salinas Grandes when this thesis was finalised in May 2019.

Bolivia's Salar de Uyuni is a 10,000-square kilometre salt flat that is so large it can be seen from space. It has been estimated to have more lithium than anywhere in the world, making Bolivia the "Saudi Arabia of lithium" according to a Financial Times journalist.[34] The socialist government of indigenous former coca union leader Evo Morales has funded a Bolivian state mining company to build a small pilot lithium plant on the south of the Salar de Uyuni, to explore options for large-scale extraction. The Salar de Uyuni is surrounded by numerous communities of native Bolivian peasant

[33] The Economist, "The white gold rush: A battle for supremacy in the lithium triangle", 15 June 2017.
[34] Andres Schipani, 'Bolivia: The Saudi Arabia of Lithium?', Financial Times, 7 January 2013, https://www.ft.com/content/ec58385a-fbc7-319f-93a8-4bd5647b10e0.

quinoa farmers, with one village, Colchani, traditionally focused on salt gathering. Bolivia's socialist government has taken a different approach to Argentina's or Chile's, who have invited foreign mining companies to mine private concessions. Despite great interest from foreign investors in the large Bolivian lithium deposit, the anti-colonial regime has eschewed outside investment and technical help in favour of extracting lithium from the Salar de Uyuni through a state-run mining company.

However, for over a decade, the Bolivian government's ambitious plans to mine lithium without foreign technology or investment have been mired with delays and problems. One key problem is Bolivia's limited experience with industrial development (it still imports the most basic manufactured items).[35] A second key problem causing delays is the prevalence of magnesium in the brines of the Salar de Uyuni, an impurity which complicates the standard lithium brine mining process.[36]

1.5 Natural resource extraction and indigenous peoples' rights

Natural resource extraction on a large scale is often damaging to the surrounding environment, and the people who depend on it for their survival and livelihoods. This is particularly true of indigenous peoples. As well as universal human rights to a healthy environment and its composite requirements of clean water, air, adequate food and so on, indigenous peoples have special human rights in international law. These rights have been enshrined in law to ensure their survival, and, more broadly, the survival of indigenous people and their cultures, which are often linked closely to the natural

35 Rebecca Hollender and Jim Shultz, 'Bolivia and Its Lithium: Can the "Gold of the 21st Century" Help Lift a Nation out of Poverty?' (Cochabamba: The Democracy Center, 2010), https://democracyctr.org/archive/bolivia-and-its-lithium/.
36 Anna C. Revette, 'This Time It's Different: Lithium Extraction, Cultural Politics and Development in Bolivia', *Third World Quarterly* 38, no. 1 (2 January 2017): 149–68, https://doi.org/10.1080/01436597.2015.1131118.

world.[37] While a human right to participation in environmental decision-making is arguably universal, indigenous communities also have specific rights to environmental participation in the form of informed consultation according to international law.[38] Furthermore, native and rural communities around the world are often the first to be affected by the impacts of climate change, and the most seriously, given the close dependence on particular lands for their physical and cultural survival.[39]

The Latin American continent has a "long history of extracting and exploiting natural resources dating back to the colonial era" according to Raftopoulos, and yet "the relationship between human rights, extractivism and the environment remains under-researched and under-theorised."[40] Samson and Gigoux state that, "[u]ndoubtedly, the main driving force of colonialism in Latin America has been the quest of all governments to assert sovereignty over indigenous lands."[41] Indigenous lands are often natural resource-rich, and as such indigenous peoples have long been at a clear disadvantage when governments permit and encourage extraction on their territories.[42]

Particularly for indigenous, rural and place-based peoples, extraction-based

[37] Colin Samson and Carlos Gigoux, *Indigenous Peoples and Colonialism: Global Perspectives* (Malden, MA: Polity, 2017); Laura Westra, *Environmental Justice and the Rights of Indigenous Peoples: International and Domestic Legal Perspectives*, First issued in paperback (London: Earthscan, 2013).
[38] *Mayagna (Sumo) Awas Tingni Community v Nicaragua*, IACHR Series C No 79, [2001] IACHR 9, IHRL 1462 (IACHR 2001), 31 August 2001; Mauro Barelli, "Development Projects and Indigenous Peoples' Land: Defining the Scope of Free, Prior and Informed Consent," in *Handbook of Indigenous Peoples Rights*, ed. Corinne Lennox and Damien Short (London ; New York, NY: Routledge, 2016).
[39] Paul Havemann, "Mother Earth, Indigenous Peoples and Neo-Liberal Climate Change Governance Paul Havemann," in *Handbook of Indigenous Peoples Rights*, ed. Corinne Lennox and Damien Short (London ; New York, NY: Routledge, 2016).
[40] Malayna Raftopoulos, 'Contemporary Debates on Social-Environmental Conflicts, Extractivism and Human Rights in Latin America', *The International Journal of Human Rights* 21, no. 4 (4 May 2017): 387–404, https://doi.org/10.1080/13642987.2017.1301035.
[41] Samson and Gigoux, *Indigenous Peoples and Colonialism*.
[42] Samson and Gigoux; Westra, *Environmental Justice and the Rights of Indigenous Peoples*; Elena Blanco and Jona Razzaque, *Globalisation and Natural Resources Law: Challenges, Key Issues and Perspectives* (Cheltenham, UK ; Northampton, MA: Edward Elgar Publishing Ltd, 2011); Jennifer Huseman and Damien Short, '"A Slow Industrial Genocide": Tar Sands and the Indigenous Peoples of Northern Alberta', *The International Journal of Human Rights* 16, no. 1 (1 January 2012): 216–37, https://doi.org/10.1080/13642987.2011.649593.

economic "development" is often experienced as disastrous.[43] However, increased visibility and persistent lobbying by indigenous delegates at the international level, and particularly within the UN human rights forum in Geneva,[44] has resulted in some gains in law, politics and practice for indigenous peoples' rights.[45] Because of the 1989 International Labour Organisation's Indigenous and Tribal Peoples' Convention 169 (ILO169), for example, states must consult with indigenous peoples in advance of mining projects as regards the scope of the project and its environmental impacts.[46] The 2007 UN Declaration on the Rights of Indigenous Peoples (UNDRIP),[47] proposes that these consultations have the objective of obtaining indigenous "free, prior and informed consent" (FPIC) in advance of mining projects that might affect them, provided for in UNDRIP Article 32.2.[48] Although UNDRIP constitutes only soft law, the principle of FPIC is now accepted by many stakeholders as being central in negotiations between indigenous communities and mining companies.[49]

Similarly, there are a number of global initiatives, driven by UN member states and other international organisations such as the World Bank, that aim to curb the worst excesses of transnational corporate power. These include the UN's non-legally-binding

[43] Deborah McGregor, 'Living Well with the Earth', in *Handbook of Indigenous Peoples Rights*, ed. Corinne Lennox and Damien Short (London; New York, NY: Routledge, 2016).
[44] Julian Burger, 'From Outsiders to Centre Stage: Three Decades of Indigenous Peoples' Presence at the United Nations Julian Burger', in *Handbook of Indigenous Peoples Rights*, ed. Corinne Lennox and Damien Short (London; New York, NY: Routledge, 2016).
[45] Sheryl Lightfoot, *Global Indigenous Politics: A Subtle Revolution* (Routledge, 2016).
[46] International Labour Organization (ILO), Indigenous and Tribal Peoples Convention, C169, Articles 6 and 15.
[47] UN General Assembly, *United Nations Declaration on the Rights of Indigenous Peoples : resolution / adopted by the General Assembly*, 2 October 2007, A/RES/61/295, available at: https://www.refworld.org/docid/471355a82.html [accessed 17 May 2019]
[48] Ibid, Article 32.2
[49] Corinne Lewis, 'Indigenous Peoples and the Corporate Responsibility to Respect Human Rights', in *Handbook of Indigenous Peoples Rights*, ed. Corinne Lennox and Damien Short (London ; New York, NY: Routledge, 2016); David Szablowski, 'Operationalizing Free, Prior, and Informed Consent in the Extractive Industry Sector? Examining the Challenges of a Negotiated Model of Justice', *Canadian Journal of Development Studies / Revue Canadienne d'études Du Développement* 30, no. 1–2 (1 January 2010): 111–30, https://doi.org/10.1080/02255189.2010.9669284; Adem Kassie Abebe, 'The Power of Indigenous People to Veto Development Activities: The Right to Free, Prior and Informed Consent (FPIC) with Specific Reference to Ethiopia' (Mini Dissertation, University of Pretoria, 2009), https://repository.up.ac.za/handle/2263/12643.

Global Compact (2000) and Guidelines on Business and Human Rights (2009), discussed briefly in Chapter 4; the World Bank's International Finance Corporation's "Performance Standards" for managing social, environmental and human rights risks; and the Organisation for Economic Cooperation and Development Guidelines and associated system of National Contact Points. Due to space and time restrictions, and general inapplicability of the latter two oversight mechanisms in lithium projects in Bolivia and Argentina, these mechanisms not a focus of this thesis.

According to Raftopoulos, extraction and exploitation of natural resources in Latin America has been driven by "strong international demand for raw materials and a cycle of high prices",[50] a trend seen in the lithium market as well as markets for numerous other commodities. This dynamic is further exacerbated by "the recent downturn in the price of minerals and hydrocarbons" which creates a decline in profits that must be "offset by the further expansion of extractive frontiers".[51] Harvey's concept of "accumulation by dispossession" as a form of "new imperialism" is a useful reference here.[52] He highlights how capital requires new environments into which to expand to exploit natural resources, with the effect of dispossessing indigenous and rural peoples of their natural heritage and rights to clean water, air and a healthy environment.[53]

Oil is a clear example of natural resource extraction which has caused severe socioenvironmental and human rights violations all across the world. In Nigeria, for example, oil production by Royal Dutch Shell and the Nigerian state company has had devastating effects on the environment and people of Ogoniland, resulting in a situation where nine Ogoni environmental activists were executed by the military

50 Raftopoulos, 'Contemporary Debates on Social-Environmental Conflicts, Extractivism and Human Rights in Latin America'.
51 Raftopoulos.
52 David Harvey, *The New Imperialism* (Oxford ; New York: Oxford University Press, 2005).
53 Harvey.

government following an unfair trial in 1995.[54] In the Canadian tar sands, the toxic environment created by enormous open cast mines of bituminous sands has created a health crisis for First Nations communities local to the mines that is so severe Huseman and Short call it a "slow industrial genocide".[55] With their land destroyed by the largest industrial project on Earth, native communities have little hope of returning to their subsistence hunting, trapping and fishing traditions. In Latin America, states are also very familiar with the environmental effects of oil extraction, which has severely affected the health and wellbeing of rainforest communities in Ecuador, for example.[56] These cases will be examined in detail in the next chapter (Background) and in Chapter 4 (Law).

1.6 The contribution of the thesis

1.6.1 Comparing indigenous environmental rights compliance in two states

The impact of extraction on the environment, economy and rural or indigenous communities has been well researched in recent years, across numerous academic disciplines.[57] Recent Latin American political shifts to the left and back, and swings in

54 Amnesty International, 'Nigeria: Shell Complicit in the Arbitrary Executions of Ogoni Nine as Writ Served in Dutch Court', 29 June 2017, https://www.amnesty.org/en/latest/news/2017/06/shell-complicit-arbitrary-executions-ogoni-nine-writ-dutch-court/.
55 Huseman and Short, "'A Slow Industrial Genocide'".
56 Miguel San Sebastián and Anna Karin Hurtig, 'Oil Development and Health in the Amazon Basin of Ecuador: The Popular Epidemiology Process', *Social Science & Medicine* 60, no. 4 (1 February 2005): 799–807, https://doi.org/10.1016/j.socscimed.2004.06.016.
57 Raftopoulos, 'Contemporary Debates on Social-Environmental Conflicts, Extractivism and Human Rights in Latin America'; Joanna Morley, '" … Beggars Sitting on a Sack of Gold": Oil Exploration in the Ecuadorian Amazon as Buen Vivir and Sustainable Development', *The International Journal of Human Rights* 21, no. 4 (4 May 2017): 405–41, https://doi.org/10.1080/13642987.2016.1249140; Linda Farthing and Nicole Fabricant, 'Open Veins Revisited: Charting the Social, Economic, and Political Contours of the New Extractivism in Latin America', *Latin American Perspectives* 45, no. 5 (1 September 2018): 4–17, https://doi.org/10.1177/0094582X18785882; Alberto Acosta, 'Extractivism and Neoextractivism: Two Sides of the Same Curse', in *Beyond Development: Alternative Visions from Latin America* (Amsterdam: The Netherlands: Transnational Institute, 2013), 26, https://www.tni.org/en/publication/beyond-development; Lisa Laplante and Suzanne Spears, 'Out of the Conflict Zone: The Case for Community Consent Processes in the Extractive Sector', *Yale Human Rights and Development Law Journal* 11, no. 1 (18 February 2014), https://digitalcommons.law.yale.edu/yhrdlj/vol11/iss1/6; Emma Gilberthorpe and Dinah Rajak, 'The Anthropology of Extraction: Critical Perspectives on the Resource Curse', *The Journal of Development Studies* 53, no. 2 (1 February 2017): 186–204, https://doi.org/10.1080/00220388.2016.1160064.

global commodity prices, have made this area ripe for investigation.[58] However, this is the first study to comprehensively compare two states' compliance with international law enshrining rights to indigenous consultation and other forms of opportunities for indigenous participation in the lithium industry particularly. This is important as the industry grows quickly across the Lithium Triangle. Because conflicts between miners and indigenous communities can emerge at any time in the life of a mine, an understanding of the context and build-up to any resulting grievance or conflict may prove helpful for both mitigation and restitution.

There have been a number of studies focusing on the lithium industries developing in Argentina and Bolivia, and in neighbouring Chile. Most have examined just one country, focusing on economic issues, potential for conflict or reasons for public support. Barros, for example, has focused on impacts on indigenous communities' rights to water and self-determination in the Chilean Atacama Desert in respect of both copper and lithium mining. He concludes from this work that

> Latin American states seem now increasingly unwilling to grant the indigenous peoples the possibility of effectively vetoing extractive projects, and consider that the results of consultation with indigenous peoples is non-binding in legal terms.[59]

Barros's study and reflection above are certainly relevant to the thesis that follows. In Argentina, both academic and NGO researchers (primarily from FARN – Argentina's *Fundación Ambiente y Recursos Naturales*) have examined lithium mining in Jujuy Province with a focus on community benefits and impacts.[60] Argento, writing with Zicari, concludes that the economic development motive has been effective in sidelining

[58] Acosta, 'Extractivism and Neoextractivism'; Raftopoulos, 'Contemporary Debates on Social-Environmental Conflicts, Extractivism and Human Rights in Latin America'.
[59] Alonso Barros, 'The Fetish Mechanism. A Post-Dogmatic Case Study of the Atacama Desert Peoples and the Extractive Industries', in *Handbook of Indigenous Peoples Rights*, ed. Corinne Lennox and Damien Short (London; New York, NY: Routledge, 2016). p.231
[60] Pia Marchegiani, Elisa Morgera, and Louisa Parks, 'Indigenous Peoples' Rights to Natural Resources in Argentina: The Challenges of Impact Assessment, Consent and Fair and Equitable Benefit-Sharing in Cases of Lithium Mining', *BENELEX Working Paper No. 19*, January 2019.

indigenous community rights in Jujuy.[61] Writing with Puente in Fornillo's volume on the developing Argentinean lithium industry, their conclusion is that indigenous identity is used strategically by the Salinas Grandes communities, within the framework of national and international law pertaining to them, to exert influence over decisions that will affect their lives.[62]

One Bolivian NGO, CEDLA (*Centro de Estudios para el Desarrollo Laboral y Agrario*), was able to create a full appraisal of the Bolivian lithium mining project in 2014, and the conclusions drawn therein are of central importance here. Revette's doctoral thesis (2016) focuses on the apparent acceptance among local indigenous peasant farmer communities of the Bolivian socialist regime's lithium mining plans, using the concepts of the "magical state" and Burawoy's notion of "manufacturing consent".[63] Bolivian economist Sanchez-López focused her doctoral thesis on commodification and resource governance in the Salar de Uyuni. The Bolivian situation being particularly compelling, due to the scale of the challenge for the country of industrialising lithium, and its colonial and neoliberal history of mining and extractivism (which will be examined fully in the next chapter), studies have continued to emerge during the writing of this thesis. For example, Romero Valenzuela notably used her thesis to focus on the "resource curse" and the potential for "green conflict" around the Salar de Uyuni in Bolivia as a result of lithium mining.[64]

In contrast to the above, this study, with its close focus on indigenous environmental rights, is of particular interest because it is able to clearly compare

61 Melisa Argento and Julián Zícari, 'Las Disputas Por El Litio En La Argentina: ¿Materia Prima, Recurso Estratégico O Bien Común?' 1, no. 19 (2017): 14.
62 Florencia Puente and Melisa Argento, 'Conflictos Territoriales y Construcción Identitaria En Los Salares Del Noroeste Argentino', in *Geopolítica Del Litio Industria, Ciencia y Energía En Argentina* (Buenos Aires: El Colectivo, 2015).
63 Anna Revette, 'Extractive Dreams: Unearthing Consent, Development, and Lithium in Bolivia.', 1 December 2016, https://repository.library.northeastern.edu/files/neu:cj82nr48k.
64 Janine Romero Valenzuela, 'Green Cars = Green Conflicts? Governance, Grievances and Conflict Dimensions of the Bolivian State Lithium Program' (Doctoral Thesis, University of Erfurt, 2018).

communities' experiences under two very different regimes, making it distinct from the above works. Through the use of original interview data and observations from three cases across two countries, triangulated with the above-mentioned studies, conclusions can be drawn. These conclusions contribute to a broader understanding of the probable socioenvironmental impacts of lithium mining in these regions, and the national and international political settings within which indigenous rights can be secured. The wider dimensions of the role of lithium in climate change mitigation and questions of sustainable development, where there are potentially serious environmental impacts, are also highly relevant.[65]

1.6.2 The socioenvironmental impacts of lithium mining

There are two key environmental concerns when mining lithium from brine at scale in the Lithium Triangle. The first concern is related to the availability of groundwater. One study commissioned by a lithium company examining aquifers in the Chilean Atacama suggests a potential lowering of the water table, for example, due to brines being drawn for lithium extraction.[66] Furthermore, in 2018, a group of scientists wrote to *Nature* over concerns that pollution of limited water sources from lithium mining in the Atacama were having knock-on effects on local indigenous communities' water rights.[67] The consequences of over-drawing of water for mining in this region can be severe communities in this region, as they may have to migrate to where they can find water as agriculture becomes unsustainable.[68]

[65] L. Hancock, N. Ralph, and S. H. Ali, 'Bolivia's Lithium Frontier: Can Public Private Partnerships Deliver a Minerals Boom for Sustainable Development?', *Journal of Cleaner Production* 178 (20 March 2018): 551–60, https://doi.org/10.1016/j.jclepro.2017.12.264.
[66] David F. Boutt et al., 'Rapid Recharge of Fresh Water to the Halite-Hosted Brine Aquifer of Salar de Atacama, Chile', *Hydrological Processes* 30, no. 25 (2016): 4720–40, https://doi.org/10.1002/hyp.10994.
[67] Jorge S. Gutiérrez, Juan G. Navedo, and Andrea Soriano-Redondo, 'Chilean Atacama Site Imperilled by Lithium Mining', *Nature* 557 (23 May 2018): 492, https://doi.org/10.1038/d41586-018-05233-7.
[68] Katy Jenkins, 'Is It All About the Water? Exploring Conflicts between Indigenous Communities and the Mining Industry in the Atacama Desert' (Resource Entanglements: Disparate Narratives on Natural Resource Extraction in Latin America, ILAS, Senate House, London, 2016).

There is limited independent research on the impacts of lithium mining at scale on the environment and communities of the Lithium Triangle. Importantly, my research manages to bring the available evidence together, and broadens the question to focus on the impacts on the environment and the broader socioenvironmental consequences for indigenous communities in these regions, particularly on the level of information and participation in decision-making being afforded them. Through interviews and observation during fieldwork, and documentary and bibliographic research, I came to understand that lithium mining could threaten the supply of fresh water for indigenous communities, particularly in a drought-prone region. Furthermore, one extraction method being proposed in Bolivia's Salar de Uyuni could contaminate land through large amounts of waste product and the additional and cumulative pollution from trucks required to remove it. While the research could have focused specifically on rights to water, food, health and life, due to time and space restrictions, these are included as part of general environmental rights (see Chapter 4).

1.6.3 Timely research at the early stages of a fast-growing lithium industry

I was most compelled to undertake this research to provide a substantive contribution at an early enough stage that environmental damage, loss or degradation of indigenous lands and livelihoods, and the potential for conflict might be limited. International indigenous peoples' human rights law has been developed over the last several decades for the very purpose of providing indigenous agency over ancestral lands, environments and traditional livelihoods. To effect this, prior informed consultation in these communities is crucial.

All individuals have rights to environmental information and participation, and indigenous communities have specific rights to consultation. It follows that a detailed assessment of compliance with these rights, and review of the relevant information

about potential environmental damage that lithium mining might cause, are significant contributions to knowledge about an industry that is only just beginning to grow. If lithium is to become as important to the global economy as oil, an understanding of the key environmental impacts and the barriers to participation for affected indigenous communities is likely to be valuable.

While the environmental impacts of oil extraction and lithium extraction are not necessarily directly comparable, there are wider considerations of sustainable development and intercultural fairness to consider. Further, the sheer scale of the industrial operations necessary for all the lithium required is likely to be immense. The remote and undeveloped regions in which extraction is set to take place are home to thousands of indigenous people in hundreds of communities. Their livelihoods and cultures are likely to suffer from the resulting impacts on their environment. That this is likely to be done in the name of fuelling a low-carbon economy deserves timely and careful scrutiny.

While lithium is only one element in the complex composition of lithium-ion batteries, it is clearly essential and used in great quantities. Other parts of a lithium-ion battery have also come under human rights scrutiny: cobalt mined by children from the Democratic Republic of Congo is also used in lithium-ion batteries that power many mobile phones and laptops, for example.[69] But there is a sense that lithium is particularly interesting because of its capacity to store energy, and energy produced from renewable resources, solving an enormous problem for human societies and therefore all life on Earth.

The research that follows documents the current and potential impacts on the

[69] Amnesty International, "'This Is What We Die For": Human Rights Abuses in The Democratic Republic of Congo Power the Global Trade in Cobalt' (Amnesty International, 19 January 2016), https://www.amnesty.org/en/documents/document/?indexNumber=afr62%2f3183%2f2016&language=en.

human rights of native Argentineans and Bolivians to consultation, and the difficulties of fair environmental participation in an extractivist setting impacting socially and politically disadvantaged communities. It is therefore able to provide some predictions of the socioenvironmental costs of the low-carbon energy transition, explored through the lens of lithium extraction in the Lithium Triangle.

1.7 Organisation of the thesis

The thesis locates the legal rights of indigenous communities within their socio-political context, to see if rights are being observed in practice. The chapter that follows after the three maps (Chapter 2), therefore, examines the socio-political and historical contexts within which lithium mining is proposed in the two countries. It focuses on the two regimes of governance in place in Argentina and Bolivia and their socio-political histories, particularly pertaining to mining and indigenous peoples' rights. Included here is background discussion of indigenous conceptions of nature and particular vulnerabilities relating to discrimination and environmental degradation.

Having set out the context to the thesis and the question to be answered, Chapter 3 details the methodological approach and methods used in the thesis. I first detail the process of undertaking preliminary documentary and online research. Then I detail how I went about undertaking fieldwork in the high Andean plains of Argentina and Bolivia, including ethical considerations. This chapter includes 22 photographs from the fieldwork trip.

The focus of the thesis is on compliance with legal obligations; thus, Chapter 4 provides an analysis of the international law relevant to the indigenous communities living near proposed lithium mining projects in Argentina and Bolivia. The chapter has a dual focus: on environmental participation rights more generally, and indigenous peoples' rights to consultation more specifically.

Moving from the international legal system to the domestic, Chapter 5 is then the first of two chapters based on empirical data gathered during fieldwork interviews and observation. This chapter examines Argentinean law and the two sets of communities that live around the Salinas Grandes and Olaroz salt flats. It analyses the case of the 33 Communities of the Salinas Grandes in depth, including their Supreme Court case of 2012 and *Kachi Yupi* consultation protocol, which affirms their use of the salt flat for salt-gathering.

Chapter 6 focuses on Bolivia. It analyses recent Bolivian legislation pertaining to mining and indigenous peoples' rights and local attitudes to lithium mining around the southwest of the Salar de Uyuni. Here, I set out the potential for severe environmental damage from the industrialisation of lithium in the Salar de Uyuni. The socialist ambitions of Bolivian government pertaining to the lithium project are also addressed in this chapter.

Having analysed the case studies, Chapter 7 presents the key findings of the study. Here, I compare and contrast the data laid out in the country chapters above in the form of an analysis that incorporates the concepts presented in Chapters 2 and 4.

Chapter 8 is the conclusion to this thesis. As well as summarising the key findings, it provides recommendations and avenues for future research. It also summarises the broader implications of the study for sustainability and indigenous peoples' rights research.

CHAPTER 2 BACKGROUND: THE SOCIAL, POLITICAL AND HISTORICAL CONTEXTS OF LITHIUM MINING IN ARGENTINA AND BOLIVIA

Introduction

This chapter provides social, political and historical backgrounds to Argentina and Bolivia's differing approaches to developing their lithium industries. It will focus on the relationships between indigenous peoples and governments where mining and extraction is proposed or is taking place. The aim of the chapter is to establish the commonalities and differences between Argentina and Bolivia, in order that the comparison can yield conclusions later in the thesis.

This chapter has four parts. The first examines the history and development of post-independence societies within the two countries, and implications for indigenous peoples today. The second examines environmental politics and the extraction and industrialisation of natural resources in Argentina and Bolivia and Latin America more broadly. The third focuses on indigenous peoples and their relationship with the state in Latin America, and the role of international law in securing indigenous peoples' rights. The fourth details the methods used to extract lithium from brine and the two countries' lithium industries so far, with a close focus on the three sites I visited on my fieldwork.

Latin America's indigenous peoples have been severely affected for five hundred years by colonial invasion, the spread of disease, forced labour and ongoing domination by settler populations.[70] Despite this, the region has a relatively high proportion of

[70] Eduardo Galeano and Cedric Belfrage, *Open veins of Latin America: five centuries of the pillage of a continent* (London: Serpent's Tail, 2009).

surviving indigenous peoples. An early definition by Martínez Cobo, the former UN Special Rapporteur of the Sub-Commission on Prevention of Discrimination of Minorities, states that indigenous and tribal peoples have "a historical continuity with pre-invasion and pre-colonial societies that developed on their territories"[71] and "consider themselves distinct from other sectors of the societies now prevailing on those territories".[72] Indigenous peoples make up roughly 10 per cent of the population of Latin America as a whole,[73] numbering roughly 45 million.[74] Some 85 percent live in Central America and the central Andes. In Bolivia and Guatemala indigenous people constitute over 50 percent of the population[75], while in Argentina the figure is just over two percent.[76] This contrast informs much of the socio-political comparison set out below. Argentinean institutions are dominated by non-indigenous Eurodescendents. In Bolivia, the election of an anti-colonial socialist government, led by indigenous President Evo Morales, has ushered in changes in politics and society. Implications for the lithium industry and the securing of indigenous rights are analysed throughout this thesis with this distinction in mind.

2.1 Comparing society and political economy in Argentina and Bolivia

Argentina is a country of around 43.5 million people located in the south and southeast of continental South America (see Map 1). At 2.78 million square kilometres, it is the largest Spanish-speaking country in the world. Bolivia is a landlocked nation of around

71 This is taken from the first authoritative definition of indigenous peoples, which influenced the definition provided in the Convention on the Rights of Indigenous and Tribal Peoples, ILO169 (1989). See Samson and Gigoux, *Indigenous Peoples and Colonialism*.
72 Ibid.
73 Rachel Sieder, ed., *Multiculturalism in Latin America: Indigenous Rights, Diversity, and Democracy*, Institute of Latin American Studies Series (Houndmills, Basingstoke, Hampshire ; New York: Palgrave Macmillan, 2002).
74 ECLAC 2014, cited in Samson and Gigoux, *Indigenous Peoples and Colonialism*. p.36–8
75 Sieder, *Multiculturalism in Latin America*. p.17
76 INDEC, 'Censo Nacional de Población, Hogares y Viviendas 2010: Resultados Definitivos: Serie B', n.d., http://www.censo2010.indec.gob.ar/archivos/censo2010_tomo1.pdf.

11 million people. While both were established as Spanish colonies in the 1500s, today they are very different countries socially, politically and economically. The following section presents a brief background history of Argentina and Bolivia relevant to the sociopolitics of mining and the relative power of indigenous peoples in each society.

2.1.1 Brief histories of Argentina and Bolivia

The Andean region area where this research is focused was a crucial part of the Inca Empire, which lasted from the mid-1400s until the arrival of the Spanish in the early 1500s. In the colonial period the area that became Argentina was part of the Viceroyalty of Peru when Spanish explorers came from the capital, Lima, to establish communities in what is now Argentina. In 1776, Argentina became part Rio de la Plata Viceroyalty, with a collection of adjoining countries now known as Uruguay, Paraguay and much of what is now Bolivia (which at the time was known as Upper Peru). The country declared independence from Spain in 1819, and a civil war ensued until the Constitution of 1853 declared Argentina a republic.[77] There were campaigns of extermination of indigenous peoples across the country from north to south (especially during the "Conquest of the Desert" in Patagonia in the late 1870s) and annexation of indigenous lands, diminishing indigenous numbers significantly. According to Sutton, this was part of the Argentinean nineteenth-century nationhood project, which was geared towards making Argentina more economically powerful, white, and "civilised".[78] Miller contends that through this, Argentina circumvented the notions of *mestizaje* (miscegenation or mixing of racial groups) common in other parts of Latin America.[79]

These racist ideologies influenced the evolution of Argentinean Constitution of

[77] Government of Argentina, *Argentina (Republic of)'s Constitution of 1853, Reinstated in 1983, with Amendments through 1994,* translated by Jonathan M. Miller and Fang-Lian Liao (Oxford: OUP), Article 1.
[78] Barbara Sutton, 'Contesting Racism: Democratic Citizenship, Human Rights, and Antiracist Politics in Argentina', *Latin American Perspectives* 35, no. 6 (2008): 106–21.
[79] Marilyn Grace Miller, *Rise and Fall of the Cosmic Race: The Cult of Mestizaje in Latin America* (University of Texas Press, 2004), https://muse.jhu.edu/book/3020.

1853, which in its Article 25 makes restrictions on immigration illegal for "foreigners whose purpose is tilling the soil, improving industries, and introducing and teaching the sciences and the arts".[80] Immigration from the Southern European countries was encouraged particularly, and as a result, from 1853 to the 1950s, 6.5 million immigrants arrived, predominantly from Italy, Germany, Spain and other parts of Europe.[81] This large wave of European immigration makes Argentina the receiver of the second highest number of immigrants of any country anywhere in the world, after the US (which received 25 million).[82] During this period, the country benefitted from this migrant wave through improvements in and moves towards industrial agriculture, and high levels of foreign investment compared to other parts of Latin America.

In modern day Argentina 34 indigenous peoples make up just over two percent of the population,[83] and they are mainly concentrated in the Andean north and Patagonian south. In northern Jujuy Province, 15 percent of households have at least one member that identifies as being indigenous or a descendent of an indigenous person. In Chubut and Nequén in Patagonia, the figure is 12 percent.[84] Indigenous peoples such as the Kolla, Atacama and Wichi live across the northern western Salta and Jujuy Provinces of Argentina. Jujuy Province, where this study is focused, has the highest percentage of households in Argentina where at least one self-identifying indigenous person lives.[85] The provincial capital cities of San Salvador de Jujuy and neighbouring Salta are also well-known for having a higher percentage of *mestizo*[86] and indigenous inhabitants in

80 Ibid, Article 25.
81 Gino Germani, 'Mass Immigration and Modernization in Argentina', *Studies in Comparative International Development* 2, no. 11 (1 November 1966): 165–82, https://doi.org/10.1007/BF02800543.
82 Héctor Hugo Trinchero, 'The Genocide of Indigenous Peoples in the Formation of the Argentine Nation-State', *Journal of Genocide Research* 8, no. 2 (1 June 2006): 121–35, https://doi.org/10.1080/14623520600703008.
83 INDEC, 'Censo Nacional de Población, Hogares y Viviendas 2010'.
84 Ibid.
85 Ibid.
86 *Mestizo* is a term that denotes mixed indigenous–Eurodescendant heritage in Latin America.

contrast to the larger Argentinean cities of Central Argentina. I knew from a visit many years ago that in Argentina locals pronounced the double "L" in words as a "j" sound, meaning *Kolla* would be pronounced "Koja", perhaps an approximation of "Quechua". According to the 2010 Argentinean Census, 13,936 people identify as first-generation "Atacameño" in Argentina.[87] These communities primarily speak Spanish at home, but Quechua words are commonly used throughout the region.

Argentina's government operates under a federal system, in which the responsibility for managing natural resource extraction is devolved to provincial authorities. This affects many aspects of governance in the country, including over industry, and also provides increased economic motivation for extraction.

Bolivia is divided by its geography into the Andean west, which includes in its north the administrative capital La Paz,[88] and the Amazonian lowland east. The *altiplano*[89] dominates the west of the country, and is an important geographical–cultural region in Bolivian history, society and politics. It is also the long-term home of the two most dominant Bolivian indigenous ethnic groups, the Aymara and Quechua-speaking indigenous people.[90] In Bolivia as a whole, 36 recognised indigenous ethnicities make up around half of the population which totals around 11 million people. There was a drop in people self-identifying as indigenous, from 60 to 40 percent, between the

87 INDEC, 'Censo Nacional de Población, Hogares y Viviendas 2010'. According to the Museo Chileno de Arte PreColumbiano (Chilean Museum of Pre-Columbian history) the Atacameños were invaded by the Incas in the fifteenth century. The Atacameño indigenous language, *kunza*, is recently extinct. Atacameños only exist in Argentina and Chile, and in Argentina, only in Salta and Jujuy Provinces, and Jujuy has far more Atacameño indigenous communities than Salta. See Pueblos originarios de Chile, nd, accessed 31 October 2017 https://web.archive.org/web/20090611024918/http://mod.precolombino.cl/mods/culturas/etno.php?id=110

88 La Paz is the world's highest capital city at 3,640 metres above sea level.

89 Altiplano means "high plain" in Spanish.

90 Leonardo Tamburini, 'Bolivia Censo 2012: Algunas claves para entender la variable indígena', *PUCP | RIDEI* (blog), 15 October 2013, http://red.pucp.edu.pe/ridei/politica/bolivia-censo-2012-algunas-claves-para-entender-la-variable-indigena/.

censuses of 2001 and 2012.[91] According to Fontana, there was talk of "'statistical ethnocide', referring to the political manipulation of semantic categories to influence processes of individual and collective self-identification".[92] There had also been significant changes to the Bolivian Census's question on ethnic self-identification, which led to an increase in identification with being a "peasant" rather than native or indigenous. The results confirming that Bolivia is no longer majority-indigenous puts the dominant category as "*mestizaje*" (which was excluded as an option from the census), which Fontana suggests emphasises

> "the risks implicit in the excesses of indigenism, which would threaten the national unity and the principle of inequality (for example through the introduction of collective rights to decide on natural resources exploitation)".[93]

However it must be noted here that the collective rights referred to here are already present in the 2009 Bolivian Constitution.

Pre-Spanish Conquest, Bolivian history saw the Aymaran Tiwanaku Empire (which was centred around Lake Titicaca near modern-day La Paz in the northwest of Bolivia) overtaken in prominence by the Inca Empire in the 1400s. Conquest and colonial rule led to a decrease in the indigenous population due to disease and war. Post-Conquest there were a number of native rebellions in this region, which produced notable indigenous martyr figures still visible in indigenous societies of both countries' Andean regions today.[94] For example, in 1782, an Aymaran woman called Bartolina Sisa was executed for raising a native revolt, and her name is now used for a national indigenous women's confederation in Bolivia active in Potosí Department.

91 Lorenza Fontana, 'Why Are Bolivian Indigenous People Statistically Disappearing?', *Siid* (blog), 8 October 2013, http://siid.group.shef.ac.uk/blog/bolivian-indigenous-people-statistically-disappearing/.
92 Ibid.
93 Ibid.
94 Tupac Amaru, for example, who was beheaded in Cuzco in 1572, is celebrated in Jujuy's indigenous museums and communities, where images of his face sits alongside that of the revolutionary Ché Guevara on murals and flags across indigenous housing projects in Jujuy, Argentina. Helle Abelvik-Lawson, 'Field Report from Argentina, on File with Author.', 2017.

Potosí, the capital of Potosí Department where the Salar de Uyuni is located (see Map 2), was the Spanish Empire's greatest source of funding between invasion in 1545 and Bolivia's independence in 1825,[95] owing to its silver-rich *Cerro Rico*. One estimate suggests that eight million indigenous slaves died in the silver mines.[96]

Bolivia experienced a series of wars in the period following independence. The most significant of these is the War of the Pacific (1879–1883), in which Bolivia lost its entire coastal territory to Chilean invaders.[97] Bolivia lost both the valuable natural resources of the northern Chilean region, including copper and lithium, and its access to the sea, valuable for trading. Economist Collier suggests that landlocked countries are more likely to suffer weaker trade and growth and therefore remain poorer than those with sea ports through which to trade.[98] This is likely to be a factor in Bolivia's poor economic performance historically. Argentina was, by contrast, at the turn of the twentieth century, the richest country in the world by per capita income.[99]

The nineteenth century saw significant expansion of big European-owned estates at the expense of the lands and people of the communities in Bolivia.[100] Furthermore, from the late 1800s to the early 1900s across the Andean regions of Bolivia, Eurodescendent "tin barons" exploited valuable seams of tin in the northern Andean region, using the best available mining technology imported from overseas but paying the lowest wages to (mainly indigenous) miners.[101] This had the effect of entrenching

95 Dennis O. Flynn and Arturo Giráldez, 'Born with a "Silver Spoon": The Origin of World Trade in 1571', *Journal of World History* 6, no. 2 (1995): 201–21.
96 Galeano and Belfrage, *Open veins of Latin America*.
97 Herbert S. Klein, 'Bolivia from the War of the Pacific to the Chaco War, 1880–1932', The Cambridge History of Latin America, May 1986, https://doi.org/10.1017/CHOL9780521245173.017.
98 Paul Collier, *The Bottom Billion: Why the Poorest Countries Are Failing and What Can Be Done about It*, 1. OUP paperback (Oxford: Univ. Press, 2008).
99 José Ignacio García Hamilton, 'Historical Reflections On The Splendor And Decline Of Argentina', *Cato Journal* 25, no. 3 (2005): 521–40.
100 Heraclio Bonilla, 'Peru and Bolivia from Independence to the War of the Pacific', The Cambridge History of Latin America, July 1985, https://doi.org/10.1017/CHOL9780521232241.015.
101 Leslie Bethell, ed., *The Cambridge History of Latin America*, vol. 5 (Cambridge [England] ; New York: Cambridge University Press, 1984), p.566–568, p.366–8; Galeano and Belfrage, *Open veins of Latin America*, p.277.

social inequality in the extractive sector and delaying Bolivia's industrialisation compared to Argentina. Colonial and post-independence Argentina was far less reliant on mining extraction, with beef and leather production for British trading partners more prevalent.

In both Argentina and Bolivia, since independence from Spain in the 1800s, government institutions and corporate actors have been dominated by *criollo* elites, the term used to describe "the direct descendants of the Spanish colonial ruling class".[102] In North America, Australia and the US, the term "settler" is used to describe the colonial ruling class, who retains control of resource governance in the same way since the colonial era. Gott states that while the term "settler" is not often used in relation to Latin American colonisation, the term "settler colonialism" has relevance to the Latin American situation.[103] "Settler colonialism", he suggests, refers "not just to the brief period of historical conquest and domination of the indigenous peoples, but to the continuing and principal structural characteristic of the former settler state".[104] Both countries' contemporary societies and distribution of land are affected by this historical dynamic. However, the settler colonial dynamic is more starkly observable in Argentina, with government, legal institutions and the elite classes dominated by Eurodescendents to this day.

2.1.2 Industrialisation and neoliberalism in twentieth-century Argentina and Bolivia

Argentina's process of industrialisation started before the 1930s,[105] and was boosted by

[102] Richard Gott, 'Latin America as a White Settler Society', *Bulletin of Latin American Research* 26, no. 2 (April 2007): 269–89, https://doi.org/10.1111/j.1470-9856.2007.00224.x.
[103] Ibid
[104] Ibid.
[105] Jorge Katz and Bernardo Kosacoff, 'Import-Substituting Industrialization in Argentina, 1940–80: Its Achievements and Shortcomings', in *An Economic History of Twentieth-Century Latin America: Volume 3: Industrialization and the State in Latin America: The Postwar Years*, ed. Enrique Cárdenas, José Antonio Ocampo, and Rosemary Thorp, St Antony's Series (London: Palgrave Macmillan UK, 2000), 282–313, https://doi.org/10.1057/9780230595682_10.

further waves of European immigrants fleeing Nazi rule in Germany. A European class structure had developed as a result of these high levels of immigration, with concomitant innovation in agriculture, industry and manufacturing. When General Juan Domingo Perón was elected in an open poll in 1946, he implemented labour reforms that had a powerful impact on the (European) working class, whose numbers were growing steadily due to increased industrialisation and urbanisation in the 1930s.[106] Argentina, which had never had a mining economy like Bolivia's, experienced a period of rapid industrialisation between 1935 and 1960, and a decline in its substantial agricultural sector.[107] This was spurred on by a policy of import-substitution industrialisation, which boosted the country's manufacturing, particularly in heavy industry and the automotive industry. The country eventually became an exporting nation.[108]

Industrialisation did not occur in Bolivia in this way. While the establishment of railways in the Andean regions of Bolivia around the Salar de Uyuni enabled the Bolivian tin mining sector to thrive well into the twentieth-century, with modernising effects on the *altiplano* population,[109] the region remains relatively poor compared to other parts of the nation and continent. Following a colonial history predicated on mining, Bolivia has remained a primary commodity exporter to this day, without even a single smelter in the country until 1976, according to Galeano.[110] Furthermore, the

106 Juan Carlos Torre and Liliana de Riz, 'Argentina since 1946', The Cambridge History of Latin America, October 1991, https://doi.org/10.1017/CHOL9780521266529.003.
107 Dario Debowicz and Paul Segal, 'Structural Change in Argentina, 1935–1960: The Role of Import Substitution and Factor Endowments', *The Journal of Economic History* 74, no. 1 (March 2014): 230–58, https://doi.org/10.1017/S0022050714000084.
108 Simón Teitel and Francisco E. Thoumi, 'From Import Substitution to Exports: The Manufacturing Exports Experience of Argentina and Brazil', *Economic Development and Cultural Change* 34, no. 3 (1986): 455–90.
109 Laurence Whitehead, 'Bolivia since 1930', The Cambridge History of Latin America, October 1991, https://doi.org/10.1017/CHOL9780521266529.010.
110 Galeano and Belfrage, *Open veins of Latin America.*

country still imports basic manufactured items such as nails.[111]

The Bolivian National Revolution of 1952 is a significant event in Bolivian and Latin American twentieth-century history. The leaders of the revolution, the *Movimiento Nacional Revolucionário* (MNR), nationalised the country's largest tin mines, introduced universal suffrage and implemented substantive land reforms. These reforms had the biggest impact on rural (mostly indigenous) Bolivians. The revolution spurred the creation of the native Bolivian identity of native-indigenous *campesinos*.[112] Even prior to the revolution, indigenous communities had retained title to around a quarter of the country's cultivated land and had a significant degree of influence over the use of more,[113] indicating a greater indigenous influence on Bolivian society than in Argentina. This influence is still observable in Bolivian society, with native-indigenous rural union federations hugely influential in contemporary Bolivian politics.

Both Argentina and Bolivia suffered numerous coups and military dictatorships across the latter half of the twentieth centuries. Violent dictatorship scarred Argentinean society between 1976–1983, leaving a legacy of human rights abuses, including the "disappearing" of thousands of people.[114] In a reconciliation process, as of 2016, a thousand of the dictatorship's killers and torturers had been tried and 700 sentenced.[115] Bolivia too experienced dictatorships, from the 1960s to the 1980s. As in other parts of South America, the US supported, funded, supplied and trained political and military operatives within these regimes, leaving a legacy of violence, corruption

111 Hollender and Shultz, 'Bolivia and Its Lithium: Can the "Gold of the 21st Century" Help Lift a Nation out of Poverty?'
112 The common translation of *campesino* is *peasant*.
113 Whitehead, 'Bolivia since 1930'.
114 Peter Rush, 'Dirty War Crimes: Jurisdiction of Memory and International Criminal Law', *Revista Derecho Del Estado*, 2014, 101.
115 Uki Goñi, '40 Years Later, the Mothers of Argentina's "disappeared" Refuse to Be Silent', *The Guardian*, 28 April 2017, sec. World news, https://www.theguardian.com/world/2017/apr/28/mothers-plaza-de-mayo-argentina-anniversary.

and a growing economic dependence on Washington.[116]

Argentina has experienced serious economic problems over recent decades. In 2001, a severe economic crisis culminated in street riots when citizens were unable to access money from the banks following the IMF withdrawing debt financing. This financial crisis has its roots in the 1980s, which saw Washington and international financial institutions across Latin America implement neoliberal economic policies across the continent's political economies.[117]

Neoliberalism is the term used for a governance strategy that favours free-market capitalism, deregulation, privatisation and reduced government interference in the economy. [118] Neoliberal economic governance has been prevalent around the world since the 1980s, but has a particular heritage in Latin America: Chilean economists attending the Chicago School in the US brought back the model to test its use within their economy, assisted by the US, who supported the implementation of neoliberal policy prescriptions.[119] This has resulted in neoliberalism being hugely influential on subsequent governments in numerous South American countries, including both Argentina and Bolivia, particularly in the last decade of the twentieth century.

The 1990s saw widespread deregulation and privatisation across Latin America, with massive foreign investment into extraction of minerals in "mining states" such as Bolivia, and severe structural adjustment programmes leading to multiple subsequent economic crises in Argentina. The large-scale extraction and export of minerals and agricultural products undoubtedly had impacts on state governance over the extractive industries and economy. The subsequent commodity booms of the early 2000s,[120] with

116 Naomi Klein, *The Shock Doctrine: The Rise of Disaster Capitalism* (London: Penguin Books, 2008).
117 Klein.
118 David Harvey, *A Brief History of Neoliberalism*, Reprinted (Oxford: Oxford Univ. Press, 2011).
119 Harvey.
120 Maristella Svampa *Las fronteras del neoextractivismo en América Latina: Conflictos socioambientales, giro ecoterritorial y nuevas dependencias*, CALAS, p.44.

high prices leading to substantial trade surpluses, were instrumental in driving support for the election of the explicitly anti-neoliberal, pro-extraction Morales Government in Bolivia in 2005, for example.

Neoliberal trade and investment policies have enabled governments to sell the rights to exploit their nation's natural resources to foreign companies.[121] Allowing such "foreign direct investment" supposedly increases government revenues from taxes on foreign mining profits,[122] generates economic activity and enables economic growth and subsequent "development" of the economy. However, this is not always the case. Auty's concept of the "resource curse" describes a phenomenon whereby the reverse is true. Nations rich in natural resources often find their economies in decline due to a failure to diversify away from extraction through investment in education and training in other sectors, for example.[123] This has been experienced by oil-producing developing nations such as Nigeria and Venezuela. Bolivia has also historically struggled with the resource curse; it was one of the countries analysed by Auty when developing his theory.[124] As well as the problem of the resource curse, extraction causes severe damage to the natural environment and consequently the livelihoods and cultures of those who depend on it. Notably, countries with strong institutions (and no colonial history) like Norway, have managed to avoid the resource curse.[125]

121 "Natural resources" is a term which should not be used uncritically when describing the natural environment: much like the popularisation of the term "natural capital", such terms debase the inherent value of nature and the environment in favour of monetary value. However, it is used across legislation and social science analysis so I will continue to use it here.
122 Harvey, *A Brief History of Neoliberalism*, 2011.
123 Richard M. Auty, 'Economic Development and the Resource Curse Thesis', in *Economic and Political Reform in Developing Countries*, ed. Oliver Morrissey and Frances Stewart (London: Palgrave Macmillan UK, 1995), 58–80, https://doi.org/10.1007/978-1-349-13460-1_4.
124 R. M. Auty, 'The Resource Curse Thesis: Minerals in Bolivian Development, 1970–90', *Singapore Journal of Tropical Geography* 15, no. 2 (1995): 95–111, https://doi.org/10.1111/j.1467-9493.1994.tb00055.x.
125 Steinar Holden, 'Avoiding the Resource Curse the Case Norway', *Energy Policy* 63 (1 December 2013): 870–76, https://doi.org/10.1016/j.enpol.2013.09.010.

2.1.3 Contemporary political economy in Argentina and Bolivia

In November 2015, Argentina elected the government of multimillionaire Mauricio Macri in a narrow victory. Replacing the progressive neo-Peronist governments of Néstor and Cristina Fernández de Kirchner of the 1990s and 2000s, the election of Macri was one of two definitive signs (with the 2015 political coup that saw Dilma Rousseff replaced by right-wing Michel Temer in Brazil) that the so-called "pink tide" in Latin America of the previous decade was turning.[126] The pink tide saw left-wing governments elected across Latin America in the early 2000s, including in Ecuador and Bolivia,[127] whose progressive governments also appeared to be more explicitly eco-socialist and keen to implement pro-indigenous policies.

Neoliberalism is operationally most effective in states with allegiances between right-leaning governments dedicated to participating in globalised free trade and the companies willing to profit from the privatisation of national assets such as natural resources. Global financial and business elites propagate the model through their active participation in national governments. There are many examples of this dynamic across the world, and in South American right-wing regimes it is particularly common. Macri's government, for example, comprises contemporary Argentinean landowning and other global business elites, including former executives of General Motors, Latam Airlines, HSBC, Deutsche Bank, Coca-Cola, and Shell.[128] However, Macri's presidency was tested in 2018, when Argentina had to return to the IMF for a USD$57 billion bailout, the biggest loan in IMF history, following a 50 percent devaluation of its currency.[129]

126 Maria Esperanza Casullo, 'Argentina Turns Right, Again', *NACLA Report on the Americas* 48, no. 4 (1 October 2016): 361–66, https://doi.org/10.1080/10714839.2016.1258279.
127 'Open Veins Revisited: Charting the Social, Economic, and Political Contours of the New Extractivism in Latin America - Linda Farthing, Nicole Fabricant, 2018', accessed 21 October 2018, http://journals.sagepub.com/doi/10.1177/0094582X18785882.
128 Casullo, 'Argentina Turns Right, Again'.
129 Patrick Gillespie and Ignacio Olivera Doll, 'Argentina Gets $57 Billion as IMF Doubles Down on Record Bailout', 26 September 2018, https://www.bloomberg.com/news/articles/2018-09-26/argentina-gets-57-billion-as-imf-doubles-down-on-record-bailout.

Amid this, to encourage much-needed foreign investment, Macri attended the G20 summit to push investment into Argentina's two key extractive sectors: lithium mining and hydraulic fracturing for natural gas.[130]

Bolivia has been governed by the socialist MAS (*Movimiento al Socialismo*) Party led by Evo Morales Ayma, since 2006.[131] Morales was elected to the presidency in December 2005 following widespread political unrest relating to corporate and national water, mining and gas extraction contracts. In 2000, indigenous and *mestizo* peasants protested against the privatisation of water supplies in Cochabamba, which led to local streams being gated and high fees for access being charged, in what came to be called the "Water War".[132] Following this in 2003–2005, protestors in the capital La Paz and neighbouring El Alto fought against the neoliberal government in "Gas Wars", which led to demands for the nationalisation of the country's significant gas reserves found in the Eastern Amazonian regions.[133] These were triggered by a national debate over plans to export gas to the US via Chilean ports, with limited profits remaining in the country, perpetuating the mode of extraction in the colonial era.

Morales announced at his Aymaran presidential inauguration ceremony at the pre-Columbian archaeological site Tiwanaku: "With the unity of the people, we're going to end the colonial state and the neoliberal model," which Kozloff describes as "an emotional moment for the Bolivian people".[134] The Bolivian socialist government has

130 Casullo, 'Argentina Turns Right, Again'.
131 Dan Glaister, 'Triumph for Bolivia's Candidate of Poor', *The Guardian*, 20 December 2005, sec. World news, https://www.theguardian.com/world/2005/dec/20/usa.bolivia.
132 Heather C. R. Curtis, 'The Cochabamba Water War Social Movement : A Successful Challenge to Neoliberal Expansion in Bolivia?' (St Mary's University, 2015), http://library2.smu.ca/handle/01/26455.
133 Democracy Now!, 'Beyond the Gas War: Indigenous Bolivians Fight for "Nationalization of the Government"', *Democracy Now!*, 25 May 2005, http://www.democracynow.org/2005/5/25/beyond_the_gas_war_indigenous_bolivians; Linda C. Farthing and Benjamin H. Kohl, *Evo's Bolivia: Continuity and Change*, First edition (Austin, TX: University of Texas Press, 2014).
134 Nikolas Kozloff, *Revolution!: South America and the Rise of the New Left* (St. Martin's Press, 2008). p.118

since succeeded in creating a welfare state, offering payments of pensions to citizens and lifting many out of poverty by providing social welfare, electricity, telecoms, internet and reliable water supplies to Bolivians who had no access to such services before. This is markedly contrasted with the growth of extreme poverty under the previous neoliberal governments, which had risen from under two-thirds of the population in 1997 to over three-quarters by 2002.[135] Under Morales, the poverty rate dropped from 59.9 percent in 2006 to 36.4 percent in 2017,[136] positively impacting Bolivia's extremely poor indigenous majority.[137]

Furthermore, the government has included many native–indigenous officials in its ranks and has sought to redress inequalities in other parts of Bolivian society through an explicitly socialist economic programme.[138] Morales is therefore established as a revolutionary leader who has shifted the balance of power in Bolivia away from Eurodescendent elites, overseen economic growth of the country through gas exports, and enabled that growth to benefit Bolivian society through the socialist redistribution of revenues. However, as shown above, the Bolivian economy has for centuries relied heavily on natural resources for its economy, and continues to do so today. Therefore, putting an "end to the neoliberal model" would likely still require the extraction of natural resources, which is likely to continue to affect the country's numerous indigenous peoples.

135 Ronn Pineo, 'Progress in Bolivia: Declining the United States Influence and the Victories of Evo Morales', *Journal of Developing Societies* 32, no. 4 (1 December 2016): 421–53, https://doi.org/10.1177/0169796X16667170.
136 Caroline Stauffer, 'Native Peoples Sour on Morales, Bolivia's First Indigenous President', *Reuters*, 24 August 2018, https://www.reuters.com/investigates/special-report/bolivia-indigenous/.
137 James Dunkerley, 'Evo Morales, the "Two Bolivias" and the Third Bolivian Revolution', *Journal of Latin American Studies* 39, no. 1 (2007): 133–66.
138 Lalander writes that "A common joke during the first years of Morales' presidency was that before going to a job interview, the best thing to do was to first dress up in a poncho and/or other ethnic symbols." Rickard Lalander, 'Ethnic Rights and the Dilemma of Extractive Development in Plurinational Bolivia', *The International Journal of Human Rights* 21, no. 4 (4 May 2017): 464–81, https://doi.org/10.1080/13642987.2016.1179869.

2.2 Environmental politics in Latin America

The following section analyses environmental politics in contemporary Latin America, focusing on natural resource extraction and the state. It examines policies of "extractivism" in Argentina and Bolivia, building on the above analysis of each country's political economy and the role of natural resources. It then analyses the indigenous notion of "*buen vivir*" or "*vivir bien*" (translated as "good living" in English). This is an ecological, communitarian cosmovision that has been promoted by progressive Bolivian and Ecuadorean governments in recent years.

2.2.1 Extractivism and neo-extractivism in Argentina and Bolivia

The modern nation-state is the primary subject of international law and has sovereignty over the natural resources contained within its borders. Blanco and Razzaque write that "natural resources constitute in most cases the bulk of a country's wealth and their exploitation, management and distribution of benefits is closely interlinked with the politics of each country and with the groups in power in each society."[139] Governments usually seek to exploit such resources, often allowing foreign specialist firms to manage exploitation through the agreement of mining or agribusiness contracts, to enable economic growth and thus "development" to take place. This model is known as "extractivism", and it is particularly prevalent in resource-rich Latin America.[140]

As Acosta asserts, "[e]xtractivism is a mode of accumulation that started to be established on a massive scale 500 years ago. The world economy – the capitalist system – began to be structured with the conquest and colonisation of the Americas, Africa and Asia".[141] As such, extractivism is clearly relevant to Bolivia's colonial

139 Blanco and Razzaque, *Globalisation and Natural Resources Law*.
140 Raftopoulos, 'Contemporary Debates on Social-Environmental Conflicts, Extractivism and Human Rights in Latin America'.
141 Acosta, 'Extractivism and Neoextractivism'.

experience. Andreucci and Radhuber provide a useful definition of extractivism as "a type of natural resource extraction which (a) is large scale and/or very intensive; (b) is oriented primarily towards export, and (c) entails little or no industrial processing,"[142] characteristics which are all relevant to Argentina and Bolivia's approaches to lithium mining.

In many Latin American nations, the dynamics of extractivism are central to internal and external manifestations of state power. This not a new dynamic, and is closely related to a continuation of colonial modes of extraction which continue to play out in countries such as Brazil, Argentina, Peru and Ecuador, whose governments approve extraction in remote regions through a form of "internal colonialism".[143] This propagates the notion of regional differentials in state policy, whereby extractive areas become what Svampa calls "areas of sacrifice" considered "empty" by the central government powers.[144] This can also have impacts internally on the way territory is viewed within extractivist countries, closely related to a perception of a right to development and progress based on revenues derived from extraction.

Jessop suggests that state structures "offer unequal chances to different forces within and outside that state to act for different political purposes".[145] While these chances are varied and dependent on geographical and historical–temporal contexts, the state has leverage over its own political and economic strategies (some more privileged that others) that result in the exercise of state power. Jessop calls this dynamic the "strategic-relational approach", and modified Marx's view of capital as a

142 Diego Andreucci and Isabella M. Radhuber, 'Limits to "Counter-Neoliberal" Reform: Mining Expansion and the Marginalisation of Post-Extractivist Forces in Evo Morales's Bolivia', *Geoforum* 84 (1 August 2017): 280–91, https://doi.org/10.1016/j.geoforum.2015.09.002.
143 Adam Jones, in Genocide: A Comprehensive Introduction, Oxford: Taylor and Francis, 2006.
144 Maristella Svampa, «Consenso de los Commodities» y lenguajes de valoración en América Latina, Nueva Sociedad No 244, marzo-abril de 2013, p.34.
145Bob Jessop *State Theory: Putting the capitalist state in its place*. Pennsylvania: University Park: Penn State University Press, 1990. p.367.

social relation rather than a thing.

Much state power in Latin America is arguably articulated by their extractive agenda, which determines their external trading power and international relations, and internal political strategies to maintain social and economic cohesion through the provision of work and services. Internally, incoming mining companies creating enclaves in those "sacrifice areas" in regions remote from provincial or federal government, " generate new power dynamics where, as investments increase, conflicts increase and institutionality develops late and badly", according to Durand.[146] Using the Peruvian experience of becoming explicitly a "Mining State", Durand also contends that mining enclaves serve to project global corporate power at the national and regional/local levels, with developing social power in national local levels owing to the political and social functions performed at each level.

Although not historically a mining nation, Argentina has recently promoted extractivism. In the last three decades it has increased agribusiness operations, particularly in soybean production, a key supplier of grain to the global beef industry.[147] These operations have had severe negative effects on the traditional territories of Wichi communities in the Argentinean Gran Chaco, located in eastern Salta Province.[148] Furthermore, over the last five years the process of hydraulic fracturing for gas, known as "fracking" has been taking place across the Vaca Muerta reserve in the central western region of Neuquén.[149] In 2017, a report presented to the UN Committee on Economic, Social and Cultural Rights (CESCR) highlighted the adverse economic,

146 Francisco Durand, *Poder político y gobierno minero*, (Lima, Peru: CooperAcción – Acción Solidaria para el Desarrollo, 2015).
147 Pablo Lapegna, *Soybeans and Power: Genetically Modified Crops, Environmental Politics, and Social Movements in Argentina* (New York, NY: Oxford University Press, 2016).
148 Uki Goñi, 'Soy Destruction in Argentina Leads Straight to Our Dinner Plates', *The Guardian*, 26 October 2018, sec. Environment, https://www.theguardian.com/environment/2018/oct/26/soy-destruction-deforestation-in-argentina-leads-straight-to-our-dinner-plates.
149 Grace Livingstone, 'Mapuche Community in Argentina Fights Fracking Site', 5 September 2016, sec. Latin America & Caribbean, https://www.bbc.com/news/world-latin-america-36892770.

social, and cultural rights impacts of fossil fuel extraction at Vaca Muerta on local residents and indigenous Mapuche communities.[150] Fracking has been causing problems for Mapuche indigenous communities, for example, whose livestock have been dying from drinking contaminated water.[151] These projects demonstrate the Argentinean state's extractive political economy and its impacts on indigenous communities.

As discussed above, Bolivia has had a much longer history of colonial extractivism, and continues to rely heavily on extractivism today. However, extraction in Bolivia under the Morales government has for the most part been nationalised, in order that revenues can provide for the people within a socialist system. The term "neoextractivism" has emerged to describe the same processes of extraction, but in states governed by more progressive or left-leaning governments, where extractive profits are managed directly by the state.[152]

Gudnyas suggests that extraction still persists as a cornerstone of development policy in the progressive countries of Latin America, like Bolivia, and that maintaining involvement in the international market perpetuates a subordinate position without substantive changes to the structure of accumulation.[153] Veltmeyer and Petras hold that there is a "coincidence of economic interests between the state and capital (resource rents for governments, capital for companies)".[154] They hold that, even in the case of those governments "oriented towards a policy of anti-imperialist capital", like Bolivia, if

150 GI-ESCR, 'Press Release: UN Spotlight on Impacts of Argentina's Vaca Muerta Fracking Project on Indigenous Rights and Climate Change', GI-ESCR, 10 October 2017, https://www.gi-escr.org/latest-news/un-spotlight-on-impacts-of-argentinas-vaca-muerta-fracking-project-on-indigenous-rights-and-climate-change.
151 "Press Release: UN Spotlight on Impacts of Argentina's Vaca Muerta Fracking Project on Indigenous Rights and Climate Change," GI-ESCR, accessed April 23, 2019, https://www.gi-escr.org/latest-news/un-spotlight-on-impacts-of-argentinas-vaca-muerta-fracking-project-on-indigenous-rights-and-climate-change.
152 Acosta, Alberto, 'Extractivism and neoextractivism: two sides of the same curse?' in Miriam Lang and Dunia Mokrani, eds., *Beyond Development: Alternative Visions from Latin America*, 1. transl. ed (Amsterdam Quito: Transnational Institute, Rosa-Luxemburg-Stiftung, 2013).
153 Summarised in Acosta, in Lang and Mokrani, *Beyond Development*, p.72
154 Henry Veltmeyer, James F. Petras, and Verónica Albuja, *The New Extractivism: A Post-Neoliberal Development Model or Imperialism of the Twenty-First Century?* (London: Zed Books, 2014).

there is "any conflict between the company and the communities directly affected by the operations of extractive capital", the state will "tend to side with capital against the communities".[155]

Harvey argues that governments use their operative power to side with capital, and their "monopoly on violence and definitions of legality", to facilitate accumulation by dispossession.[156] This is observed in Bolivia by Eichler through the criminalisation of social protests over mining,[157] and by Raftopoulos who notes that, again in Bolivia, "government officials now have the power to dissolve any non-governmental organisations without using any due judicial process".[158] Raftopoulos further finds that the criminalisation of environmental protests and use of the law to silence dissent against extraction are highly prevalent across the region.[159] These are clear breaches of civil and political rights, which have a bearing on procedural rights to environmental participation, on which I will elaborate further in Chapter 4.

2.2.2 Industrialisation of lithium in non-industrial Bolivia

Since assuming power, the Morales government has been clear on its plans to "industrialise" its vast lithium reserves found in the brines under the Salar de Uyuni. This means not simply extracting lithium for export but processing extracted lithium within the country, manufacturing batteries and eventually even electric cars.[160] This is certainly an ambitious project, according to Hollender and Shultz, for a country that

155 Henry Veltmeyer, James F. Petras, and Verónica Albuja, *The New Extractivism: A Post-Neoliberal Development Model or Imperialism of the Twenty-First Century?* (London: Zed Books, 2014), p.248–9.
156 Harvey, p.175.
157 Jessika Eichler, 'The Vernacularisation of Indigenous Peoples' Participatory Rights in the Bolivian Extractive Sector: Including Subgroups in Collective Decision-Making Processes' (phd, University of Essex, 2016), http://repository.essex.ac.uk/19121/.
158 Raftopoulos, 'Contemporary Debates on Social-Environmental Conflicts, Extractivism and Human Rights in Latin America'.
159 McGregor, 'Living Well with the Earth'.
160 Hollender and Shultz, 'Bolivia and Its Lithium: Can the "Gold of the 21st Century" Help Lift a Nation out of Poverty?'

imports the most basic manufactured goods.[161] Nonetheless, successive Bolivian 5-year Economic and Social Development Plans emphasise the government's policy of "industrialisation" of Bolivia's natural resources.[162] That policy is found in the 2009 Constitution, which highlights the need for:

> The industrialisation of natural resources to overcome dependence on the export of raw materials and to achieve an economy with a productive base, within the framework of sustainable development in harmony with nature. [163]

This clause shows very clearly the intention of the government, which oversaw the Constituent Assembly of 2007–2009 and the creation of the country's radical, decolonising 2009 Constitution, to move beyond a dependence on raw materials.

Following the colonial and post-independence history outlined above, Blanco and Razzaque state that countries like Bolivia,

> [h]aving become independent from the colonial powers found themselves in an unequal system of sovereign states with rules already drafted and devised to satisfy the interest of the old powers. Today they are looking at rapid industrialisation and economic development as an answer to their many internal poverty and underdevelopment related problems.[164]

This is certainly an accurate description of the Bolivian situation, evidenced by subsequent policies of the Morales government that aim to keep profits from the extraction of natural resources in the country in order to achieve rapid economic development. In the case of Bolivia, this economic development is provided through a socialist redistribution of revenues.

At the end of this chapter the developing lithium industries of Argentina and Bolivia are examined in more detail. However, it is worth here establishing the

161 Hollender and Shultz.
162 Government of Bolivia, Economic and Social Development Plan 2016-2020, Within the Framework Of Integrated Development For Living Well, 2016, http://www.planificacion.gob.bo/uploads/PDES_INGLES.pdf
163 Government of Bolivia, *Bolivia (Plurinational State of)'s Constitution of 2009*, (Oxford: OUP, 2009), Article 311.3.
164 Blanco and Razzaque, *Globalisation and Natural Resources Law*. p.102

difference between Argentina and Bolivia in respect of their lithium industrialisation plans. Firstly, Bolivia is widely assumed to have more lithium than anywhere in the world. This caused a flurry of international attention in the late 2000s, when newly-elected socialist President Evo Morales was courted by international delegations of governments and mining firms from countries across the globe including France, Iran, Brazil and South Korea.[165] Foreign government delegations and their national automobile industry partners visited the Salar de Uyuni, bolstering Bolivia's new reputation as the "Saudi Arabia of lithium" in the international media.[166] While all sought a piece of Bolivia's valuable lithium deposits, beyond a couple of memoranda of understanding, the delegations left without any significant deals. Bolivia had considered applications for foreign involvement carefully however: one bid from a French company was rejected because it ignored the industrialisation aspect of Bolivia's lithium plans, and they had to resubmit.[167]

To achieve a further stage on the chain of industrialisation, Bolivia commissioned and purchased a battery cathode factory on a "turnkey" (ready for use) basis from a Chinese firm. This factory was completed in 2017,[168] even before the state mining company had begun producing lithium from the Salar de Uyuni. This does however signal Chinese interest and involvement in Bolivian lithium.[169] Significant Chinese involvement in natural resource extraction in Latin America and Africa has led some

165 Lawrence Wright, 'Lithium Dreams', *New Yorker*, 15 March 2010, https://www.newyorker.com/magazine/2010/03/22/lithium-dreams; Hollender and Shultz, 'Bolivia and Its Lithium: Can the "Gold of the 21st Century" Help Lift a Nation out of Poverty?'; Sagárnaga López, 'Bolivia's Lithium Boom'.; Sagárnaga López.
166 Schipani, 'Bolivia'.
167 *The Lithium Revolution*, Dir: Andreas Pichler & Julio Weiss (Polar Star Films: Barcelona, Spain 2012).
168 Pablo Perlata, 'Empresas chinas ejecutan siete proyectos clave para Bolivia', *Pagina Siete*, 9 November 2013, https://www.paginasiete.bo/nacional/2013/11/10/empresas-chinas-ejecutan-siete-proyectos-clave-para-bolivia-5634.html.
169 Alejandra Saraiva López and Rua Quiroga, 'An Assessment of the Environmental and Social Impacts of Chinese Trade and FDI in Bolivia' (Boston University: Global Development Policy Center, 2015), https://www.bu.edu/gdp/2015/04/28/an-assessment-of-the-environmental-and-social-impacts-of-chinese-trade-and-fdi-in-bolivia/.

researchers to describe Chinese influence as the "Beijing Consensus", echoing the neoliberal conception of the "Washington Consensus".[170]

Meanwhile, Argentina has similar goals to manufacture batteries but has been slower in implementing them. Its government research agency, CONICET, has nonetheless performed research and development into participating in more aspects of the lithium-ion battery supply chain.[171] However, according to Barandiarán, the Chilean and Argentinean governments see lithium as of relative little interest to their economies, principally for Chile because one year of lithium sales generates as much revenue as copper in one month.[172] Although interest in Argentina is growing as explained above, what is clear is that Bolivia is more committed than any other of the Lithium Triangle states to industrialising lithium, principally for the purposes of redistribution under the socialist regime.[173]

2.2.3 The Andean indigenous cosmovision of "good living"

Since the mid-2000s, Bolivian and Ecuadorean governments have been at the centre of an international movement espousing the inherent rights of nature and indigenous environmentalism encapsulated by the phrase *buen vivir* in Ecuador and *vivir bien* in Bolivia, both of which translate roughly to "good living" or "living well". Alcoreza writes that since the late 1990s, "indigenous groups have been looking at the etymology of the words 'development' and 'progress' in order to translate them as accurately as possible into their native languages".[174] They did so in order to

170 Jun Li, *China's Economic Dynamics: A Beijing Consensus in the Making?*, 1st ed. (Routledge, 2013), https://doi.org/10.4324/9781315855998.
171 Bruno Fornillo, "'Del Salar a La Batería": Política, Ciencia e Industria Del Litio En La Argentina', in *Geopolítica Del Litio Industria, Ciencia y Energía En Argentina* (Buenos Aires: Editorial El Colectivo, 2015), 57–123.
172 Barandiarán, 'Lithium and Development Imaginaries in Chile, Argentina and Bolivia'.
173 Hollender and Shultz, 'Bolivia and Its Lithium: Can the "Gold of the 21st Century" Help Lift a Nation out of Poverty?'
174 Raúl Prada Alcoreza, 'Buen Vivir as a Model for State and Economy', in *Beyond Development* (Amsterdam: The Netherlands: Transnational Institute, 2010). p.145

> seek to understand the incompatibility of the two different world views: on the one hand, policies described as 'development' by the state and the international aid community, which have had a negative impact; and on the other, the indigenous 'cosmovision' of co-existence with nature as a new view of development.[175]

The resulting indigenous language translations, such as the Aymará *suma qumaña* and Quechua *sumak kawsay*, states Alcoreza, had in common the concept of an "ideal life".[176] This was one in which "[m]en and women, together with nature, are part of Mother Earth and there is a communion and dialogue between them mediated by rituals in which Nature is understood as a sacred being."[177]

Incorporated into Ecuador and Bolivia's 2008 and 2009 Constitutions, *buen vivir/vivir bien* is understood as an indigenous conceptual paradigm that promotes communitarian living in harmony with nature. In Bolivia *vivir bien* is also found in the 2012 Framework Law of Mother Earth and Integral Development for Living Well, [178] which developed a 2010 Law on the Rights of Mother Earth.[179] *Buen vivir* is also prominent in the Ecuadorean Constitution, which also recognises the inherent rights of nature,[180] a step not taken in the Bolivian Constitution.

Following the inclusion of this concept in the 2009 Constitution, Bolivia reaffirmed its place on the international stage as a pro-indigenous, eco-socialist state in April 2012, when the World People's Conference on Climate Change was held in the central Bolivian city of Cochabamba. The outcome of this meeting, designed as a "people's summit" to set the indigenous and environmentalist agenda ahead of the Rio+20 Conference on sustainable development a couple of months later, was a

175 Alcoreza.
176 Alcoreza.
177 Alcoreza.
178 Government of Bolivia, Law No.300 Law on the Framework of Mother Earth and Integral Development to Live Well, 2012.
179 Government of Bolivia, Law No.071, Law of Rights of Mother Earth, December 21, 2010.
180 Government of Ecuador, Ecuador's Constitution of 2008 (Oxford: OUP, 2008)

Universal Declaration on the Rights of Mother Earth.[181]

In the years since however, the Bolivian government has become increasingly concerned with securing state control over mining projects, most notably through the 2014 Mining and Metallurgy Law, which (along with another law) criminalises dissent against mining.[182] The contrast of the outward-facing environmentalism of the early years with the internal repression of dissent against extraction more recently, is notable. Despite the rhetoric around *vivir bien* of the earlier period, enshrined in the 2009 Constitution and law, the Morales government is heavily focused on mining extractivism as a way to effect both industrialisation and, subsequently, further redistribution. As Coletta and Raftopoulos contend:

> Tensions between Bolivia's decolonial project and the current extractive model of development have become increasingly evident and have brought to the forefront critical concerns over the environment and indigenous rights as economic growth has been prioritised over alternative environmentalism and sustainability.[183]

It is against this backdrop that the Bolivian state lithium industry's relationship with local indigenous communities is examined in the following chapters.

In Ecuador the *buen vivir* approach is also failing to live up to effective operationalisation, where it "has been enacted in the new constitution and laws but where old development practices still continue".[184] Nonetheless, the concept of *buen vivir* seeks to challenge the dominant Western concepts of "development" and "sustainable development" prevailing in international institutions such as the UN and World Bank, by proposing an indigenous alternative that considers the environment

[181] McGregor, 'Living Well with the Earth'.
[182] Eichler, 'The Vernacularisation of Indigenous Peoples' Participatory Rights in the Bolivian Extractive Sector'.
[183] Michela Coletta and Malayna Raftopoulos, 'Counter-Hegemonic Narratives and the Politics of Plurality: Problematising Global Environmental Governance from Latin America through the Case of Bolivia', *Iberoamericana – Nordic Journal of Latin American and Caribbean Studies* 47, no. 1 (15 November 2018): 108–117, https://doi.org/10.16993/iberoamericana.429. p.114
[184] Unai Villalba, 'Buen Vivir vs Development: A Paradigm Shift in the Andes?', *Third World Quarterly* 34, no. 8 (1 September 2013): 1427–42, https://doi.org/10.1080/01436597.2013.831594.

and indigenous communities holistically.[185]

The integration of these concepts into law and policy has been welcomed, particularly, by commentators exploring the negative environmental impacts of extraction on indigenous peoples. However, as explained above, Bolivia's socialist government, despite being run by an indigenous leader who has promised an anti-colonial, post-neoliberal form of development, has become committed to industrialisation of lithium, for the purposes of building a strong, redistributive socialist economy with industry and manufacturing at its core.

2.3 Indigenous peoples in Argentina and Bolivia

This section analyses the relationships between indigenous peoples and the state in Argentina and Bolivia. It also highlights the role of international law in securing rights for indigenous peoples in Latin America. A final part examines the unique situation of some indigenous actors in Bolivia, who are part of politically powerful groups.

2.3.1 Indigenous peoples and the state in Argentina and Bolivia

Indigenous peoples in Argentina suffer discrimination on account of being excluded from numerous institutions of the state, including the judiciary and organs of government. There are also serious issues in Argentina over the realisation of indigenous peoples' rights to land, and land evictions are commonplace. In 2013, Amnesty International made the link between extractive and agribusiness industries and barriers to securing indigenous land rights in Argentina.[186] Furthermore, state actors are known to use repression against indigenous communities, for example shooting at

185 McGregor, 'Living Well with the Earth'.
186 Amnesty International, 'Indigenous Peoples in Argentina: "We Are Strangers in Our Own Country"', 9 August 2013, https://www.amnesty.org/en/latest/news/2013/08/indigenous-peoples-argentina-we-are-strangers-our-own-country/.

protestors resisting plans to build on their ancestral land.[187] Violence against indigenous people is slow to be investigated,[188] and activists who call out failings in compliance with indigenous land rights law have been criminalised.[189]

The repression extends to non-indigenous activists who campaign on behalf of indigenous communities. In August 2017, the disappearance and death of 28-year-old (non-indigenous) activist Santiago Maldonado, acting in solidarity with a Mapuche community who had just faced a violent raid by the Argentine National Gendarmerie, led to widespread protests in Argentina and a call by Amnesty International to investigate.[190] Despite some progress in the same year with national "spaces for intercultural dialogue" opening up, documents emerged reflecting the portrayal by the state of indigenous Mapuche as violent terrorists.[191]

There is also a background of state repression of indigenous organisations in Argentina's Jujuy Province, the focus of this study. In 2017, Amnesty International and the UN condemned the arbitrary arrest and the imprisonment without trial of *jujeño* indigenous leader Milagro Sala for over a year, on unfounded allegations of corruption in a local housing scheme. In early 2019 Sala had been acquitted of ordering an assassination, and sentenced to 13 years for corruption, against which she is appealing.[192]

187 Amnesty International.
188 Amnesty International.
189 IWGIA, Indigenous peoples in Argentina (Copenhagen: IWGIA, nd) accessed January 29, 2019. https://www.iwgia.org/en/argentina
190 Amnesty International, 'Argentina: Investigation into the Santiago Maldonado Case Must Be Carried out Impartially and without Interference', 31 July 2018, https://www.amnesty.org/en/latest/news/2018/07/argentina-la-investigacion-sobre-el-caso-de-santiago-maldonado-debe-ser-realizada-de-forma-imparcial-y-sin-injerencias/.
191 IWGIA.
192 Times/AFP, 'Milagro Sala Acquitted of Attempted Murder', *Buenos Aires Times*, 19 March 2019, http://www.batimes.com.ar/noticias/argentina/milagro-sala-acquitted-of-attempted-murder.phtml; Frances Jenner, 'Milagro Sala Sentenced to 13 Years in Prison for Corruption', *Argentina Reports* (blog), 15 January 2019, https://argentinareports.com/milagro-sala-sentenced-to-13-years-in-prison-for-corruption/2296/.

While repression of specifically indigenous peoples is not as pronounced in modern-day Bolivia, socioenvironmental conflict involving indigenous peoples has been ongoing. As indicated above, historical and political events have contributed to increased land and resource rights for indigenous Bolivians, such as the 1954 revolution,[193] the more recent agrarian reform laws in the mid-1990s,[194] and mining rights granted to indigenous cooperatives to exploit mines.[195] These reforms precipitated the creation of "native–indigenous–peasant" unions in Bolivia. These unions are formed from traditional indigenous communitarian land governance models called *ayllus*, comprising communities arranged on a parcel of land. *Ayllus* have been losing power since the 1952 revolution, replaced by these local syndicates that are much more politically organised, and have come to have relatively powerful political roles in contemporary Bolivia, particularly following the election of the MAS government.

Subsequent to taking office, the MAS government initially worked closely with Andean highland indigenous confederation the *Consejo Nacional de Ayllus y Markas del Qullasuyu* (CONAMAQ) and the *Confederación de Pueblos Indígenas de Bolivia* (CIDOB). Along with the MAS-aligned *Confederación Sindical Única de Trabajadores Campesinos de Bolivia* (CSUTCB), a "Pact of Unity" had been established in 2002 to demand a new Constitution,[196] and continued during the Constituent Assembly that resulted in the 2009 Constitution.

193 Benjamin Kohl and Linda Farthing, 'Material Constraints to Popular Imaginaries: The Extractive Economy and Resource Nationalism in Bolivia', *Political Geography* 31, no. 4 (1 May 2012): 225–35, https://doi.org/10.1016/j.polgeo.2012.03.002.
194 Albo, Xavier, "Bolivia: From Indian and Campesino Leaders to Councillors and Parliamentary Deputies" in Sieder, *Multiculturalism in Latin America*.
195 Eichler, 'The Vernacularisation of Indigenous Peoples' Participatory Rights in the Bolivian Extractive Sector'; June C. Nash, *We Eat the Mines and the Mines Eat Us: Dependency and Exploitation in Bolivian Tin Mines* (New York: Columbia University Press, 1993).
196 Andrea Alemán-Andrade, 'The Agency of Andean Agrarian NGOs in the Relationship with Bolivian State's Political Models during the Last 20 Years (1996-2016)', *VII, 89 p.*, 2017, https://brage.bibsys.no/xmlui/handle/11250/2459903; John Crabtree and Ann Chaplin, *Bolivia: Processes of Change* (London ; New York: Zed Books, 2013). p31–34

However, MAS government plans to open up the *Território Indígena y Parque Nacional Isiboro Secure* (TIPNIS) in the lowlands to a road-building plan caused significant ruptures in indigenous peasant unity in 2011. The TIPNIS conflict saw CONAMAQ and CIDOB join together to resist the government's highway project. Acting in solidarity with the Tsimané, Yuracaré, and Mojeño-Trinitario indigenous communities living within the park, CONAMAQ and CIDOB organised a national march in August 2011 from the region to La Paz, which was violently repressed by government forces.[197] The march itself split the "Pact of Unity" between the two confederations, CONAMAQ and CIDOB and three other prominent native–indigenous–peasant organisations, which included the CSUTCB.

The split saw the native–indigenous–peasant organisations break into what Albó calls the twins, CIDOB and CONAMAQ, who kept independence from the state, becoming the main actors during the TIPNIS march, and the triplets, CSUTCB, and two other groups known as the CSCIB and CNMCIOB-BS or Bartolina Sisa, who continued in close alliance with the ruling party.[198] The CSUTCB is relevant to this research as the parent confederation of a peasant group active in the early Bolivian lithium project.

With 36 indigenous ethnicities and roughly half of the population self-identifying as indigenous depending on which census one consults, it is clear that Bolivia's indigenous peoples' relationships with the state defy simplification. What is important here is the relationship between indigenous political organisations and the MAS government. Understanding that the CSUTCB peasant union is a key ally of the government is helpful for the analysis in Chapter 6 of local indigenous community

197 'Contested Development: The Geopolitics of Bolivia's TIPNIS Conflict', NACLA, accessed 22 October 2018, /article/contested-development-geopolitics-bolivia%E2%80%99s-tipnis-conflict.
198 Xavier Albó, 'Pacto de Unidad = Trillizas + Mellizas', *Red Bolivia Mundo* (blog), 16 November 2011, http://www.boliviamundo.net/pacto-de-unidad-trillizas-mellizas/.

participation in Bolivian lithium industry. This confederation is active in the regions around the Salar de Uyuni through its regional arm, the *Federación Regional Única de Trabajadores y Campesinos del Altiplano Sur* (FRUTCAS),[199] a federation comprising local organic quinoa farmers. It is also a key early player in Bolivia's state lithium project.

2.3.2 The role of international law in securing indigenous peoples' rights

Indigenous people are the subject of international and national constitutional laws that protect individual rights. However, they are also subject to international and national laws that protect indigenous collective rights to, for example, land, water, their own culture, and to determine the methods of their own development.[200] Indigenous peoples are also often most affected by environmental changes, on account of their close relationship to nature for subsistence and maintaining their culture.[201]

The most prominent of the laws protecting indigenous rights to consultation on such development projects is the International Labour Organisation (ILO) Convention 169 (1989), a binding international law to which all states of the Lithium Triangle are party. The precise rights held by indigenous peoples under ILO169 are detailed in full in Chapter 4. The legal chapter also examines in detail the 2007 UN Declaration on the Rights of Indigenous Peoples (UNDRIP), adopted in its entirety into Bolivian law in the days after it was agreed by the UN General Assembly. While there is controversy over the exact obligations bestowed upon states who voted in the UN to adopt this non-binding declaration, as it now forms part of Bolivian law, its provisions must be implemented in Bolivia.

199 Ricardo Calla Ortega, 'Impactos de La Producción Industrial Del Carbonato de Litio y Del Cloruro de Potasio En El Salar de Uyuni'.
200 Barelli, 'Development Projects and Indigenous Peoples' Land: Defining the Scope of Free, Prior and Informed Consent'.
201 Havemann, 'Mother Earth, Indigenous Peoples and Neo-Liberal Climate Change Governance'. Burger, 'From Outsiders to Centre Stage: Three Decades of Indigenous Peoples' Presence at the United Nations Julian Burger'.

The existence of the ILO Convention 169 (ILO169) and UNDRIP enables national and transnational advocacy networks to put pressure on state governments to respect the rights of indigenous peoples who may not otherwise garner support and assistance. Keck and Sikkink highlight the potential for such transnational networks to create what they call a "boomerang pattern", whereby an international network can persuade a state to respect human rights, which is helpful if the communities are unable to by themselves.[202] For indigenous peoples, UN human rights agencies and investigators, and particularly the UN Special Rapporteur for Indigenous Peoples, through high-level reports and country visits, can form part of this transnational network. International or bilateral non-governmental organisations (NGOs) often play a substantive role in bringing these issues to the attention of these UN bodies.

There are other international initiatives examining the impacts of extractive industries, which often impact the human rights of indigenous peoples. This is known as the "business and human rights" framework at the UN, and includes non-binding agreements such as the early UN Global Compact (2000)[203] and the Guiding Principles on Business and Human Rights (2011). The latter document seeks to definitively outline companies' duties to respect, protect and remedy the negative human rights impacts of their operations as well as states' duties to ensure the realisation of human rights by regulating industry. Companies tend to avoid the language of human rights, however, preferring to invest in "corporate social responsibility" (CSR) schemes, which offer financial compensation, for example, instead of the informed participation of communities. CSR projects pre-date the shift in focus to company-based human rights obligations, and often do not adequately address the substantive needs of communities,

[202] Margaret E. Keck and Kathryn Sikkink, *Activists beyond Borders: Advocacy Networks in International Politics* (Ithaca, N.Y: Cornell University Press, 1998).
[203] United Nations Global Compact, *The Ten Principles UN Global Compact*, 2000, accessed 2 January 2018, https://www.unglobalcompact.org/what-is-gc/mission/principles

compounding the lack of community agency on their territories and wasting valuable funds.[204] As Laplante and Spears point out: "Poor communities are interested in economic benefits from extractive industry projects, but, more importantly, desire 'to receive visible, tangible forms of recognition from the mining company'."[205] For indigenous communities, this would likely include a recognition of their inextricable link to their environments, which are often deeply embedded in their cultural practices and traditional livelihoods, practised over centuries across the same geographical regions.

In Bolivia, the extractive industries are increasingly under national control, and indigenous peoples' rights are deeply embedded in the constitution and numerous new pieces of legislation, marking some form of success for the international indigenous rights movement. However, actual compliance with these rights may be compromised by policies to continue extraction (with a view to rapid industrialisation). In Argentina, where indigenous communities are marginalised by the state, there is a higher likelihood of transnational advocacy networks working for indigenous communities in securing their rights, particularly where international visibility is brought to a case such as in the example of Milagro Sala in Jujuy outlined above.

What is clear is that international indigenous peoples' human rights law provides a workable framework within which to document compliance of a developing extractive industry. This is particularly interesting to observe in the case of Bolivia, led by an indigenous president who has adopted UNDRIP into national law, and who promotes extractive development in harmony with nature, for the socialist redistribution of revenues across a predominantly poor indigenous population.

[204] Laplante and Spears, 'Out of the Conflict Zone'.
[205] Laplante and Spears.

2.3.3 Bolivia and "speaking like an indigenous state"

While Morales "has surfaced as an international superstar for the climate justice movement" according to Fabricant,[206] the use of *vivir bien* for Bolivia serves more as a mechanism that Zimmerer describes as "speaking like an indigenous state".[207] Zimmerer conceives of this as "indigenous identity-making amid multicultural neoliberalism" by building on Scott's influential idea of "seeing like a state",[208] which he summarises as "the dependency of modern state power on the manipulation, standardisation, simplification and metaphorical use of visual messaging".[209] In a similar vein, Revette attributes Morales' promotion of large "magical state" projects, such as the Teleférico in La Paz – the Swiss-built cable car public transport system that has transformed the lives of even the poorest Bolivians by making traversing the mountain city incredibly cheap and easy – as the key to widespread support of large industrial projects such as lithium mining in Bolivia's Salar de Uyuni.[210]

Canessa noted in 2006 following the election of Morales, that "Morales's indigeneity here is a strategic position against which to challenge global capitalism",[211] giving an early indication of the complex heterogeneity of Bolivian indigenous identity, projected differently internally and on the international stage. He elaborates that "Evo Morales's origins are as indigenous as any highland person can claim and his coca-grower base is overwhelmingly constituted by Quechua and Aymará-speaking peasants,

206 Nicole Fabricant, 'Good Living for Whom? Bolivia's Climate Justice Movement and the Limitations of Indigenous Cosmovisions', *Latin American and Caribbean Ethnic Studies* 8, no. 2 (20 May 2013): 159–78, https://doi.org/10.1080/17442222.2013.805618.
207 Karl S. Zimmerer, 'Environmental Governance through "Speaking Like an Indigenous State" and Respatializing Resources: Ethical Livelihood Concepts in Bolivia as Versatility or Verisimilitude?', *Geoforum* 64 (1 August 2015): 314–24, https://doi.org/10.1016/j.geoforum.2013.07.004.
208 James C. Scott, *Seeing like a State: How Certain Schemes to Improve the Human Condition Have Failed*, Nachdr., Yale Agrarian Studies (New Haven, Conn.: Yale Univ. Press, 2008).
209 Zimmerer, 'Environmental Governance through "Speaking Like an Indigenous State" and Respatializing Resources'.
210 Revette, 'Extractive Dreams'.
211 Andrew Canessa, 'Todos Somos Indígenas: Towards a New Language of National Political Identity', *Bulletin of Latin American Research* 25, no. 2 (2006): 241–63, https://doi.org/10.1111/j.0261-3050.2006.00162.x.

[who are] migrants from the highlands", yet questions whether Morales is an "indigenous leader" just because he is a leader who also happens to be indigenous.[212]

Zimmerer's "indigenous statecraft" and Canessa's "indigeneity as a strategic position" operate conceptually within Bolivian ethnic and political groupings as well as on the international stage, serving to blur the lines between Bolivian indigenous identities. These divisions are then exploited to advance large projects that go decidedly against the concepts of *vivir bien* and Mother Earth. For example, according to Zimmerer, "to Aymará and Quechua peoples supporting the government of Morales and MAS the concepts [of *vivir bien* and Mother Earth] echo their own national political power".[213] This is not experienced in the same way by the lowland indigenous communities, for example those resisting plans for a highway through TIPNIS. The conflict created ruptures within Bolivian society and indigenous identity, disrupting the idea of indigenous homogeneity as described above. It also failed to stop the project, although the protests did secure a law requiring prior consultation specifically for the communities set to be affected by the highway.[214]

Lalander links Morales and the TIPNIS conflict directly to prior consultation for affected communities, stating that:

> Regarding the right of the affected population to prior, free and informed consultation, heavily debated throughout the TIPNIS conflicts, Morales has repeatedly expressed that he considers this procedure to be a waste of time and money, but that this right of the peoples should be respected.[215]

This is an important insight into contemporary Bolivian law and practice over natural resource extraction and infrastructure development, and is potentially relevant to

212 Canessa.,p.255
213 Zimmerer, 'Environmental Governance through "Speaking Like an Indigenous State" and Respatializing Resources'.
214 Plurinational State of Bolivia, Law No.222 *Ley de Consulta a los Pueblos Indígenas del Territorio Indígena Y Parque Nacional Isiboro-Sécure* (10 February 2012).
215 Lalander, 'Ethnic Rights and the Dilemma of Extractive Development in Plurinational Bolivia'.

Bolivian lithium mining.

This section has examined the different ways in which indigenous peoples and the state interact in Argentina and Bolivia. The socio-political background analysed here will aid an analysis of the relevant law in Chapter 4 and provide context for the empirical data gathered during the fieldwork in Chapter 5 (Argentina) and Chapter 6 (Bolivia). It will also aid the analysis of the comparison between the two countries' approaches to developing lithium mining in Chapter 7 (Discussion).

2.4 Lithium mining in Argentina and Bolivia

This final section details the technical aspects of lithium mining from brine and potential environmental impacts. It will then describe the two countries' lithium industries in turn. The case of Argentina, which has numerous salt flats and foreign lithium firms mining across its northern regions, is very different to the single state-owned pilot project on the Salar de Uyuni in Bolivia developed since the mid-2000s. This is partly because of the unusual salt-lake terrains where lithium is found.

2.4.1 Lithium extraction from brine under salt flats

In a number of mountain plain regions of the world there are naturally-occurring dried-out salt lakes with a thick top crust called salt flats. Dissolved in the natural-occurring brines that are found under the salt flat crusts are metals and minerals, including magnesium, potassium, borate, iodine and lithium. The lithium compounds required for batteries are lithium carbonate and lithium hydroxide. In order to extract these usable lithium compounds for batteries, they need to be separated from the other components of the brine salts through a process of evaporation. This is particularly economical and efficient in the dry Andean plateau, which has high solar radiation and wind vectors.

First, millions of litres of brine are pumped out from under the surface of the salt flats.[216] These brines are then deposited in pools, which can be hundreds of metres long and wide. They are often carved out from the salt flats themselves. Then, water naturally evaporates from the brine solution, over a period between three to 18 months. Following the evaporation of water, the resulting solution is more highly concentrated in lithium salts than in the naturally-occurring brine.[217] The solution is then chemically processed in nearby plants to create lithium carbonate or lithium hydroxide at varying quality "grades", with the purest used in batteries.[218] Other compounds obtained from evaporating the brines include chemical fertilisers such as potassium nitrate.[219]

The underlying brines of each salt flat have a slightly different chemical composition. As such, the time taken for the testing phase, and the chemicals required for processing into battery-grade lithium, can vary. Mining corporations therefore require a period of prospecting and testing in advance of large-scale mining taking place. This testing has been occurring in all three Lithium Triangle states over the last two decades in slightly different ways. Chile has been producing lithium through a privatized state company on the Salar de Atacama since the 1980s, making it the second-largest lithium producer in the world. In Argentina, where there are numerous salt flats across the three northernmost states, only three of the international companies mining lithium have reached the stage of commercial production, with many more hoping to follow in the coming years. In Bolivia, only a small pilot plant has been completed on the Salar de Uyuni, the only lithium-rich salt flat in the country. Here, no

216 Ibid.
217 Victoria Flexer, Celso Fernando Baspineiro, and Claudia Inés Galli, 'Lithium Recovery from Brines: A Vital Raw Material for Green Energies with a Potential Environmental Impact in Its Mining and Processing', *Science of The Total Environment* 639 (15 October 2018): 1188–1204, https://doi.org/10.1016/j.scitotenv.2018.05.223.
218 Ibid.
219 SQM, 'Production Processes', n.d., https://www.sqm.com/en/acerca-de-sqm/recursos-naturales/proceso-de-produccion/.

commercial production is yet taking place.

Lithium mining is generally assumed to be more environmentally-friendly compared to typical forms of mining metal from rock, which can require the use of contaminants such as mercury and cyanide to extract the metals. This assumption stems from the basic idea that the key extraction stage uses the natural process of evaporation; that the "mining" of lithium only uses sun and wind and not fossil fuel-powered machines or dangerous chemicals. However, the extraction of millions of litres of brines, and the evaporation "ponds" that can stretch for kilometres, constitutes in many ways a form of open-cast mining, and the high volume of water that evaporates suggest likely impacts on the hydrological balance of the surrounding region.

2.4.2 Environmental impacts of lithium mining

Lithium mining from brine is a relatively new and different process compared to those used in other extractive industries. There is therefore less information available about its environmental impacts, particularly when mined at the scale required to meet global demand. Lithium mining in Chile, for example, is an important bellwether for potential future impacts of lithium mining at scale in Argentina and Bolivia. However, the lithium region of northern Chile is also the site of hugely water-intensive copper and gold mining, making it difficult to isolate and measure the impacts of lithium mining alone. Furthermore, the region's ecosystem is not well understood by scientists, and is simultaneously experiencing climatic changes,[220] which also have the potential to disrupt lithium mining processes as well as indigenous livelihoods.

Due to the mining process described above and the dry climate in the Lithium Triangle, concerns about impacts on water supplies and chemical contamination of land were raised by Friends of the Earth Europe in a 2013 factsheet. This summarises the

220 O'Brien, 'Chile Desert Rains Sign of Climate Change'.

impacts of lithium mining as follows:

> The extraction of lithium has significant environmental and social impacts, especially due to water pollution and depletion. In addition, toxic chemicals are needed to process lithium. The release of such chemicals through leaching, spills or air emissions can harm communities, ecosystems and food production. Moreover, lithium extraction inevitably harms the soil and also causes air contamination.[221]

This report indicates the potential serious impacts on indigenous communities in the high Andean plain regions, which is already a water-stressed area.

Water is therefore a big concern in lithium extraction from brines. In recent years, information has been emerging to indicate that lithium mining companies in Chile are offered rights to draw water "with little more than each company's own data to support their sustainability credentials".[222] In 2018, Chilean scientists raised concerns about the overexploitation of groundwater in the Atacama, the pollution of water from lithium extraction, and consequent impacts on local communities.[223] Furthermore, the remote salt flats of the Andean high plains support rare wildlife such as numerous species of flamingo, including the threatened Andean flamingo.[224] Chilean scientists writing to *Nature* in 2018 cited a study suggesting that "harmful cyanobacteria usually eaten by these birds accumulate in the water polluted by lithium extraction, putting human health at risk as well as threatening the bird populations".[225]

The need for chemical processing of brines, a process which appears opaque from lithium company websites, perhaps due to proprietary reasons,[226] is also a concern for

[221] Joseph Zacune, "LIthium Factsheet" (Friends of the Earth Europe, February 2013), accessed October 21, 2018 https://www.foeeurope.org/sites/default/files/publications/13_factsheet-lithium-gb.pdf.
[222] Dave Sherwood, 'In Chilean Desert, Global Thirst for Lithium Is Fueling a "Water War"', *Reuters*, 29 August 2018, https://uk.reuters.com/article/us-chile-lithium-water-idUKKCN1LE16T.
[223] Gutiérrez, Navedo, and Soriano-Redondo, 'Chilean Atacama Site Imperilled by Lithium Mining'.
[224] Gutiérrez, Navedo, and Soriano-Redondo.
[225] Thomas Cherico Wanger, 'The Lithium Future—Resources, Recycling, and the Environment', *Conservation Letters* 4, no. 3 (2011): 202–6, https://doi.org/10.1111/j.1755-263X.2011.00166.x.
[226] Livent, 'Research & Development with Pragmatic Lithium Inventions', Livent, nd, https://livent.com/applications-and-innovation/; SQM, 'Production Processes'; Sales de Jujuy, 'Projects', Sales de Jujuy website, n.d., http://salesdejujuy.com/projects/.

the environment. Companies are keen to promote the idea that lithium mining is demonstrably less harmful to the environment than mining from rock due to the "natural" evaporation process. However, in 2018, Argentinean researchers Flexer *et al* concluded that the process of lithium "extraction is chemical intensive, extremely slow, and delivers large volumes of waste".[227] They further state that the "technology is struggling with the current surge in demand" as there are only five commercial-scale lithium brine projects in operation worldwide.[228]

In Bolivia the chemical processing aspect of lithium mining is of particular concern, due to the high prevalence of magnesium in the Salar de Uyuni brines. A lengthy period of testing has yielded few clear results available in the public domain. In Argentina, the fast-growing industry stretches across dozens of salt flats and three provinces, suggesting cumulative stressors on the region's hydrology when lithium production peaks. There are likely to be chemical processing concerns in the Argentinean provinces as well, but there are also difficulties accessing mining company information.

2.4.3 Lithium mining in Argentina and Bolivia

In Argentina, the lithium-rich salt flats are located in the country's three northwesternmost provinces: Catamarca, Salta and Jujuy. The firms that have invested in Argentinean lithium are broadly transnational firms from the United States, Canada, Australia, Europe, Korea, China and Japan.[229] Some of these firms, such as FMC Lithium,[230] are at the forefront of innovation in lithium extraction from brines,

227 Flexer, Baspineiro, and Galli, 'Lithium Recovery from Brines'.
228 Flexer, Baspineiro, and Galli.
229 Susan van der Veen, 'Can the "green" Economy Also Be "Fair"? Environmental Justice and Corporate Accountability in the Process of Lithium Extraction in Jujuy. Argentina' (Master thesis, 2017), http://dspace.library.uu.nl/handle/1874/356890.
230 Livent, 'Research & Development with Pragmatic Lithium Inventions'.

attempting to minimise the time spent on evaporation, and thus overall production costs.

Lithium mining first came to Argentina in the early 1990s, when a US company, which was then called FMC Corporation, now part of a pharmaceutical and materials company called Livent,[231] began producing lithium from the Salar de Hombre Muerto (Dead Man's Salar) in 1997.[232] Working on the Olaroz salt flat, one of the sites of study for this thesis, Australian Orocobre (working under local joint venture Sales de Jujuy), became the country's second producer in 2014.[233] They were followed in 2018 by Exar, a company that was part-owned by Chile's Sociedad Química y Minera (SQM) until it sold its share to Lithium Americas and Gangfeng Lithium as it reached commercial production in the same year.[234] Both companies work in partnership with the Jujuy Energía y Minería Sociedad del Estado (JEMSE), the state provincial mining company.

The early Argentinean lithium industry was supported by the leftwing governments of Néstor and Cristina de Kirchner in the early 2000s and 2010s. Cristina de Kirchner particularly encouraged a national drive towards the industrialisation of the primary resource into batteries, through funding research and development programmes, as a move towards making portable electronics more accessible to poorer Argentineans.[235] She "inaugurated" via teleconference the Sales de Jujuy lithium mine on the Olaroz salt flat in December 2014,[236] the first lithium project to come into

231 Google searches for FMC Lithium/Corporation or fmclithium.com now redirect to Livent.com
232 Commodities and Mining, 'Argentina Is Set on Becoming a Lithium Superpower, but There's One Big Problem | Financial Post', 12 December 2017, https://business.financialpost.com/commodities/mining/argentina-is-set-on-becoming-a-lithium-superpower-but-theres-one-big-problem.
233 Sales de Jujuy, 'Sales de Jujuy', Sales de Jujuy, n.d., http://salesdejujuy.com/.
234 Panorama Minero, 'SQM Se Retira de Cauchari-Olaroz – Se Conforma JV Entre Lithium Americas y Ganfeng Lithium – Panorama Minero', 16 August 2018, http://panorama-minero.com/noticias/sqm-se-desprende-minera-exar-se-conforma-jv-entre-lithium-americas-y-ganfeng-lithium/.
235 Melissa Argento and Julián Zícari, "Lithium disputes in Argentina: raw material, strategic resource or common good?" *Prácticas De Oficio*, 1:19, 2017, p.40.
236 Telam, 'Cristina Puso En Macha Proyecto de Litio Sales de Jujuy', Telam, 12 December 2014, http://www.telam.com.ar/notas/201412/87636-cristina-puso-en-macha-proyecto-de-litio-sales-de-jujuy.html.

production in Argentina in over twenty years. However, foreign investment in lithium was limited until Macri's government took power in 2015, "as investors remained wary of the successive leftist governments" of the Kirchners from 2003 to 2015.[237]

In one of his first acts as President in 2015, Macri eliminated export taxes on mining exports,[238] increasing the inflow of foreign mining investment into the northern region. Lithium producers and the Argentinean president continue to be optimistic that lithium production could grow to the point where the country is the world's second largest producer of lithium, overtaking neighbouring Chile.[239]

The lithium boom in the north of Argentina is a complex web of firms at different stages of prospecting and exploration. Across these three Argentinean provinces' high Andean plains are dozens of salt flats, large and small, many of which have been divided into concessions that have been purchased by foreign firms. These small, specialist mining companies are little known outside the lithium mining industry and many may exclusively deal in lithium-brine extraction. Concessions are regularly bought and sold between holders, even in the absence of viable mining operations, stoking fears of a speculative bubble in lithium.[240]

Lithium investors are operational in Argentina at multiple levels. Local mining companies are owned, funded and operated by staff employed by larger mining firms. They also have investment from automobile firms who require lithium for electric car batteries. Sales de Jujuy, a key company within this study, was founded in a joint venture between Australia and Toronto Stock Exchange-listed Orocobre Limited, Japanese trading company Toyota Tsusho Corporation and the mining company of the

237 Juliana Castilla, 'Argentina Seeks to Overtake Chile in South America Lithium Race', *Reuters*, 14 November 2017, https://uk.reuters.com/article/uk-argentina-mining-lithium-idUKKBN1DD2IP.
238 Ibid.
239 Juliana Castilla, 'Argentina Seeks to Overtake Chile in South America Lithium Race'.
240 Sanderson, 'Lithium'.

provincial government of Jujuy JEMSE.[241]

The other key Argentinean lithium mining company in this study is Exar, which is also a joint venture with JEMSE.[242] Exar was formed by Chilean firm Sociedad Quimica y Minera de Chile (SQM), a lead player in the global lithium industry that operates just over the border from Jujuy in northern Chile. A producer of lithium carbonate from the Atacama Desert since 1997, SQM is thought to have been in talks to supply lithium to electric-only car company Tesla Motors in early 2018.[243] SQM sold its share of Exar to Lithium Americas and Gangfeng later in 2018.

In Bolivia, as indicated by the socialist approach to state neoextractivism and industrialisation outlined above, a state-owned pilot lithium mining plant has been built on the Salar de Uyuni salt flat, located in the Department of Potosí.[244] Following the designation of lithium development as a national priority in 2008, the Bolivian government created a subsidiary of its national mining company, *Corporación Minera de Bolivia* (COMIBOL), called the *Gerencia Nacional de Recursos Evaporíticos* (GNRE).[245] The GNRE was tasked with developing a "pilot plant" to test the parameters of state-managed lithium extraction. Despite a decade of work, there was still no commercial production of lithium from the Salar de Uyuni at the time this thesis was finalised in May 2019.

The construction of Bolivia's lithium project has been delayed significantly from earlier plans and predictions,[246] and there are numerous doubts around the Bolivian

241 Sales de Jujuy, 'Projects'.
242 van der Veen, 'Can the "green" Economy Also Be "Fair"?'
243 Henry Sanderson, 'Tesla in Talks with Chile's SQM over Lithium Investment', Financial Times, 29 January 2018, https://www.ft.com/content/5df19f04-01c7-11e8-9650-9c0ad2d7c5b5.
244 "In Chilean Desert, Global Thirst for Lithium Is Fueling a 'Water War,'" *Reuters*, August 29, 2018, https://uk.reuters.com/article/us-chile-lithium-water-idUKKCN1LE16T.
245 López and Rua Quiroga, 'An Assessment of the Environmental and Social Impacts of Chinese Trade and FDI in Bolivia'.
246 Revette, 'Extractive Dreams'.

government's ability to bring a commercial lithium mine to production, given the scale of the challenge for a non-industrialised nation.[247] The idea that Bolivia would be able to exploit lithium without international finance and technology was widely derided by the international mining and financial press in the early 2010s. While delays are generally attributed to the struggle to deal with high levels of magnesium in the Salar de Uyuni brines, the perceived lack of progress has been compounded by an increasing lack of transparency in the project, noted by prominent Bolivian lithium mining analyst Zuleta in 2018.[248]

Conclusion

This chapter has provided an overview and analysis of the key historical and socio-political aspects of Argentina and Bolivia relevant to the lithium mining regions and developing industries. It has set the two countries apart in terms of their social structure, finding that Argentinean indigenous peoples are far more marginalised, repressed and neglected than in Bolivia, which is a far poorer country with a long history of extraction, but governed by a revolutionary anti-colonial government since 2006 that is committed to the redistribution of mining revenues.

The Bolivian socialist government is pursuing state extraction of lithium and even its industrialisation up the value chain into batteries and electric cars, despite no history of manufacturing using extracted primary materials. Lithium is therefore an important aspect of the country's national development trajectory and resource-nationalist "imaginary", according to Revette and Barandirán.[249] Argentina meanwhile has followed the more common neoliberal extractivist path of inviting foreign mining companies

247 Wright, 'Lithium Dreams'.
248 Millan Lombrana, 'Bolivia's Almost Impossible Lithium Dream'.
249 Barandiarán, 'Lithium and Development Imaginaries in Chile, Argentina and Bolivia'; Revette, 'Extractive Dreams'.

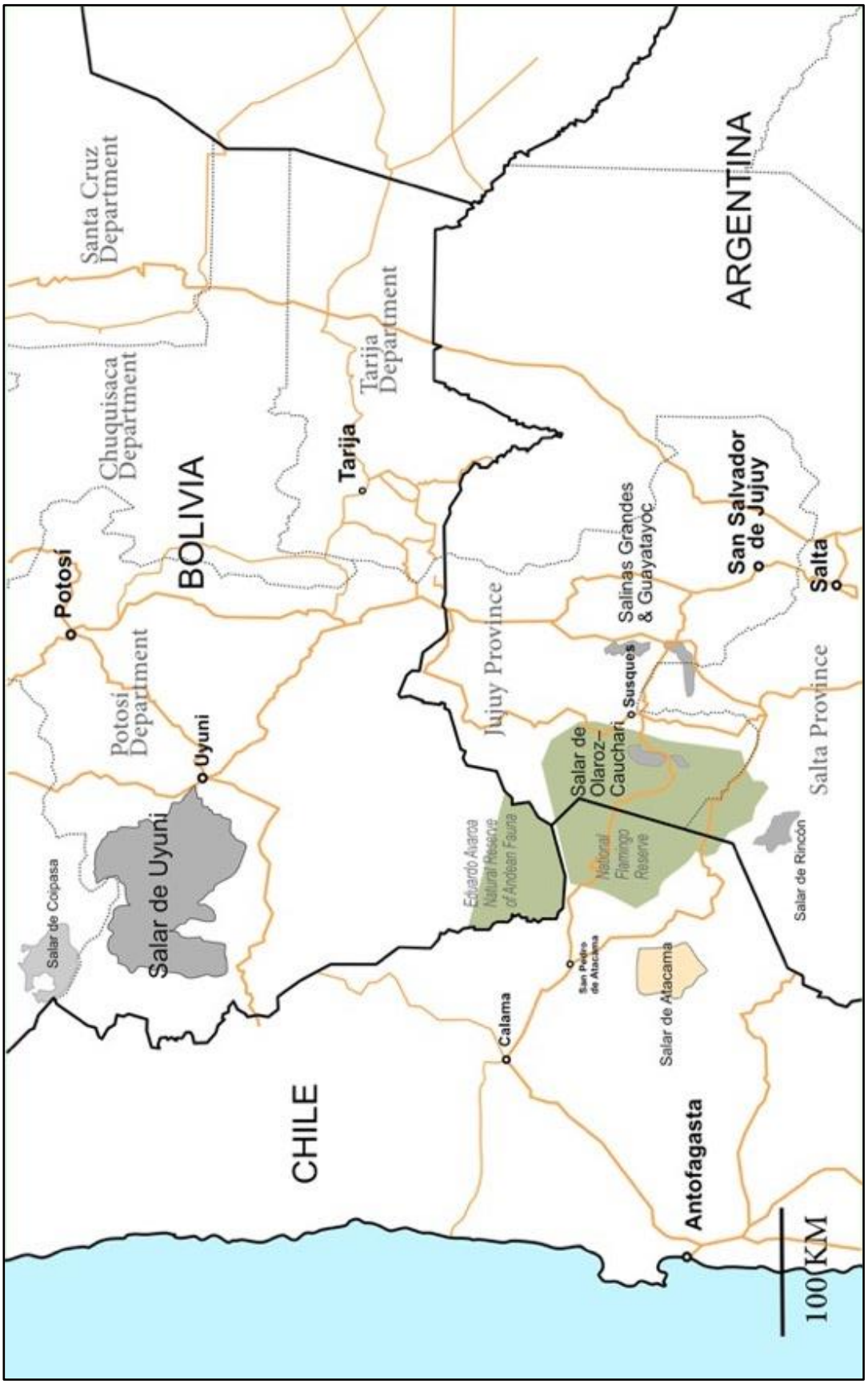
specialising in lithium mining to mine concessions on its numerous salt flats.

In Argentina, rights for indigenous peoples are commonly violated or left uninvestigated, and this is increasing, particularly as the number of large extractive agribusiness projects expand. However, the increase in such violations has the potential to result in increased visibility within the international community. For Bolivia, it is likely that the reverse is true, due to Morales portraying Bolivia as a pro-indigenous and innately environmentalist nation on the world stage. The nature of lithium mining, which appears to be more environmentally friendly than other forms of mining, may even help Bolivia retain this image.

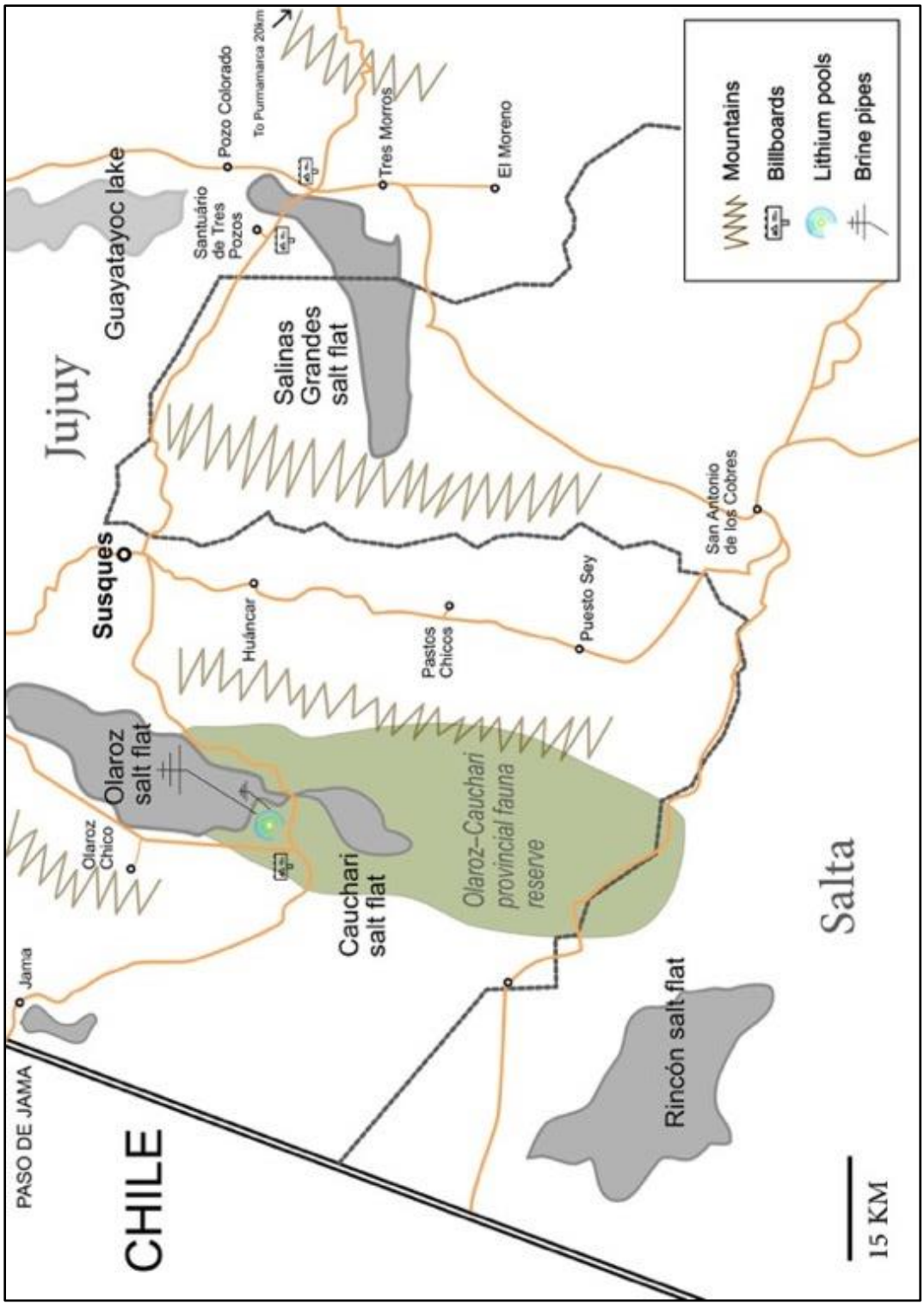
As the last part of this chapter details, the method and impacts of lithium mining from brines is not yet fully understood and could have serious impacts on the regions surrounding the salt flats through water stress and contamination. This study aims to document how much or little information was given to local indigenous communities about these impacts particularly, and how much indigenous peoples have had the chance to participate in decision-making about the industry in their midst.

Maps (1–4) of South America and key communities in the lithium regions in Argentina and Bolivia

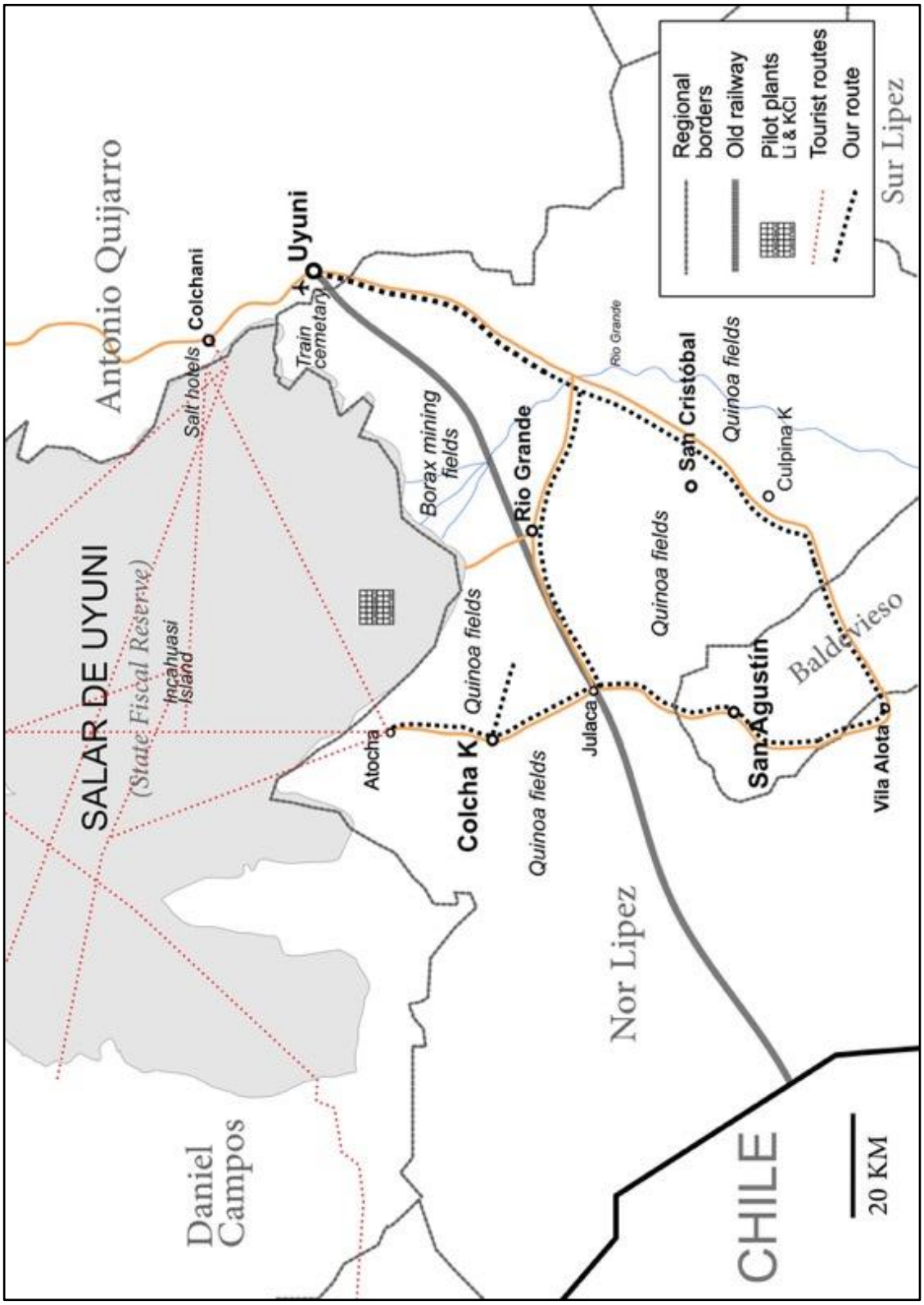
Map 1: Map of South America showing the "Lithium Triangle" and Bolivia's Salar de Uyuni (in white)



Map 2: The Lithium Triangle at the borders of Argentina, Bolivia and Chile



Map 3: Salinas Grandes and Olaroz-Cauchari salt flats and key communities in Jujuy Province, Argentina



Map 4: Map of the region around the south of the Salar de Uyuni and lithium pilot plant

CHAPTER 3 METHODS: QUALITATIVE SOCIO-LEGAL RESEARCH WITH FIELDWORK IN ARGENTINA AND BOLIVIA

Introduction

The aim of this chapter is to detail the process of conducting preliminary legal and documentary research and collecting and analysing the empirical data gathered during fieldwork, which form the basis of the thesis. This thesis is based on qualitative socio-legal research undertaken between 2015 and 2018, including fieldwork carried out between January and June 2017 in the high Andean plain regions of Argentina and Bolivia. I focused on three sites: two groups of Atacama and Kolla communities around two salt flats in Jujuy Province, Argentina, and the predominantly Quechua-speaking communities around the southern coast of the Salar de Uyuni in Bolivia. During my six months' fieldwork trip, and in prior and later triangulation of other research, I built a robust picture of the developing lithium mining industries in Bolivia and Argentina, and the extent of indigenous community participation in lithium mining.

I conducted preliminary research throughout the 2015/16 academic year, a process which I detail fully below. Between January and June 2017, I travelled to two of the three lithium-mining provinces of Salta and Jujuy in Argentina, then to Bolivia's Salar de Uyuni and federal capital La Paz, returning to Salta and Jujuy in Argentina to conclude my interviews in May 2017. I transcribed and analysed my data over the summer of 2017 and wrote and edited this thesis throughout 2018 and 2019. To aid an understanding of the region and some of my observations, three maps and a number of photographs are included in this chapter. Map 2 (p.74) shows the entire Lithium

Triangle region, including the Atacama in Chile. Map 3 (p.75) shows the two Jujuy salt flats and the towns and communities I visited in Argentina. Map 4 (p.76) shows the Bolivian communities to the south of the Salar de Uyuni, and the location of the state pilot plant on the salt flat near the community of Rio Grande (the dotted line is the route I took to interview communities over a two-day trip). Following this chapter are the photographs to which this thesis refers, particularly within this chapter and Chapters 5 and 6, which examine the Argentinean and Bolivian case studies respectively.

The chapter has six parts. The first part examines the interdisciplinary approach and choice of qualitative research methods. The second describes my preliminary online, academic, documentary and legal research methods. The third part provides a description of the fieldwork sites. The fourth and fifth parts discuss the key methods of observation and interviewing I used during fieldwork, as well as ethical considerations and reflections on fieldwork challenges. The final part details how I processed and analysed my data in the summer months of 2017. Access challenges, time and financial constraints and the limitations of the study are also analysed here.

3.1 Method of inquiry: Qualitative research with fieldwork and interviewing

This first section establishes the interdisciplinary basis for the study, and the choice of methods selected. Here I also explain how I selected the cases for the research, and how two interrelated sets of research questions informed my fieldwork practice.

3.1.1 Interdisciplinary context, approach and method selection

Interdisciplinary work is pragmatic, showing "the value of choosing the most appropriate research method or methods to address specific research questions".[250] My approach was generally informed by studies and approaches from diverse disciplines, including law, sociology and anthropology, political economy, and Latin American studies. Using analytical insights from different disciplines, I used qualitative social science methods to answer my research question.

The intersection between law and a variety of social science and humanities disciplines is known as socio-legal studies.[251] Socio-legal studies employ sociological and other methodological tools and theory for data collection, and sociological methods for analysis of law and compliance.[252] Critical realists suggest that there is one actual world, but this is lived, experienced and interpreted differently.[253] The experiences of rights-holders are crucial evidence in human rights research.[254] Relatedly, the perspectives of those invested with the power to cause, permit or otherwise enable human rights violations (in this case, governments and corporations) are also important evidence in research into the causes of actual and probable abuses of human rights. Taking a critical realist approach has enabled me to examine and analyse different perspectives on, for example, environmental impact reports and consultation protocols produced by the corporations and communities respectively. By recording and comparing such perspectives, the rise of the lithium industry can be fully analysed in respect of current

250 Snape and Spencer, "Foundations of Qualitative Research", in Jane Ritchie and Jane Lewis (eds), *Qualitative Research Practice: A Guide for Social Science Students and Researchers* (London: Sage, 2003) p.21.
251 Fiona Cownie and Anthony Bradney, 'Socio-Legal Studies: A Challenge to the Doctrinal Approach', in *Research Methods in Law* (London: Taylor & Francis, 2018).
252 Reza Banaker and Max Travers "Law, Sociology and Method" in ed. Reza Banaker and Max Travers *Theory and Method in Socio-Legal Research* (Oxford and London: 2009) Hart, p.4.
253 Ibid, p.11; According to Sayer, 2000: Critical realism finds a way between the extremes of positivism (that suggests a knowable singular truth, measurable through value-free research) and relativist interpretivist approaches (which deny the existence of an objective truth putting the onus on the researcher's interpretation entirely). Sayer, Realism and Social Science, (London: Sage, 2000), p.8–10.
254 Essex University Human Rights Research Methods Summer School, Essex University, June 27–5 July 2016.

and probable future impact on indigenous peoples' rights. Only then can recommendations for the successful mitigation of such violations be made.

Preliminary and online research indicated limited secondary material available on the situation of the communities living in these remote lithium regions, necessitating fieldwork, with an aim to understand the nature of the relationships between communities, lithium companies and state actors.

Socio-legal researchers draw on social theory to understand how aspects of a situation inform how law is conceptualised within it.[255] This process has been used to provide a methodology for this thesis that generates key findings and situates them in their wider socioenvironmental and political contexts. This qualitative socio-legal research takes a critical realist approach to understand experiences of consultation and other forms of indigenous participation in mining projects compared with that mandated by international human rights law. The thesis is thereby able to document compliance with that law, interpreted through reconciling the accounts of key stakeholders and applying social theories to understand the extent of that compliance in its political context. From this a number of conclusions can be drawn, that may produce recommendations and allow better socioenvironmental policies and practice to emerge which are underpinned by a strong evidence base.

3.1.2 Selection of cases and fieldwork sites

Extractive projects are complex, involving a large number of stakeholders. The Argentinean lithium industry is geographically far more complex than the Bolivian, certainly in terms of key stakeholders: lithium mining is set to affect three north-eastern provinces and is being proposed or conducted by a large number of international

255 Snape and Spencer "The Foundations of Qualitative Research", Barakar and Travers "Law, Sociology and Method".

companies in a very remote and difficult-to-access region. Specific community-level case selection at the local and regional levels had to be done as the fieldwork progressed and more was known about my ability to access these communities.

Although I originally planned to examine the lithium industries of all three Lithium Triangle countries, I initially focused on the Bolivian lithium industry before settling on the comparison with Argentina. Due to the shift towards a socialist programme of government with a strong neo-extractivist policy, Bolivia seemed an outlier in comparison with the neoliberal models of extraction and export continuing in Argentina and Chile. It seemed likely that Morales' anti-neoliberal stance and the emergence of *vivir bien* and indigenous rights in legislation could have some impact on how the state lithium industry progressed its aims. Furthermore, Bolivia's long colonial extractivist history appeared to have a complex and compelling influence on contemporary resource nationalism, particularly in the case of the early lithium industry.

However, the Bolivian industry was less advanced than in Argentina, where indigenous communities had already mounted a defence of the Salinas Grandes following prospecting in 2010. I therefore decided to compare state and industry consultation with communities in both countries, measuring compliance with their international legal obligations. Comparison can be helpful for research design, enabling a level of control over the data collected and benchmarks for analysis. It can help "isolating in thought particular aspects of the object under study",[256] which is known as abstraction,[257] or separating the components into discrete parts in order to analyse them separately before looking at the whole. In this case it also enables me to compare the treatment of indigenous peoples by two very different political regimes.

256 *Practising Human Geography*, p.308.
257 David Harvey, 1989, cited in Paul Cloke, Ian Cook, Philip Crang, Mark Goodwin, Joe Painter, Chris Philo, *Practising Human Geography*, (London: Sage, 2003) p.308.

3.1.3 Research questions

Because intensive, large-scale lithium mining is relatively new in the Andean plain region, there was a clear gap in research about its impacts on indigenous communities. Early documentary research online and in library databases undertaken in 2016 returned very little academic research on socioenvironmental impacts in my chosen regions, or in Chile.

This dearth of research had benefits for formulating a research project, as well as drawbacks: there were numerous avenues to pursue, but narrowing the precise topic and disciplinary focus was a challenge.

Eventually, I formulated two dimensions to help answer the central research question on indigenous environmental participation in lithium mining:

> 1) "What are the socioenvironmental impacts of mining lithium in Bolivia and Argentina?"
>
> - Are community members/leaders concerned about environmental impacts? If so, is excessive water use / hydrological imbalance more of a concern, or chemical contamination?
> - To what extent do local communities rely on the environment that might be impacted by lithium mining? Are these traditional activities?
> - What expectations do community members/leaders have of companies in terms of jobs, agreements and economic interventions? How does the community–government relationship affect these?
> - To what extent will environmental impacts increase as the lithium mining industry grows?

> 2) "To what extent are indigenous communities able to participate in decision-making in relation to lithium mining projects in Bolivia and Argentina?"
>
> - To what extent have communities been able to access reliable information relating to existing or proposed mines?
> - Have consultations taken place with communities regarding lithium mining projects?
> - What role is the government playing in the communities to mediate relationships with the companies?
> - How do the companies facilitate local participation in the industry?
> - How do companies and/or governments conceptualise community participation in their planning?

These research questions became the foundation for preliminary documentary research and fieldwork preparation, with an emphasis on the second set of questions given the

clear legal basis for participation in environmental decision-making, particularly for indigenous communities, which will be elaborated upon in Chapter 4.

Documentary research involved online and academic and legal research. This in turn fed in to fieldwork preparation, and interview guides, and the subsequent analysis of the fieldwork data, such as the coding of interview transcripts.[258] Training in interdisciplinary, qualitative research methods, human rights research methods and social science research methods involving hidden, marginalised and excluded populations was undertaken in preparation.[259]

3.2 Preliminary documentary research and preparation for the fieldwork

This second section explains my processes for conducting preliminary legal and socio-legal human rights research, through legal statutes, academic texts and online searches. It also demonstrates how I identified key actors to interview during my fieldwork, and how ethical considerations were addressed.

3.2.1 Legal and socio-legal human rights research

It is well known that indigenous peoples are often gravely impacted by mining developments on their ancestral territories.[260] As a result, legally-binding international treaties designed to protect their rights to land, culture and participation have been created. As such, I researched environmental participation rights and the concept of free, prior and informed consent (FPIC) in international law, and the implications of centuries of colonialism on Latin American indigenous peoples' rights in the context of

[258] *Practising Human Geography*, p.332–356.
[259] Essex University Human Rights Centre Summer School on Human Rights Research Methods, Essex University, June 27–5 July 2016.; Essex University Summer School in Social Science Data Analysis, "Applied Research Methods with Hidden, Marginal and Excluded Populations", 25–29 July.
[260] Lewis, 'Indigenous Peoples and the Corporate Responsibility to Respect Human Rights'; Westra, *Environmental Justice and the Rights of Indigenous Peoples*; Huseman and Short, '"A Slow Industrial Genocide"'.

neoextractivism and the global primary commodity trade. I also examined the literature on the "resource curse", a concept which attempts to understand why many countries rich in resources do not necessarily benefit from the generated wealth.[261]

What I found particularly interesting at the beginning was that the new 2009 Bolivian Constitution made clear that Bolivia was a "plurinational" nation that had constitutionalised indigenous peoples' rights. This document and other emerging legislation in Bolivia under the *Movimiento al Socialismo* (MAS) Government aims to respect indigenous peoples and the environment and serve a decolonising function for its citizens, who comprise 36 different indigenous ethnicities and constitute around half of the population. Argentina, by contrast, has strong constitutional environmental rights, but very few laws pertaining to its indigenous peoples. Both are, however, party to international law on indigenous rights. The distinction between the two sets up an interesting comparative project that the fieldwork data was able to expand upon.

A number of academic studies were published or became available during course of my research. Revette's 2016 thesis, which focused solely on attitudes in and around the Salar de Uyuni to lithium-based "development" for example, helped answer questions about why there was little resistance to lithium mining in Bolivia.[262] This study also provided the background on Bolivian attitudes (indigenous and non-indigenous) to "development" more generally, and lithium more specifically.[263] Studies continue to emerge, including one on the potential for lithium to become a "green conflict mineral", invoking the recourse curse thesis.[264]

262 Revette, 'Extractive Dreams'.
263 Ibid.
264 Rodrigo Aguilar-Fernandez, 'Estimating the Opportunity Cost of Lithium Extraction in the Salar de Uyuni, Bolivia', 4 December 2009, https://dukespace.lib.duke.edu/dspace/handle/10161/1554.

3.2.2 Online and documentary research

Conducting preliminary research on an emerging issue necessitated good internet research skills. I had to continually find the most up-to-date information available and monitor ongoing developments. I also had to examine this information in terms of its provenance, reliability and possible inherent bias or motivation. I recorded and analysed what I found, saving webpages offline and organising them for analysis within drafts of this thesis. Using these online research techniques,[265] I was able to verify, for example, whether there were any key government documents available online, such as contracts with companies or environmental impact assessments, and when they had been made available. There were none.

As well as helping with the establishment of the facts, these early searches were invaluable in enabling me to assess what information was publicly available, and how easy it was to access. As the right to information underpins the right to participation (see Chapter 4), this was an important stage of the research in and of itself.

Simple Google searches helped me understand lithium mining in the region in general, particularly in terms of projects being developed and communities that might be impacted. I gathered every publication I could find on the subject, including a 2010 NGO report from the Bolivian-based Democracy Center and a Master's thesis examining the "opportunity cost" of lithium extraction in the Bolivian region that produces the world's highest-quality organic quinoa.[266]

The use of Google News and Scholar Alerts helped me ensure I never missed a piece of news or a scholarly work published online containing the words "*litio*" or

[265] This involves typing for example "site:gob.bo litio Uyuni", to find every webpage on the Bolivian government server (gob.bo) containing those keywords.
[266] Hollender and Shultz, 'Bolivia and Its Lithium: Can the "Gold of the 21st Century" Help Lift a Nation out of Poverty?'; Aguilar-Fernandez, 'Estimating the Opportunity Cost of Lithium Extraction in the Salar de Uyuni, Bolivia'.

"lithium" and either "Argentina" or "Bolivia". I was alerted in this way when Fornillo and his colleagues published their book *Geopolítica*, about the lithium mining industry in Argentina.[267] The very act of searching and saving these pages, and the difficulty in understanding and analysing the types of content found, gave some clue as to the levels of access for indigenous communities to detailed information about lithium mining via online news and reports.

Bolivian government web pages tended to have limited information and were older and slower to load than those relating to Argentina. Online resources from Argentina were much more accessible, in terms of speed and availability of content, and there were more activist-run blogs in evidence than in Bolivia. There are videos of the hearing from the 2012 case taken by 33 Communities affected by proposed lithium mining to the Supreme Court available on an activist blog site, which I was able to download from Youtube.[268] As there was plentiful local news available online, I searched local newspapers for stories using site-specific search techniques. This was helpful in providing historical information and background.

I was careful to note any probable biases identified from producers of online content, and I was made aware of the unstable nature of this preliminary online data. My supervisor Dr Jane Hindley advised me to download and save some of the more important articles and webpages, as these are often moved or removed at a later date. This was excellent advice, as the Bolivian lithium company's website was overhauled in late 2016, and in the process, important pages about community relations and a blog post from the then-head of the company became unavailable.

267 Bruno Fornillo, *Geopolítica del Litio: Industria, Ciencia y Energía en Argentina* (ed) Buenos Aires: Editorial El Colectivo, 2015.
268 Maxo Morer, Prensa Libre Pueblos Originarios: Oro Blanco: La Locura Del Litio - Minería Contaminante: Explotación de litio en Argentina -Bolivia -Chile, *Prensa Libre Pueblos Originarios* blog, accessed 30 October 2018 http://prensalibrepueblosoriginarios.blogspot.com/2012/03/oro-gris-explotacion-de-litio-en.html

Google News and Scholar Alerts enabled me to better plan my fieldwork and keep abreast of academic research being published about lithium mining. For example, the publication in December 2016 of a Washington Post article, "Indigenous people are left poor as tech world takes lithium from under their feet", gave me a wealth of information that would have been very difficult to obtain otherwise.[269] This article was invaluable for its maps and the names of the villages and community association leaders who had signed deals on behalf of their communities with lithium companies for access to water, land and passage through land.

3.2.3 Identifying key actors, informants and documents

Prior to the fieldwork I identified three broad categories of key informants relevant to the study: community members and leaders; provincial and national government officials; and corporate or industry actors. A fourth category, academics and other members of the research community, were also valuable informants for the preliminary stages of the fieldwork. These contacts often acted as "gatekeepers" for my eventual interviewees, providing essential background and context on their positions in the debate.

In 2016 I came across another doctoral researcher working on lithium mining and indigenous peoples' rights, Pia Marchegiani. Marchegiani works for Argentina's FARN (*Fundación Ambiente y Recursos Naturales* – Environment and Natural Resource Foundation). FARN worked with the 33 Communities of the Salinas Grandes, giving legal advice and assisting in the compilation of their community consultation protocol, *Kachi Yupi: Procedimiento de consulta y consentimiento previo, libre e informado para las comunidades*

[269] Todd Frankel and Peter Whoriskey, 'Indigenous People Are Left Poor as Tech World Takes Lithium from under Their Feet', *Washington Post*, 19 December 2016, https://www.washingtonpost.com/graphics/business/batteries/tossed-aside-in-the-lithium-rush/.

indígenas de la cuenca de Salinas Grandes y Laguna de Guayatayoc.[270] It is notable that *Kachi Yupi* was chosen as the title for the protocol. *Kachi yupi* is a Quechua phrase meaning "footprints in the salt", although the communities in the region mainly speak Spanish.

Over Skype, Marchegiani was able to give me a good overview of the situation in Jujuy Province. She sent me some documents and the name of a representative for the 33 Communities, who I contacted when I arrived in Salta, Argentina. Salta, which neighbours Jujuy, is also a lithium-producing province of Argentina, but there are fewer indigenous people and communities in the Salteño cities or highlands than in Jujuy.

Marchegiani also gave me a copy of a report from the Bolivian NGO *Centro de Estudios para el Desarrollo Laboral y Agrario* (CEDLA – Centre of Studies for Labour and Agrarian Development), published in 2014, called *Un Presente sin Futuro: El proyecto de industrialización del litio en Bolivia* [A Present without Future: The Bolivian Lithium Industrialisation Project].[271] This CEDLA report, compiled with the cooperation of a senior manager in the Bolivian lithium project, became a crucial piece of documentary evidence of the potential environmental impacts of lithium mining at scale on the Salar de Uyuni. It also led me to meet Bolivian academic and expert in the socioenvironmental impacts of lithium mining, Ricardo Ortega Calla. Calla authored two chapters in this report, one explaining the two proposed methods of extraction and their socioenvironmental consequences and the other the complex history of land rights in the region.

270 The 33 Communities of Salinas Grandes and Guayatayoc, 'Kachi Yupi / Huellas de Sal [Footprints in the Salt]: Procedimiento de Consulta y Consentimiento Previo, Libre e Informado Para Las Comunidades Indígenas de La Cuenca de Salinas Grandes y Laguna de Guayatayoc'.
271 Calla Ortega, Ricardo, Juan Carlos Montenegro Bravo, Yara Montenegro Pinto, Pablo Poveda Ávila, *Un presente sin futuro: El proyecto de industrialización del litio en Bolivia* [A Present without Future: The Bolivian Lithium Industrialization Project], (La Paz: Centro de Estudios para el Desarrollo Laboral y Agrario (CEDLA), 2014).

3.2.4 Ethics and safety considerations

Using the University of Essex ethical approval form and following the British Sociological Association's ethics guidelines, I rigorously examined and revised my fieldwork plan and its ethical considerations in the months running up to the commencement of my fieldwork. I determined how I would store personal details in advance of meeting a participant and afterwards when I had further personal details and interview data. (See Appendix A.)

All interviews were conducted with the full consent of the participants. A consent form was created in Spanish and was presented to the potential participant before the interview with a verbal explanation of the project. The parameters for participation were fully explained with the use of an information sheet (which included contact details) which the participant could retain (See Appendix A). Every informant read the information sheet and signed the consent form. Only one participant chose to use a pseudonym, and one participant requested to be anonymous (but gave their name on the form).

These forms were photographed and kept in the bottom of my luggage, which was kept locked. Many participants are leaders within their own communities or well known for their views on the lithium mining projects occurring in their local areas. However, my consent form, which also held a section on risk to participants, promised to anonymise published data. I have done this for community members and leaders, referring only to their location or broad affiliation.

I carried a Zoom H4N recorder, two SD memory cards and two plug-in external hard drives (one for backup) that both had password protected sections to keep interview recordings and scanned forms secure in accordance with the promise to participants that their data would be safe. I made sure notes made in my notebook did

not include personal information such as names, addresses or phone numbers, in case of loss, using post-its for information and securing my smartphone and laptop with PINs and passwords. I took guidance from expert academics about my own personal and physical safety.

Potentially being multilingual research, I faced the ethical dilemma of misrepresentation due to translations errors. This was fortunately not a problem, as all but two of my community informants (in Bolivia) spoke Spanish. When I interviewed these two persons, I had a driver to translate from Quechua for me and the interviews were short and focused on life in the region generally rather than any aspect of lithium consultations. I was concerned about levels of literacy as an ethical consideration, but all community participants read the form in front of me and signed it with their name and date.

I exercised great caution when approaching people, proposing an interview and interviewing, to ensure that I did not coerce informants or "lead" towards any particular answers. This caution was aided in many respects by my intermediate-level Spanish. Although I had read up on many aspects of lithium mining proposals and international human rights law, I was cautious about telling people directly what I had learned, in order not to cause concern. For example, although I had information about the potential use of a damaging method of extraction on the Salar de Uyuni from the CEDLA report, as the report appeared not to have been circulated, I only sought to ascertain whether officials were aware of its content or the proposed extraction methods to be used. An official from the Bolivian lithium municipality of Colcha K requested a copy of the thesis, which I will send in due course.

3.3 Description of fieldwork sites

This central section describes the fieldwork sites, making reference to the maps above.

It particularly highlights the similarities between the landscapes, communities and natural features of the region, while also identifying some key differences. Here, I also focus on the salt mining, quinoa and tourism industries. I conclude by highlighting some of the challenges I faced in accessing communities in these remote regions, but also what I learned from these challenges.

3.3.1 The Andean high plains and indigenous communities of Argentina and Bolivia

The Andean high plateau is commonly referred to as the *puna* in Argentina and as the *altiplano* in Bolivia. The word *puna* finds its origins, like many used across the region even in Spanish speech and signage, in the Quechua language.[272] There are many similarities between the sites visited within the Argentinean *puna* in Jujuy and the Bolivian *altiplano*: the climate, flora and fauna, landscapes, human settlements and productive industries have much in common, and these will be described below.

In Argentina, the first case I researched was a group of 33 indigenous communities who have spent seven years resisting lithium mining proposals for the Salinas Grandes. The 33 Communities of Salinas Grandes and Guayatoc (an adjacent salt flat) live in villages surrounding the Salinas Grandes basin. I visited El Moreno, 12 kilometres to the south of the main (tarmacked) road that passes through the Salinas Grandes, on a dirt road that runs south towards Salta Province. Santuário de Tres Pozos (Sanctuary of Three Wells), which I also visited, is located approximately one kilometre off the road on the western side of the Salinas (see Map 2). Pozo Colorado (Coloured Well) is to the east of the Salinas, on the Guayatyoc side. None are visible from the road, but there are road signs pointing to them. Interestingly, *pozo* means well (from which water is drawn), the inclusion of which in two communities' names hints at the importance of groundwater to the region.

[272] Puna from Quechua, Wiktionary, n.d., accessed March 19, 2019 https://en.wiktionary.org/wiki/puna.

I visited the following communities within the administrative region surrounding Susques: Huancar, Pastos Chicos, Puesto Sey and Olaroz Chico. These communities are not opposed to lithium mining on the Olaroz salt flat. The notable exception is the Colectivo Apacheta based in Susques, which has formed a campaign group that opposes Sales de Jujuy and Exar's operations. Olaroz Chico overlooks the Olaroz salt flat; the others are located over an hour's drive away (see Map 2).

The indigenous people of the area live in small communities, dispersed across vast plains where the salt flats are located, flanked by Andean mountain ranges. Some 1,611 people live in the main town of Susques,[273] a small town with only five or six roads; two or three general stores; a couple of restaurants or canteens and three hostels or hotels.

My informants in most of the smaller communities in both countries I visited often described their communities in terms of the "number of families". Using census data, where available, I established that 80–100 families would translate as approximately 300–500 people. According to my first interviewee in Argentina, an organiser for the 33 Communities, the Salinas Grandes and Guayatayoc *cuenca* (basin) has a population of 7,000. Near the Olaroz salt flat there are ten communities, who have some form of direct involvement in the lithium industry through agreements with associated payments to communities and local jobs, making the number living in that region approximately 4,000–6,000 people in total, including the town of Susques. I was also told that 40,000 people in total live across the *puna*,[274] incorporating the Andean plains of Jujuy, Salta and Catamarca Provinces where Argentinean lithium mining is taking place.

In Bolivia, the communities and provinces of interest to the study are located

273 INDEC, 'Censo Nacional de Población, Hogares y Viviendas 2010'.
274 Representative of the 33 Communities of the Salinas Grandes. Interview with author. Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.

along the southern "coast" of the Salar de Uyuni, at varying distances from the pilot lithium plant at Rio Grande (see Map 3). Bolivia's Potosí Department is divided into a number of different provinces, with their own capitals, many of which are small villages, except Uyuni and Potosí. There are three provinces of interest to this study, all located to the southwest of the edges of the Salar de Uyuni. These are Antonio Quijarro (capital Uyuni), Enrique Baldevieso (capital San Agustín), and Nor Lípez (capital Colcha K). The Bolivian lithium mining operations are established on the Salar de Uyuni, but are closest to the village of Rio Grande, which is in Nor Lípez (see Map 3).

Uyuni is the largest town in the Bolivian region, with a population of 10,460, according to the 2012 census.[275] The Salar de Uyuni basin as a whole has a population of 42,098.[276] The town of Uyuni is estimated to receive upwards of 60,000 visitors per year.[277] The town has some impressive buildings in its centre including a colonial-style town hall building and a large church (Photograph B1). There are also many restaurants, hostels and hotels to suit all budgets and requirements. Tourism is an enormous part of the economy in this Bolivian region, meaning potential implications on livelihoods from large-scale lithium mining on the Salar de Uyuni.

In the Bolivian highlands, language is a key identifier of indigeneity (see Chapter 2). The 2012 Bolivian Census suggests that 80–85 percent of the population (over the age of six) in the regions south of the Salar de Uyuni speak Spanish.[278] Newer data from 2016 suggests that Potosí Department has the highest level of Quechua speakers in

275 Bolivian Census 2012 *Uyuni población*, (La Paz: INE, 2012)
276 Ibid. Official statistics for Bolivia are hard to find, and the Uyuni population numbers here are likely to be out-of-date, because the city is growing very fast.
277 Alejandra Saraiva López and Adam Rua Quiroga, "An Assessment of the Environmental and Social Impacts of Chinese Trade and FDI in Bolivia", in Rebecca Ray, Kevin Gallagher, Andres López, Cynthia Sanborn (eds) (2017) *China and Sustainable Development in Latin America: The Social and Environmental Dimension*, p.169
278 Interestingly, the Uyuni region (to the east of the Salar de Uyuni) has a low proportion of Spanish speakers. Bolivian Census 2012 (La Paz: INE, 2012).

Bolivia, with 54.5 percent learning Quechua as their first language.[279] Most people I spoke with were bilingual, with only one woman speaking only Quechua.

Common salt (sodium chloride) is mined both on the Salinas Grandes in Argentina and near Colchani on the southeastern side of the Salar de Uyuni in Bolivia. In both Colchani and alongside the road through Salinas Grandes I saw diggers and piles of salt metres high. In Salinas Grandes, this was being shovelled into trucks by men covered head-to-toe in overalls and caps and bandannas over their faces, owing to the skin-damaging glare from the reflective white of the salt. Salt mining cooperatives' buildings are indicated by signage. In both Salinas Grandes and Colchani there are stalls selling souvenirs and food, with Colchani's tourism industry much more pronounced and organised due to the huge influx of tourists visiting the adjacent Salar de Uyuni.

The small village of Colchani near Uyuni is home to around 600 people. Colchani's small population is employed in artisanal salt mining and market-trading for its daily tourist markets. In the centre is the newly-constructed "Salt and Llama Museum", with photographs and dioramas depicting the traditions of the salt-gathering, llama-herding communities of this region (Photograph B2). There are buildings and yards that are clearly dedicated to the processing of salt all across the village. I made three trips to Colchani, with the objective of speaking to salt-miners. Like all towns and villages in the region (including Uyuni) there are no newspapers in the shops. While people may have mobile phones, they are unlikely to have internet access or even mobile phone signal in many parts of this region. Only very few locals have computers, with the obvious exception of business owners in Uyuni, and perhaps Susques.

[279] INE, "INE: 54,4% de los potosinos aprendieron a hablar en quechua", 20 February 2016 (La Paz: INE, 2012), accessed 22 February 2019 https://www.ine.gob.bo/index.php/component/phocadownload/category/64-notas-de-prensa-2016?download=942:ine-54-4-de-los-potosinos-aprendieron-a-hablar-en-quechua

3.3.2 Challenges of accessing communities in remote salt-flat regions

From my preliminary research, I knew that there would be a number of logistical challenges to overcome in reaching the relevant communities: Google Maps was often blank in relation to some of the key access roads in the regions, and there were no local bus timetables available online with which to plan ahead. I visited many bus stations, spoke to people and photographed timetables. Travel plans had to be made as information became available, and often entire days during the fieldwork period were taken up with finding out how to get to a village of interest, where (and how long) to stay, whether it would be possible to move on from there to somewhere else of interest, and how to get back. With infrequent bus services, and no way to know whether there would be accommodation in these small villages, in both countries I ended up having to pursue quotes for expensive private transport options.

Transport infrastructure towards and within the communities I visited is generally lacking in both countries' lithium regions. However, there have been moves to encourage tourism to visit the salt flats and the "quaint" indigenous villages through tourism maps and recently-erected "tourist route" signage.[280] While there are many paved roads in Argentina, including one through the Salinas Grandes itself, in southwestern Bolivia the roads are generally unpaved, except the road out of Uyuni towards La Paz.

It was necessary to hire a car in San Salvador de Jujuy, and stay in Susques, to visit the communities of Salinas Grandes and Olaroz–Cauchari. To get there, we drove up the steep mountainside, through the Salinas Grandes and for an hour over another mountain range. Photograph A1 shows the only road in Jujuy to this region. This

[280] Florencia Puente and Melisa Argento, "*Anexo: Apuntes sobre el trabajo de campo en Salinas Grandes y Susques 17 a 21 de octubre de 2014"*, in Bruno Fornillo, *Geopolítica del Litio: Industria, Ciencia y Energía en Argentina* (ed) Buenos Aires: Editorial El Colectivo, 2015.

indicates the general geographical inaccessibility of the communities and the salt flats in both Argentina and Bolivia, in the Andes at 3,500–4,500 metres above sea level. The region is also challenging to access due to limited public transport and unpredictable changes in an already extreme climate. There is little to indicate whether any other mining, apart from lithium, occurs here.

There were many challenges presented by the fieldwork, particularly in terms of illness (principally altitude sickness), as well as time, expense and logistical difficulties accessing communities. Nonetheless, I was able to conduct 40 interviews, including with a number of officials, and gained good insight into life in the communities.

3.4 Observation

The discipline of human geography emphasises how observation can determine the dynamics between sectors of society and their environments within a distinct geographical region.[281] In the Andean high plains regions, I set out to observe how communities live, work and travel, and their experiences in respect of the new lithium mining industry.

3.4.1 Location, environment and infrastructure observation

I was able to observe the geographical features of the region as a tourist before pursuing interviews. Upon arrival in the Argentina *puna* region of Jujuy, and Uyuni in Bolivia, I was able to go on guided tours of the salt flats. In the Salinas Grandes, I toured the natural *ojos del salar* (eyes of the salt flat), which refers to areas of the salt flats open to the turquoise brines beneath (see Photograph A2). If you dipped your finger in the brine it was clear from the fine white dust left on your skin as it quickly dried that it was extraordinarily salty. Former Mining Minister of Salta Professor

[281] *Practising Human Geography*.

Alonso had told me that these brines are over ten times saltier than seawater: 300–500 grams of salt per litre, compared to seawater at 28 grams per litre. Following the guided tour by a former salt miner, I then conducted a short interview with him about the 33 Communities' campaign against lithium mining.

Sometimes there were interesting features observable in the landscape and climate that gave an understanding of some of the information gathered from preliminary research and informants' interviews. For example, the dispersed nature of the communities and the distances between them and main centres of economic activity (such as the San Cristóbal mine in Bolivia) helped my understanding of how community members saw their entitlements to work opportunities in tourism or mining and public service provision.

In Bolivia, the recent three-year drought came up regularly in my interviews, mainly because it had substantially affected the quinoa crop. The severity of the drought was worrying to locals because quinoa naturally needs little water. At the time of my visit, the *altiplano* landscapes in Bolivia were discernibly greener and more productive than those visited in the Argentina *puna*. Quinoa crops were visible, growing on a number of mountainsides, the first crop in some years (see Photograph B4). Quinoa is a bushy plant a few feet high with green, red and yellow flowers. As it is the only place in the world where it is grown organically, they call the quinoa that comes from that part of Bolivia *quinua real*, or "royal quinoa". Preliminary research suggested that the production of quinoa is potentially under threat from the industrialisation of the Salar de Uyuni with the development of lithium mining.

Another economically productive industry that was observable in Bolivia was tourism. It is not an exaggeration to say that Uyuni is filled with hordes of tourists at any given time. In the kilometre or so between Colchani and the Salar de Uyuni there

are two or three luxury "salt hotels", made largely from salt bricks from the *salar*. The contrast between these polished structures and the collection of crumbling buildings that make up nearby Colchani is pronounced. In addition, recent seasonal rains and convoys of four-wheel-drive jeeps had pummelled the road through Colchani and out towards the *salar* to being so pocked and bumpy that it was pretty much unusable by any other kind of vehicle (see Photograph B8). It was clear that having upwards of 100 vehicles driving through such a little village would no doubt be affecting the traditional fabric of the community, even if they offered a market to sell food and other goods. Furthermore, it was clear that the industrialisation of even a small corner of the Salar de Uyuni would be likely to have an impact on the tourism industry which is focused so closely on the salt flat.

One of the more extraordinary observations I made while in Argentina staying near the Olaroz salt flat occurred when I climbed a small hill near my hotel in Susques. Looking southwest, I noted a bank of clouds which seemed to be forming from water rising from below, out in the direction of the Sales de Jujuy lithium plant. Knowing that lithium was being mined by evaporation in large pools, it appeared incredible to me that I could apparently actually see this happening on the horizon (see Photograph A3).

I also aimed to observe lithium mining operations and signs of the incoming industry. It was often clear that communities could not know what the companies were doing without direct, culturally-appropriate communications from them. Signs of the companies' presence in Argentina read more like advertising or promotional materials. For example, driving through the Salinas Grandes, at the entrance and exit to the road that cuts through the salt flat, it was impossible to miss four large Orocobre company billboards. They displayed large salt-flat landscape photograph backdrops with large words like RESPETO (respect), INTEGRIDAD (integrity), and HONESTIDAD

(honesty) (see Photograph A4 and A5). In Uyuni in Bolivia, interestingly, there were very few signs of the government's lithium pilot plant. Notably, although I tried to visit the mining operations, I was never able to get any official permission or trip arranged to visit either lithium mining facility in Argentina or Bolivia.

3.4.2 Social and political observations

Throughout my fieldwork, I looked for social and political clues about the areas I was visiting. It was clear through observation while travelling through southwestern Bolivia that the country was experiencing an intensely political time. All across the towns of Potosí Department there was political graffiti saying "Yes", often with some sort of qualifier, such as "Evo for Development" or "Together for Him, Yes!" (Photograph B5). This graffiti was a campaigning tactic deployed by the ruling MAS Government to encourage a "yes" result in the referendum that would permit Evo Morales to run for a fourth term in 2020. The graffiti was notable in the south by its regular turquoise-and-red colour scheme (indicating that it was put there by MAS organisers). In other parts of the country there was less regularity, and in some places, like on the outskirts of Cochabamba, unofficial single-word graffiti, "Yes" and "No", battled it out bollard by bollard across a motorway central reservation.

Morales lost the referendum vote by a small margin on 21 February 2016. Fifty-one percent rejected the constitutional amendment. This led to the date of the 21 February 2016 referendum being dubbed "The Day of the Lie" by the government, insinuating that the electorate had "lied" about wanting Morales to run again for President. I saw this phrase, with the #21FDíadelaMentira "hashtag" for social media campaigning on posters around Uyuni town centre, indicating that the region was largely a MAS-supporting area (Photograph B6).

These kinds of observations were helpful to put local informants' responses in

their social context, particularly as regards political affiliations, the types of employment available, and the response to changes in Uyuni and the communities resulting from the tourism boom. This tourism is not perceived positively by everyone, and in some instances served to emphasize relatively severe local poverty. Numerous observations reaffirmed this point. In the "train graveyard" outside Uyuni, for example, there was graffiti reading "TOURIST GO HOME" (see Photograph B7). The benefit for locals of the continuous tourism was questionable. During a tour I took early on to see the Salar de Uyuni, my tour-mates were disparaging of the opportunity to buy souvenirs or snacks in Colchani, wanting only to get out on to the *salar* to take photos. This indicated one of the many probable difficulties of selling souvenirs as a replacement livelihood for salt gathering. It was through these observations of the tourism in Bolivia that I came to understand that working in tourism was seen by many of the residents as being inferior to working in mining, or indeed in the traditional salt-gathering cooperatives in Colchani.

In Argentina, there were clear signs of a society divided on racial and class lines, with the southern city of Salta larger and more well-kept than its equivalent capital in Jujuy to the north. I observed that Jujuy is a more indigenous or *mestizo* province, with indigenous housing projects located in San Salvador de Jujuy and in the Valley of Humahuaca. In the high plains, the villages become smaller and were almost entirely indigenous, with the exception of business-owners and local religious elites. San Salvador de Jujuy is, like Salta, a colonial town, with monuments and museums to colonial history and settlement. Both lithium companies operating in Jujuy have local headquarters in large residential properties in leafy suburbs in Salta and San Salvador de Jujuy.

3.5 Interviews

Mapping community leaders' and members' understanding of the lithium projects and their relationship to them was an essential part of the research for this thesis. Semistructured interviews enabled me to evaluate whether respondents' experiences contradicted law, stated policy and official government accounts. This section outlines my process for interviewing some of the community and "elite" key actors, before reflecting on the challenges of access to the region and some of these actors.

3.4.1 Using interviews in human rights research

The interviews are central to this study because rights-holders' experiences are necessarily the "data" through which we can understand the extent to which human rights have been fulfilled. To make the responses to community interviews in both countries comparable, semistructured interviews were conducted with the same interview guide across both community sites (see Appendix B). When using an interview guide, "the interviewer asks key questions in the same way each time and does some probing for further information".[282] I ensured I had as full an understanding of my interviewees' positions ahead of time as possible to generate informed follow-up questions.

Semistructured interviews with officials, state and corporate, were composed in advance according to a topic guide generated from preliminary documentary research and discussions with academic and NGO contacts. In each interview the final question was to ask whether the respondent knew anyone who might be willing to talk to me on these topics. This is called "snowball sampling".[283] This method of sampling, however,

[282] Sue Arthur and James Nazroo, "Designing Fieldwork Strategies and Materials", in ed. Ritchie and Lewis *Qualitative Research Practice: A Guide for Social Science Students and Researchers*.
[283] Jane Richie, Jane Lewis and Gillian Elam, "Designing and Selecting Samples", in Ritchie and Lewis *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, p.107.

often generated leads to people who may not have been willing or able to participate (or could not be found), which is when "opportunistic sampling" was useful. This is where the sample responds to unforeseen opportunities that arise during the fieldwork.[284]

I was very concerned with the comfort and safety of the participants in my study, many of whom likely had entirely different world views to my own and faced difficulties I could never fully understand. I was also aware of my immense privilege at being able to travel so far to conduct my research, and I tried hard to consider how this privilege might be perceived by my participants. I was keen to mitigate any bias through a variety of strategies to ensure typically under-represented voices were heard and understood. For example, the interviews were ordered not just by ease of access, but also by position within the debate: I interviewed leaders from the communities before interviewing the company communications and community relations managers. This went some way towards mitigating the potential for the official and "expert" pro-lithium views to overshadow the complex experiences of neighbouring communities within the research.

3.4.2 Interviewing key actors in communities

In Argentina I interviewed: five community members or leaders (two from the Salinas Grandes basin, three from the Olaroz basin); a representative from the Susques anti-lithium mining campaign group the Colectivo Apacheta; and the lawyer for the 33 Communities who worked on the Supreme Court case. While attempts were made to interview a representative balance of community leaders in this region (where women and younger people were elected as representatives as well as middle-aged men), this

[284] Arthur and Nazroo (2003), "Designing Fieldwork Strategies and Materials", p.78–79.

was difficult because of the low interest in being interviewed in this region (discussed later in the chapter). A table of key interviewees is available on p.124.

In Bolivia I interviewed: a salt mining cooperative association member and salt-gatherer in Colchani; three residents of San Cristóbal, one a former employee of the multi-metal mine; two officials in the Colcha K municipality; one resident of Vila Alota, two of San Agustin (both villages outside of the Nor Lípez province); the president of local union federation FRUTCAS; and one driver working in the Bolivian pilot plant on the Salar de Uyuni near Rio Grande. I was also able to interview numerous shopkeepers and stallholders near the San Cristóbal mine, along the busy tourist route around the Bolivian "southwest circuit". While again many interviews were with men, I had numerous informal chats and a handful of formal interviews with women, who appeared overall more concerned about pollution in our discussions.

Access to informants in the communities in Argentina was negotiated using the names from my list of key actors, the Washington Post article, and the snowball and opportunistic sampling methods. These were often used in combination, requiring me to send additional emails, make phone calls, send WhatsApp messages and knock on doors. For example, I Googled the name of the representative of the 33 Communities of the Salinas Grandes and found his email address on an anti-lithium mining Facebook page, posted by a woman whose profile said she was an employee at Greenpeace Andino (based in Buenos Aires). Thinking that he may not have reliable access to his emails (this assumption was correct – he only had access to his WhatsApp messages for an hour in the morning each day, when I presume he climbed the hill to obtain a signal on his phone), I emailed her using the email format I knew from my previous work there. We messaged about my project, and she offered as much help as she could, giving me phone numbers for the 33 Communities' representative, and later for the

lawyer for the 33 Communities in the Supreme Court case, who I interviewed at the end of my trip.

I deployed the snowball sampling method from my first interview, with the representative from the 33 Communities. This led me to the representative of the Colectivo Apacheta in Susques, a group that is resisting the lithium mining occurring on the Olaroz salt flat. I read the *Kachi Yupi* consultation protocol document very closely before interviewing the representative of the 33 Communities of the Salinas Grandes. Following this interview and my referral, I read up on the Colectivo Apacheta online overnight so I could understand the group's position in advance of speaking with its representative.

In Bolivia, I had learned from reading Calla's chapter in the CEDLA report that the union federation FRUTCAS, which has many quinoa-farming members, was a key actor in the early years of the Bolivian lithium industry. FRUTCAS, or the *Federación Regional Única de Trabajadores y Campesinos del Altiplano Sur* [the Unified (or Sole) Regional Federation of Rural Workers of the Southern Altiplano], is an organisation that works using a union-like structure to represent peasant farmers in the Bolivian region around the south of the Salar de Uyuni. There are around 40,000 people in this region, similar to that of the Argentinean *puna*, and regular FRUTCAS meetings are held in Uyuni. I interviewed the head of FRUTCAS, who was very accommodating even though he was clearly busy, travelling frequently in and out of Uyuni. The FRUTCAS offices were unavailable for us to use (he did not explain why), so we had to conduct the interview in a disused stairwell in a crumbling building near the noisy Uyuni bus terminal.

3.4.3 Overcoming the challenges of access to informants

Although I had managed to arrange to meet the representative of the 33 Communities of Salinas Grandes in advance, and he gave me two names (in Susques and Tres Pozos)

to interview next, it took nearly a whole day of driving to find the Tres Pozos contact, a former community association leader. The moment I did, she was just on her way out to Jujuy in a van, unable to stop to talk with me for more than a few minutes. On her suggestion I requested an interview with the local Salinas Grandes tour guide, who first took us to see the *ojos* and salt mining pools. I eventually found an interview with her online in an article about lithium mining, however.[285]

The Olaroz communities had no visible shops or hostels I could easily visit as a customer. People were rarely out during the day, and due to the unpredictable climate and terrain it was hard to plan travel at dawn and dusk. The houses often seemed locked with not many windows and the doors shuttered up (see Photograph A6). However, if I did see someone walking through the village and I had a name, they would know instantly where they either lived or where you might find them at that moment. In the Olaroz communities I was generally looked upon with some suspicion, except in Olaroz Chico, where I was shown to my interviewee by happy schoolchildren keen to practice their English with me.

In order to visit the quinoa-farming (and mining) communities of Nor Lípez and Enrique Baldevieso in Bolivia I booked a trip in a private-hire jeep to travel in a loop from Uyuni through San Cristóbal, San Agustin, Atocha, Julaca, Colcha K, and Rio Grande, ending back in Uyuni after two full days (see the dotted line on Map 3, and Photograph B3). The driver proved to be a useful informant, indicating how, compared with other work including tourism, mining is looked upon favourably in this region by some as a provider of good jobs and health insurance. He was referring to those in the region that work for the large opencast, hard-metal mine dominating the village of San

[285] Lucila Pellettieri, 'Mining Firms Seek Argentina's "White Gold," But Local Approval Proves More Elusive', News website, Global Press Journal, 19 March 2017, https://globalpressjournal.com/americas/argentina/mining-firms-seek-argentinas-white-gold-local-approval-proves-elusive/.

Cristóbal. He also helpfully introduced me to a FRUTCAS-affiliated farmer keen to invite copper mining into his home village, and I had an interview with the highest official in the Nor Lípez municipality capital of Colcha K, known as the "Capital of Lithium".

In Bolivia, I struggled to find interviewees in the community of Rio Grande, nearest to the Bolivian lithium pilot plant and the eponymous river that discharges minerals into the salt flat (Photograph B9). Numerous men in overalls, who looked like lithium-plant or other evaporate resource workers, driving trucks in and out of the village, were obviously busy and did not want to stop and talk to me at all. Fortunately, on our way back to Uyuni we picked up a worker at the lithium plant to give him a lift and I persuaded him to answer 20 minutes of questions. This was perhaps the most revealing interview, not only because of what he said, but also because he considered the invitation for a very long time and decided to remain fully anonymous, indicating a secrecy policy within the Bolivian state lithium company I had suspected but had been unable to verify.

3.4.4 Interviewing key elite actors in government and companies

In Argentina my key "elite" informants included a geologist at the University of Salta, who had also been the mining minister of Salta in the 2000s; three company community relations managers from Sales de Jujuy and Exar (the two main companies operating on the Olaroz–Cauchari salt flat); the mining minister of Jujuy; a legal counsel for the Mining Ministry in Salta; and the CEO and three staff members at a US lithium mining company based in Salta. My local Spanish teacher acted as a gatekeeper for access to the geologist and the lithium CEO.

In Bolivia my main elite informants were the communications lead for the Bolivian state lithium mining company; a former mining minister of Bolivia; the author of the

CEDLA report's chapter on socioenvironmental impacts of lithium mining in Bolivia and the MAS government-linked Mayor of Uyuni. In his role as gatekeeper, the author of the CEDLA report, Calla, secured the interview with Uyuni's mayor for me, advising me to be aware of his political allegiance to the MAS party when putting forward my questions.

Much of my geological understanding of the Argentinean region came from conversations with Professor Ricardo Alonso, a geologist and former mining minister of Salta Province (which was not involved in lithium at the time of his service in the 2000s). Ricardo was generous with his time and first-hand scientific knowledge, drawing for me (on napkins pulled from the tabletop dispenser in his regular breakfast café) a number of cross-section diagrams of a typical *salar* amid Andean mountains (see Photograph A7). This was very useful to learn ahead of visiting the region by car, where I could apply this knowledge to observe much more clearly how the salt flats and mountain-chains that surrounded them related to each other. The diagrams show a replenishing of minerals from the mountains through rain runoff into the salt lake depressions. As a result, fresh water is, according to Professor Alonso in Salta, very plentiful underground in the *puna*.[286]

The community relations office for Sales de Jujuy was, oddly, in a Salta suburb. The Sales de Jujuy community relations staff were a little reluctant to do the interview when they saw it was a legal study that was examining participation of communities, so they called their media manager to approve the topics I wanted to discuss. I shifted focus to the CSR projects I knew Sales de Jujuy was running in the Olaroz communities, and built rapport using flattery: the CEO of the lithium company in Salta had told me one of the community relations executives I was trying to interview was

[286] Professor Ricardo Alonso. Interview with author, Salta, 10 May 2017.

"excellent at what she does",[287] which I duly repeated during our "informal" recorded conversation. As a result, I managed to get the lead manager and her assistant talking about their community schemes for an hour, and they were both happy to sign the form at the end.

After some difficulty and delays getting in touch with her through a visit to the company headquarters and emails, I visited the community relations lead for Exar at her home in San Salvador de Jujuy. She gave up three hours of her time for me, on a Saturday, and was clearly passionate about the social projects she was launching within the communities. Her interview was revealing in its illustration of a potentially growing rivalry between the companies for community support. She spoke about resistance to lithium as though it was simply unnecessary fear-mongering, calling out the head of the Colectivo Apacheta on the basis of him not being "local enough" to be concerned about lithium mining in the region around Susques. This in turn reminded me that internal migration between the *puna* and valley was common in this region and in Bolivia, out of economic necessity.

The government interviews in Argentina were very easy to set up and conduct. I interviewed the Mining Minister of Jujuy, Miguel Soler, simply by writing him an email using an address found on the ministry website; and a lawyer for the Mining Ministry of Salta, whose contact details I had from Professor Alonso. I also attempted to get an interview with the newly-appointed minister for indigenous affairs in Jujuy, following the interview with the Mining Minister, who gave me her number, but in the end this could not be arranged.

I continuously examined my own political biases during interviews, sometimes even exploiting them to establish rapport with my interviewee. I often mentioned in

[287] CEO of lithium company. Interview with author, Salta, 12 May 2017.

interviews with elite actors, if prompted, that I am not against lithium mining, as long as it is done fairly and with the full participation of local communities in accordance with international law. There were points when my own stances on issues such as climate change, drawn out at carefully chosen moments, helped build rapport and even secure an interview that looked unlikely to happen or that might be cut short. This occurred in Bolivia when interviewing the former head of the state mining company. Conducted over two days, my interviews with Hector Cordova were extremely friendly and informative, but, interestingly, he did not respond to my follow-up messages asking to visit the plant on my way back south to Argentina.

The interviews with officials, conducted towards the end of my stays in both Argentina and Bolivia, were very informative in pulling together the picture of a new industry I had built up over the time spent in the lithium-rich regions of each country. They also gave me insight into how government actors saw their own roles in the negotiations.

3.6. Analysis of fieldwork data and reflecting on challenges and limitations

3.6.1 Transcribing, processing and analysing the data collected

The recordings and interview notes were transcribed over three months in the summer of 2017. With the six substantial field reports detailing each section of the trip; many thousands of photos; maps, tickets, receipts, and scribbled-on paper napkins, I had amassed an almost unmanageable amount of material with which to work.[288] My six field reports alone ran to 40,000 words, documenting all manner of details, such as my respondents' reactions to some of my questions.

To inform these reports I kept a fieldwork diary/notebook, and through this I was

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able to reflect on the way the research was unfolding in real time. By keeping these initial reflections and referring back to them as later interviews and events occurred, I was able to begin to see patterns – for example in the difficult of accessing communities working closely with companies in Argentina, or accessing company executives to talk on the topics related to my research. I was also vigilant, both during my interview requests in the field and while transcribing completed interviews, for evidence that my presence and perceived perspective on the lithium situation may have caused my interviewees to adapt their answers based on their perceptions of me as a researcher. Furthermore, I mitigated basing my conclusions on potentially unreliable information by finding other research to corroborate such facts.

Following my transcription period and a period of reviewing, editing and tidying up the documents, I had a good understanding of the material ready for the analysis stage to begin. Checking authenticity, credibility, representativeness and meaning of evidence obtained is a valuable part of the data analysis process,[289] and this was done throughout the fieldwork and reflected upon in the final analysis of the data gathered.

The transcripts and typed-up interview notes were "coded" into six broad themes with the following headings: Environment, Indigeneity or Regional Identity, Law and Information, Mining and Industry, and Government.[290] This coding system helped me to see patterns emerge and generate the key findings of the study.[291] The analysis stage was both challenging and exciting, requiring "a mix of creativity and systematic searching, a blend of inspiration and diligent detection".[292]

289 John Scott, *A Matter of Record: Documentary Sources in Social Research* (London: Polity, 1998).
290 Spencer, Ritchie and O'Connor (2003) in in Ritchie and Lewis (eds), *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, p. 202.
291 David Silverman, *Qualitative Research: Theory Method and Practice*, (Sage: London, 2004); Cloke et al *Practising Human Geography.*
292 Spencer, Ritchie and O'Connor, (2003) "Analysis: Practices, Principles and Processes", in Ritchie and Lewis (eds), *Qualitative Research Practice: A Guide for Social Science Students and Researchers*, p.199

Despite having had training on Nvivo, I decided to hand-code the transcripts (and selections from my fieldnotes and notebook) using highlighter pens in six colours. This decision was made to ensure context for quotations was not lost, and to provide quick visual access to the elements I needed for writing up.[293] This follows from the understanding that categories and entities are not fixed; that we could always be working differently with any aspect of the research material at any point; and "that it is not somehow 'natural' or automatically correct to be identifying certain ones rather than others" within any stage of qualitative research.[294]

Hand-coding and viewing many or all of the lines, pages and paragraphs simultaneously (spread out on the floor, for example) was very helpful not just to bring out the richness of the data, but also to be able to "stand back" and see very clearly the types of topics different categories of informants spoke about. I also had easy access to the more unexpected comments, or moments within interviews that may have been overlooked had I computerised the data. I then mapped key responses onto thematic sheets, from which I was able to generate key findings around which to build this thesis. This method of thematic analysis, followed up with more research into environmental participation in the states concerned, gave me a clear picture of indigenous community consultation and participation in the lithium mining industries in Argentina and Bolivia.

3.6.2 Reflections on the challenges of fieldwork and the limitations of the study

The challenges of conducting this research have resulted in a number of limitations to the study as a whole, but these are also revealing in nature. Limitations emerged continually as the preliminary documentary work and fieldwork progressed. It was

293 *Practising Human Geography.*
294 *Practising Human Geography.*

always a struggle to find reliable information, such as independent environmental information about lithium mining, or accurate information about how lithium was or could be mined. In particular, documents with any detail designating the management of relationships with communities in the form of contracts or environmental impact assessments were unavailable. My internet search techniques went some way to mitigating this issue, as I could always be sure I had access to any information made publicly available online. Moreover, the lack of information about lithium mining actually becomes part of the key findings, which will be presented in Chapter 7.

Interviewing scores of representatives from all the communities was not possible, given the difficulties I had travelling in the region and due to financial, time and health constraints. In the communities near Olaroz by Susques, while still recovering from illness, I faced two outright refusals to be interviewed. One community association president refused an interview saying he had had problems following an interview that he gave to a reporter for the Washington Post article. I told him he could remain anonymous, but he again politely refused. He gave me a name in the next village, however. The other said he needed to ask the community first before proceeding, and that I had just missed the community meeting at which this would have been possible by one day. Despite giving my email and phone number, attempting contact through another community member on email, and plans to return for a potential second visit to the Susques area, the opportunity was clearly lost. This was obviously disappointing, but it was an opportunity for me to reflect on the fact that I was an outsider, and that granting me access might prejudice their relationships with the companies, as the first prospective interviewee had made clear through his refusal. It seemed that giving interviews to the Washington Post reporters had engendered a cautious approach.

I also struggled to interview everyone I wanted to in La Paz, mainly due to time

constraints and visa restrictions. Although I was able to secure an interview with the communications director of the Bolivian state lithium company, I was unable to interview anyone higher up in the company, COMIBOL or the Mining Ministry, despite the potential for introductions from elite contacts and a visit to the plant from the former head of COMIBOL. This also serves to indicate that there is perhaps growing secrecy around the project, something confirmed within my interview with the Bolivian state lithium company's communications director, who said foreign journalists were no longer permitted entry to the plant.

The key limitation of this study therefore is likely its broad focus and the generalisation of community views for the purpose of comparison between two countries' lithium extraction plans. I have been able to mitigate these generalisations by fully triangulating my interview data with the preliminary data gathered, and using as much secondary material as possible from other researchers to test and corroborate my findings. Research into numerous aspects of lithium mining is fortunately becoming more readily available as journalists and academics publish results from their own studies, and I use these throughout to weigh up my findings.

Despite these limitations, the study still provides a range of perspectives not just on lithium mining, but on mining as a source of work or environmental damage; the role of government in law and in practice; responses to the impacts of climate change; and the position of traditional communities and their own economic and environmental practices, and how these are changing.

This "snapshot" of attitudes is particularly valuable while Bolivia and Argentina are likely on the cusp of a lithium-driven resource boom, with consequences for the local environment of the Andean regions and the indigenous peoples that live there. Another limitation is however related to exactly this idea of the study of a "snapshot".

Because the lithium industry is growing at such a pace, it is likely that this research is likely to be quickly outdated. Political and financial upheaval in either country examined could change the trajectory of the lithium mining industries. For this reason, the final concluding chapter of this thesis, Chapter 8, outlines the broader context within which this research sits, and makes recommendations for future avenues of research as regards lithium mining that this study has identified.

Conclusion

As this chapter has documented, this thesis is based on preliminary qualitative documentary, online, legal and academic research undertaken between 2015 and 2018, with a six-month period of fieldwork for observation and interviewing between January and June 2017. I benefitted from research from local journalists and academics before, during and after my fieldwork to corroborate my findings. I wrote six field reports totalling over 40,000 words to record my exchanges and observations and returned these initial findings to my supervisors. In addition, I have thousands of photographs and a full fieldwork diary.

Visiting the remote regions enabled me to fully appreciate the extent of the communities' reliance on their environment, whether through salt-gathering, quinoa-farming or even tourism in the case of Bolivia. Furthermore, as the communities were generally very far away from centres with access to shops with newspapers or even televisions, it was clear that even publicly-available information about lithium mining would be difficult to access for community-members. This helped in assessing access to environmental information, a key component of environmental procedural rights which will be examined in the next chapter.

During my conversations across the two regions, respondents alluded regularly to their having suffered a three-year drought, and the lack of reliable ways to access fresh

water supplies. Although it was difficult to travel in the Andean high plains to these communities, it was only through these visits to interview people and observe the environment that I came to understand fully the implications of environmental damage or water scarcity on communities. These responses, triangulated with prior and emerging research, have enabled me to draw conclusions about the socioenvironmental implications of lithium mining in the high Andean plains for Argentina and Bolivia on indigenous communities. These conclusions in turn enables this study to compare the two countries' regimes and relations between indigenous communities and the state in respect of extraction. The thesis is therefore the first to comprehensively undertake a comparison of compliance with indigenous environmental rights to participation and consultation in the lithium industries of Argentina and Bolivia.

Table 1: List of key interviewees and informants in Argentina and Bolivia

			Interviewee descriptor	Location + sex/age	
ARGENTINA	1	Community actors	Former community association leader	Olaroz Chico, Susques	M/40s
	2		Former community association leader	Puesto Sey, Susques, Jujuy	M/40s
	3		Former community association leader	Pastos Chicos, Susques, Jujuy	M/20s
	4		Lawyer for the 33 Communities, Alicia Chalabe	San Salvador de Jujuy	F/40s
	5		Representative from the 33 Communities	El Moreno, Salinas Grandes, Jujuy	M/40s
	6		Representative from Colectivo Apacheta	Susques Town, Jujuy	M/40s
	7		Salinas Grandes salt gatherer & tour guide	Salinas Grandes, Jujuy	M/30s
	8	Elite actors	CEO of lithium company	Salta	M/40s
	9		Community relations executives at lithium company (x 2, 1 white/1 mestizo)	Salta	F/30s & 40s
	10		Community relations executive at lithium company	San Salvador de Jujuy	F/40s
	11		Legal Counsel, Salta Mining Ministry	San Salvador de Jujuy	M/30s
	12		Salta Geology Professor and former Salta Mining Minister	Salta	M/50s
	13		Community relations for lithium company	Salta	F/20s
	14		Environmental engineer for lithium company	Salta	M/30s
	15		Former environmental engineer for lithium company (friend of gatekeeper)	Salta	M/30s
	16		Spanish teacher (Gatekeeper)	Salta	F/40s
BOLIVIA	17	Community actors*	President of rural union federation	Uyuni	M/40s
	18		Colcha K regional authority official, head of productive development	Colcha K, Nor Lipez	M/40s
	19		Truck driver in Llipi plant. Interview with author	Rio Grande, Nor Lipez	M/40s
	20		Market seller	Uyuni	F/20s
	21		Elderly women in market square	Colcha K, Nor Lipez	F/60s
	22		Local woman	Vila Alota	F/40s
	23		Driver	Southwest circuit	M/20s
	24		San Agustín farmer (FRUTCAS member)	San Agustín	M/40s
	25		Colchani local	Colchani	M/30s
	26		Anonymous salt miner	Colchani	M/50s
	27		Local shopkeeper near San Cristóbal	near San Cristóbal	F/50s
	28		Mayor of Uyuni	Uyuni	M/30s
	29		Local official in Uyuni	Uyuni	M/50s
	30		Local business owner (originally from La Paz)	Uyuni	M/40s
	31		Local communications ministry rep (Mayor of Uyuni's brother)	Uyuni	M/30s
	32		Ricardo Calla Ortega, CEDLA report author	La Paz	M/50s
	33		GNRE Communications Director	La Paz	M/40s
	34		Former head of COMIBOL	La Paz	M/
	35		Economics lecturer (author of a report)	Cochabamba	F/

*There is a more blurred distinction between community actors and elites in Bolivia. Some of my Uyuni interviewees may be considered political elites, but this table is more concerned with their location in relation to the lithium operations.

Photographs Argentina (A1–A10)

Photograph A1: The road from San Salvador de Jujuy and the Quebrada de Humahuaca Valley to the Salinas Grandes and Susques regions of Jujuy, Argentina

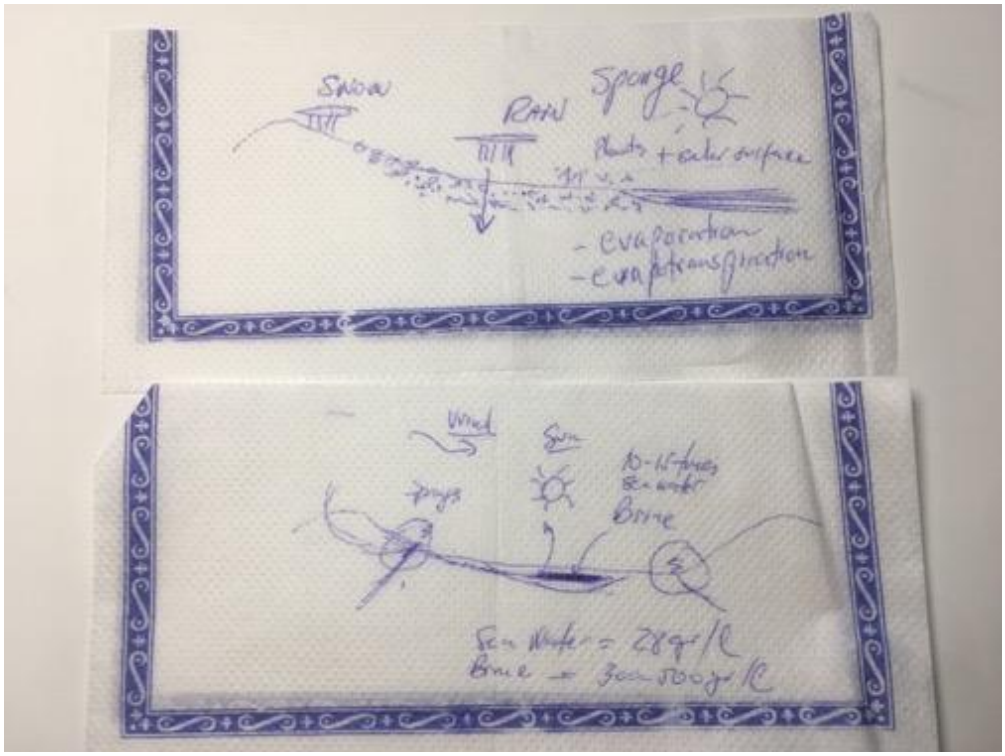
Photograph A2: A large "eye" on the Salinas Grandes salt flat. The brine is over 10 times saltier than seawater.

Photograph A3: An observation of clouds forming, perhaps by evaporation, from a hill looking southwest from Susques towards the Olaroz–Cauchari salt flat where lithium extraction is underway.

Photograph A4: Billboard on the roadside with Salinas Grandes in the background reading "INTEGRITY"

Photograph A5: Billboard on the roadside looking towards Susques, showing the Orocobre logo clearly

Photograph A6: A typical village in the Susques region, where companies are mining on the Olaroz salt flat.



Photograph A2: Diagrams drawn for me by a prominent local geologist in Salta showing the process of lithium mining from brine.

Photograph A8: The billboard signalling the way to the Sales de Jujuy lithium plant on the Olaroz salt flat.

Photograph A9: Anti-lithium/mining graffiti on the mountainside road up to the Salinas Grandes and Susques.

Photograph A10: Sales de Jujuy-branded library in Olaroz Chico.

Photographs Bolivia (B1–B11)

Photograph B1: Uyuni clock tower and town hall building.

Photograph B2: Board of information about salt mining in Colchani's "Salt and Llama museum"

Photograph B3: Local tourist map with the drawn-on line depicting our route


Photograph B4: The first quinoa of the season in 2017, and after a long period of yield-limiting drought, being photographed by a local San Cristóbal mineworker on his lunchbreak.

Photograph B5: Roadside campaigning messages from the ruling MAS Party, promoting support for a change to the 2009 Constitution allowing President Morales to run for a third consecutive term.

Photograph B6: Day of the Lie posters suggesting the result of the 21 February 2016 referendum was a "lie".

Photograph B7: Tourists climbing over remnants of railway infrastructure in Uyuni's "train graveyard" daubed with "TOURIST GO HOME" graffiti.

Photograph B8: Colchani village, on the edge of the Salar de Uyuni. Heavy rains and heavy vehicles taking tourists to see the resulting "mirror" on the salt flat impact the roads through the village.

Photograph B9: The sign for Rio Grande, the river that discharges into the salt flat and the name of the village closest to the Llipi pilot plant on the Salar de Uyuni

Photograph B10: School displays for the 23 March 2017 Bolivian "Day of the Sea"

Photograph B11: Bolivian Day of the Sea parade in Uyuni

CHAPTER 4 LAW: THE ENVIRONMENTAL HUMAN RIGHTS OF INDIGENOUS PEOPLES IN MINING PROJECTS: AN ANALYSIS OF THE LAW

Introduction

The focus of this thesis is on the lithium mining industry developing on three salt flats: two in Argentina (Salinas Grandes and Olaroz–Cauchari) and one in Bolivia (the Salar de Uyuni). In particular, I focus on the environmental human rights of these communities. At the heart of their rights is that of participation in decision-making over mining which is likely to affect them and their lives. This includes decisions made by mining companies and state authorities that will affect their environment and land they occupy and use.

The aim of the chapter is to analyse participatory rights of indigenous communities in matters affecting the environment in which they live. To establish the extent of participation afforded to indigenous peoples in decision-making necessitates a dual focus on environmental rights to participation and, more specifically, indigenous peoples' participatory rights under international law. This chapter analyses the international and regional human rights law applicable to the communities living around the lithium-rich salt flats of Argentina and Bolivia. The next two chapters will examine national law and observed compliance on the ground in each country to evidence if those rights are being effectively fulfilled in practice.

The chapter is split into three sections. The first section explains how environmental human rights are conceptualised in international law, focusing on "procedural" environmental rights: a subset of environmental human rights law. The

second section will analyse indigenous human rights in international law, including the right to participate in matters affecting the environment in which they live. This analysis necessitates drawing out the link between indigenous collective land rights, cultural rights and the environmental human rights examined in the preceding section. The third section focuses more specifically on examining indigenous peoples' rights to participation and consultation. It is here that the concept, peculiar to indigenous peoples' rights, of the right of "free, prior and informed consent" (FPIC) is explored fully.

4.1 Participatory environmental rights in international human rights law

Since the late 1980s steps have been taken to identify the link between a healthy environment and the realisation of human rights to life, health, food and water, among others.[295] While a number of these rights have been "greened' to take account of environmental dimensions of those rights, there is no universal "substantive" environmental human right, for example to health, in international human rights law (IHRL).[296] However, "procedural" environmental rights, which relate to participation in decision-making in society generally (such as casting a vote in an election), have been deduced from key human rights treaties to build a foundation for their provision. Procedural rights were originally derived from Article 19 relating to the right to freedom of expression and to receive information, contained in both the 1966

[295] David R Boyd, The Environmental Rights Revolution: A Global Study of Constitutions, Human Rights and the Environment. (Vancouver: University of British Colombia Press, 2012).
[296] John H Knox, Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, A/HRC/37/59, January 24, 2018. A distinction should be made between International Environmental Law, and environmental rights implied within International Human Rights Law. For more on this distinction, see Dinah Shelton, "The Environmental Jurisprudence of International Human Rights Tribunals", in Romina Picolotti, and Jorge Daniel Taillant, (eds) *Linking Human Rights and the Environment* (Tuscon, AZ: The University of Arizona Press, 2003).

International Covenant on Civil and Political Rights,[297] (ICCPR) and International Covenant on Economic, Social and Cultural Rights (ICESCR).[298] Procedural environmental rights contain the "three pillars of participation", which are 1) the right of access to environmental information, 2) the right to participate in environmental decision-making, and 3) the right of access to justice.[299] These provisions are valuable in enabling participation in decision-making in matters affecting a citizen's own immediate environment (such as through planning consultations or community meetings).

These rights are increasingly important as the environment continues to be degraded through industrial exploitation of land and natural resources,[300] and the impacts of climate change.[301] This first section examines participatory environmental rights in international human rights law, then more specifically focuses on the "three pillars" of procedural environmental rights.

4.1.1 Environmental rights in international human rights law

Since the mid-twentieth century the emergence of many international and regional human rights treaties and strong mechanisms of ensuring compliance has had significant influence on the international legal order.[302] Once a state has ratified a

297 UN General Assembly, *International Covenant on Civil and Political Rights (ICCPR)*, 16 December 1966, United Nations, Treaty Series, vol. 999, p. 171.
298 UN General Assembly, *International Covenant on Economic, Social and Cultural Rights (ICESCR)*, 16 December 1966, United Nations, Treaty Series, vol. 993, p. 3.
299 While procedural environmental rights are explicit in the *Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters* (Aarhus Convention) 2161 UNTS 447; 38 ILM 517 (1999), the Aarhus Convention only applies within Europe. Elsewhere in international human rights law (IHRL) they derived from Article 19 ICCPR and of the ICESCR.
300 Elena M Blanco and Jona Razzaque, *Globalisation and Natural Resources Law: Challenges, Key Issues and Perspectives*, Cheltenham, UK. (Northampton, MA, USA: Edward Elgar, 2011).
301 IPCC, *Climate Change 2014: Synthesis Report*. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC: Geneva, 2014. See also Boyd, The Environmental Rights Revolution; Blanco and Razzaque, Globalisation and Natural Resources Law; Alexander Gillespie, *The Illusion of Progress: Unsustainable Development in International Law and Policy* (London: Earthscan, 2002).
302 Martin Dixon, Robert McCorquodale and Williams, Sarah, *Cases and Materials on International Law* (Oxford: Oxford University Press, 2011). See Shelton, "The Environmental Jurisprudence of International Human Rights Tribunals" and Romina Picolotti, "Agenda 21 and Human Rights: The Right to Participate" in Picolotti, Romina and Taillant, Jorge Daniel (eds) *Linking Human Rights and the Environment*, (Tuscon, AZ: The University of Arizona Press, 2003).

legally-binding human rights instrument, and that instrument enters into force, the state is obliged to give effect to these rights within their national laws.[303] A system of regional courts and monitoring bodies helps in ensuring that international and regional treaty rights are effective in the domestic state context. More specifically in the regional context of Latin America, the Inter-American Court of Human Rights (IACtHR) offers a "court of last resort" for those facing violations of their human rights.[304]

Environmental rights in international law are generally understood in terms of substantive and procedural environmental rights, both of which function to protect other human rights.[305] ICESCR Article 12, which provides for a right to the "highest attainable standards of physical and mental health",[306] for example, suggests that "steps to be taken by the states Parties to the present Covenant to achieve the full realisation of this right shall include […] The improvement of all aspects of environmental and industrial hygiene",[307] indicating aspects of a right to a healthy environment. Furthermore, it is understood within international legal regimes that a degraded environment affects numerous other rights, such as to water and food, that can impact upon rights to health and life.[308] Thus the "right to a healthy environment" has emerged because of the recognition that a healthy environment is a necessary basis from which

303 ICCPR Art.2.2 states that states party to the Covenant must undertake the "necessary steps, in accordance with its constitutional processes and with the provisions of the present Covenant, to adopt such laws or other measures as may be necessary to give effect to the rights recognized in the present Covenant."
304 Boyd, The Environmental Rights Revolution, p.78.
305 Shelton, "The Environmental Jurisprudence of International Human Rights Tribunals", p.1; Karen Hulme, "Environmental Law and Human Rights" in Sheeran, Scott and Rodley, Nigel, Routledge Handbook of International Human Rights Law (London and New York: Routledge, 2013); Picolotti, "Agenda 21 and Human Rights: The Right to Participate"; Alan Boyle, "Human Rights or Environmental Rights? A Reassessment" *Fordham Environmental Law Review* 12 pp.471–511, 2007, p.471.
306 ICESCR, Article 21.
307 Ibid, Article 21 2(c).
308 Rights to housing, food, life and protection of the family (private life) are found in the 1966 Covenants. Rights to housing and food are found in ICESCR, Article 11; the right to not be deprived of subsistence is provided in Article 1.2 of both ICESCR and ICCPR. Rights to development are not explicit but have been implied from within these rights in the Covenants, informing the 1986 *Declaration on the Right to Development*, General Assembly, *Declaration on the Right to Development : resolution / adopted by the General Assembly*, 4 December 1986, A/RES/41/128.

the achievement of most other human rights is possible.[309]

Some regional human rights systems have gone further, and have included a substantive right to a healthy environment, such as the Inter-American regional system. However, while the San Salvador Protocol includes an iteration of the right to a healthy environment at Article 11,[310] several other articles appear to weaken it, according to Boyd.[311] In particular, not all the human rights in the Protocol are directly justiciable before the Inter-American System, for example the many economic and social rights – including Article 11.[312] Thus, petitions to the monitoring bodies of the Inter-American system need to rely on other, justiciable rights, such as the right to life (Article 4) and the right to property (Article 21), of the American Convention on Human Rights (ACHR). The right to property, in particular, has proven to be the most relevant right for the claims of indigenous peoples to realise a healthy environment (see section 4.1.2). Although not directly justiciable at the Inter-American Court, all the rights in the San Salvador Protocol must still be implemented by state parties. Furthermore, only 15 of the 24 parties to the ACHR have ratified the Protocol,[313] but this does include both Argentina and Bolivia.[314]

A 2017 Advisory Opinion requested by Colombia of the IACtHR affirmed the value of the right to a heathy environment. The Court

> recognized the existence of an irrefutable relationship between the protection of the environment and the realization of other human rights, due to the fact that environmental degradation affects the effective enjoyment of other human

309 Hulme, "Environmental Law and Human Rights"; Boyd, *The Environmental Rights Revolution*.
310 Organization of American states (OAS), Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights ("Protocol of San Salvador"), Article 11.
311 Ibid; Boyd, The Environmental Rights Revolution.
312 Protocol of San Salvador.
313 Boyd, *The Environmental Rights Revolution*, p.85.
314 Ratifications of the Additional Protocol to the American Convention on Human Rights in the Area of Economic, Social and Cultural Rights ("Protocol of San Salvador"), accessed 2 January 2018, http://www.cidh.oas.org/Basicos/English/Basic6.prot.sn%20salv%20Ratif.htm

rights.[315]

Furthermore, the Advisory Opinion acknowledged the common classification of "environmental rights" into two groups. The first are substantive, as outlined above, and the second are procedural, which the Court described as:

> the rights whose exercise contribute to better environmental policies, also identified as procedural rights (such as the rights to freedom of expression and association, to information, to participation in decision-making and to an effective remedy).[316]

This thesis is concerned with both classifications, but, given the indigenous profile of the communities in the vicinity of the salt flats upon which lithium mining is proposed, and the early nature of the industry in Argentina and Bolivia, procedural rights are the central focus.

As suggested by the quotation above, contemporary thinking on environmental rights increasingly acknowledges the importance of information and participation for the achievement of better environmental policies. In 2018, the UN Special Rapporteur on Human Rights and the Environment, John H. Knox, released a set of 16 Framework Principles on human rights and the environment.[317] Like the Colombia Advisory Opinion, he extrapolated the right to a healthy environment from within the human rights system, making clear links between the environment and human rights – some of which are binding obligations via other instruments. These Framework Principles include clear procedural environmental human rights, from state provision of "education and public awareness on environmental matters" (Principle 6), to explicit

315 Inter-American Court of Human Rights (IACtHR), Advisory Opinion OC-23/17, " Environment and Human Rights", OC-23/17, November 15, 2017.
316 Ibid.
317 John H Knox, Report of the Special Rapporteur on the issue of human rights obligations relating to the enjoyment of a safe, clean, healthy and sustainable environment, A/HRC/37/59, January 24, 2018.

requirements for human rights impacts assessments of proposed projects (Principle 8) and effective public participation in decision-making (Principle 9). Principle 15 is concerned exclusively with clarifying state obligations to indigenous peoples and members of traditional communities, and includes a specific requirement for "[c]onsulting with them and obtaining their free, prior and informed consent before relocating them or taking or approving any other measures that may affect their lands, territories or resources".[318] This acknowledgment serves to indicate how important consultations and FPIC are for indigenous communities, and how interrelated procedural rights to education and public participation are to the enjoyment of environmental human rights generally.

According to Christel et al, procedural environmental rights are "most comprehensibly defined by the 1994 Ksentini Report, later on incorporated into the 1998 Aarhus Convention".[319] Fatma Zohra Ksentini, who was at the time a Special Rapporteur in the UN Sub-Commission on Prevention on Discrimination and Protection of Minorities working on human rights and the environment, wrote the report as a "review of further developments in the field with which the Sub-Commission has been concerned".[320] The report for the Sub-Commission, which was instrumental in developing the framework for indigenous rights law, contains chapters on indigenous peoples and other groups vulnerable to environmental change. There is therefore also a very clear historical link between indigenous and minority rights and

[318] Ibid.
[319] Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, June 25, 1998, 38 ILM 517 (entered into force October 30, 2001) [hereinafter Aarhus Convention]. See Christel, Lucas G. and Gutierrez, Ricardo A. "Making Rights Come Alive: Environmental Rights and Modes of Participation in Argentina", *Journal of Environment & Development*, Vol. 26(3) 322–347, 2017, p.328
[320] Fatma Zohra Ksentini, (1994) Review of further Developments in field with which the Sub-Commission on Prevention of Discrimination and Protection of Minorities has been concerned, Human Rights and the Environment, E/CN.4/Sub.2/1994/9, 6 July 1994. This report was sadly abandoned and ignored, but its use in the development of environmental rights generally should be noted.

environmental rights from the earliest years of their conceptualisation by the UN.

Article 19 of the 1948 Universal Declaration of Human Rights states that "[e]veryone has the right to… receive and impart information and ideas".[321] This provision was subsequently also included in ICCPR Article 19 of ICCPR:

> 1. Everyone has the right to freedom of thought and expression. This right includes freedom to seek, receive, and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing, in print, in the form of art, or through any other medium of one's choice.[322]

The 1969 American Convention on Human Rights (ACHR), for example, with 24 states parties in the region, echoes these words in its Article 13 on "Freedom of thought and expression", which also provides "the freedom to seek, receive, and impart information".[323] Rights under the ACHR are enforceable by the quasi-judicial Inter-American Commission on Human Rights (IACHR), which can refer cases to the Inter-American Court of Human Rights (IACtHR).[324] Numerous IACHR and IACtHR reports and judgments form a large body of case law, with many relating to the environmental participation rights of indigenous peoples.[325]

For example, oil exploration over a number of years in Ecuador's Oriente region led to contamination of water, air and soil and consequent ill health across the indigenous Kichwa people of the region. The IACHR has the authority to examine the human rights situation of members of the Organisation of American' States, and it concluded in a report on the situation in 1997 that "[c]onditions of severe environmental pollution, which may cause serious physical illness, impairment and suffering on the part of the local populace, are inconsistent with the right to be

321 UN General Assembly, *Universal Declaration of Human Rights*, 10 December 1948, 217 A (III).
322 ICCPR, Article 19.
323 Organization of American States (OAS), *American Convention on Human Rights*, "Pact of San Jose", Costa Rica, 22 November 1969.
324 Clara Sandoval, "The Inter-American System and Approach" in Sheeran and Rodley, *Routledge Handbook of International Human Rights Law*, p.427
325 Shelton, "The Environmental Jurisprudence of International Human Rights Tribunals"; Boyle "Human Rights or Environmental Rights".

respected as a human being".[326] The Ecuador report reinforces concepts of procedural environmental rights generally, stating that "[t]he quest to guard against environmental conditions which threaten human health requires that individuals have access to: information, participation in relevant decision-making, processes, and judicial recourse."[327] Furthermore, many cases have been brought against the key oil company, Texaco, acquired by Chevron in 2001, by indigenous communities living with the pollution from their projects, one in which the company was fined USD$19 billion in 2012 – the largest in damages ever demanded.[328] In 2003 the IACHR filed a petition before the IACtHR on behalf of the Kichwa People of Sarayaku against Ecuador. In the landmark 2012 ruling of *Sarayaku v Ecuador*[329] the Court ruled that "the obligation to consult, in addition to being a conventional standard, is also a general principle of International Law".[330]

How rights are defined and developed in one regional system is very influential in the development of rights in other systems. Similar to the IACHR in the Americas is the quasi-judicial African Commission on Human Rights, which has provided significant jurisprudence on environmental rights issues through claims brought to enforce the 1981 African Charter on Human and Peoples Rights.[331] This Charter has provisions for a number of social and economic rights, and is unusual in that it explicitly links these to the environment it its Article 24: "All peoples shall have the right to a general satisfactory environment favourable to their development."[332] It was

326 Inter-American Commission on Human Rights, Report on the Situation of Human Rights in Ecuador, OEA/Ser.L/V/II.96, Document 10, Revision 1 (1997)
327 Ibid.
328 Business and Human Rights Resource Centre, "Texaco/Chevron lawsuits", n.d, accessed 21 January 2019, https://www.business-humanrights.org/en/texacochevron-lawsuits-re-ecuador
329 The Kichwa Peoples v. Ecuador, Petition 167/03, Inter-Am. C.H.R., Report No. 62/04, OEA/Ser.L/V/II.122, doc. 5 rev. 1 (2004)
330 Ibid, para 164.
331 Organization of African Unity (OAU), African Charter on Human and Peoples' Rights ("Banjul Charter"), 27 June 1981, CAB/LEG/67/3 rev. 5, 21 I.L.M. 58 (1982).
332 Ibid, Article 24. The African Charter also stands out in that it addresses the African continent's history of colonialism in its Article 21, which states that states parties to the Charter shall undertake to

in the seminal *Ogoniland* case (2001),[333] heard in the African Commission on Human and Peoples' Rights (ACHPR), that the justiciability of the right to a healthy environment under the African Charter was first adjudicated.[334] The petitioners in the *Ogoniland* case alleged that the government of Nigeria had violated the right to a generally satisfactory environment (Article 24), as well as the right to the best attainable standards of health (Article 16) of the Charter through involvement in the development of oil resources in the territory of Ogoniland (the traditional home of the Ogoni people) in the oil-rich Niger Delta.[335] In the landmark decision the Commission stated that oil contamination had contributed to violations of the rights to food, health and thus life.[336] The decision found that violations of substantive environmental rights to health,[337] environment[338] and food[339] from oil contamination, and government raids on Ogoni villages violating the right to housing,[340] had cumulatively violated the right to life of the Ogoni people.

Furthermore, procedural environmental rights are binding law in Europe, through the 1998 Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters,[341] which develops procedural environmental rights identified as the "three pillars of participation". As suggested by the title of the Aarhus Convention, they are the right of access to

"individually and collectively exercise the right to free disposal of their wealth and natural resources" and "to eliminate all forms of foreign economic exploitation… so as to enable their peoples to fully benefit from the advantages derived from their national resources."

333 *The Social and Economic Rights Action Center and the Center for Economic and Social Rights v. Nigeria*, African Commission on Human and Peoples' Rights, Comm. No. 155/96 2001, para 56.

334 Boyle, "Human Rights or Environmental Rights", pp.474–485.

335 *The Social and Economic Rights Action Center and the Center for Economic and Social Rights v. Nigeria*

336 Ibid, paras 64–66.

337 ACHPR, Article 16; *The Social and Economic Rights Action Center and the Center for Economic and Social Rights v. Nigeria*, paras 50, 52 and 60.

338 ACPHR, Article 24; The Social and Economic Rights Action Center and the Center for Economic and Social Rights v. Nigeria, paras 50 and 52.

339 Ibid, paras 9, 47, and 64–66.

340 Ibid, paras 1–5, 51–52, 60, 64, 65 and ruling.

341 Aarhus Convention.

information, public participation in decision-making, and the right of access to justice. These are the three dimensions of procedural rights commonly used in practice.

These three dimensions are also found within the jurisprudence of the European Court of Human Rights (ECHR), interpreting the Article 8 right to private and family life without interference from public authorities to include broader protections akin to a right to a healthy environment. For example, in *Taskin v Turkey* (2004) the Court held that severe environmental pollution could have a direct effect on family life.[342] In *Guerra vs Italy* (1998),[343] freedom of expression Article 10 was not considered to bestow positive obligations on the government to provide information,[344] however insofar as a lack of information or effecting of procedural rights has an impact on substantive rights, there may be violations of other ECHR rights.

4.1.2 Environmental rights and rights to land in international law

In recent decades the Inter-American System has arguably heard the most cases that relate directly to the substantive environmental rights of individuals or groups to matters concerning the use and enjoyment of lands. These cases are often brought to the Commission or Court as violations of Article 21 of the ACHR, the right to property, which states that "1. Everyone has the right to the use and enjoyment of his property", but that "[t]he law may subordinate such use to the interest of society." Article 21 further states that "2. No one shall be deprived of his property, except upon payment of just compensation, for reasons of public utility or social interest, and in the cases and according to the forms established by law." It does not define what might

342 *Taskin and Others v. Turkey*, *European Human Rights Review* (2006) Vol 42, para 113.
343 *Guerra v. Italy*, 26 ECHR. 357 (1998)
344 Ibid, para 53: "The Court reiterates that freedom to receive information, referred to in paragraph 2 of Article 10 of the Convention, 'basically prohibits a government from restricting a person from receiving information that others wish or may be willing to impart to him' (see the *Leander v. Sweden* judgment of 26 March 1987, Series A no. 116, p. 29, § 74). That freedom cannot be construed as imposing on a state, in circumstances such as those of the present case, positive obligations to collect and disseminate information of its own motion."

constitute public or social interest or the interest of society, but does hold that domestic law may enshrine compulsory purchase orders, for example, to effect public projects on private property.

Of the numerous cases that have upheld the rights of indigenous communities to land using Article 21, the most prominent is probably *Awas Tingni v Nicaragua*.[345] The question for the Court was whether the state had violated the community's right to property (Article 21) by granting timber licences to a foreign company on lands traditionally occupied by an indigenous people.[346] In finding a violation, the case "represented the first time that the Inter-American Court, relying on the San Salvador Protocol, made the connection between environmental degradation and human rights", according to Boyd.[347] Barelli suggests the case shows that "Article 21 also protects the right of the members of indigenous groups to collectively own their ancestral lands", because it "essentially stems from the preliminary recognition of the special relationship existing between indigenous peoples and their land".[348] The Court's ground-breaking interpretation was later confirmed in a number of cases, including *Yakye Axa Indigenous Community v Paraguay* (2005) and serves to indicate the importance of land rights for indigenous peoples in international human rights law.

The right to property is directly linked in a number of cases within the Inter-American regime to environmental rights, despite these not being made explicit within in the ACHR. According to Boyle, both the Inter-American Commission and Court have interpreted that the rights to life, health and property to "afford protection from

345 *Mayagna (Sumo) Awas Tingni Community v Nicaragua*, IACHR Series C No 79, [2001] IACHR 9, IHRL 1462 (IACHR 2001), 31 August 2001.
346 Ibid, para 2.
347 Boyd, The Environmental Rights Revolution, p.97.
348 Mauro Barelli, "Free, Prior and Informed Consent in the Aftermath of the UN Declaration on the Rights of Indigenous Rights: Developments and Challenges Ahead" *International Journal of Human Rights*, 16(1), 2012. pp. 1-24.

environmental destruction and unsustainable development and they go some way towards achieving the same outcome as Article 24 of the African Convention," found to have been violated in *Ogoniland*.[349]

Building on the Ogoni case, furthermore, in a 2010 landmark decision on the case of the Endorois, the African Commission found that the Kenyan government's dispossession of the Endorois people's ancestral land violated their collective right to property, enshrined in Article 14 of the African Charter.[350] The Commission further found that the Kenyan government had violated the Endorois' right to practice their religion, through the eviction of them from their sacred lands, which the Commission found to be essential to their cultural practices.[351] This case affirms that the African regional human rights system draws a clear link between the right to land and the cultural practices of a people. While the Endorois case was the first to link collective property and cultural practice in this way, the IACtHR system was the first human rights body to interpret its Article 21, the right to property, to include the right of an indigenous people to communal lands. I will return to the issue of property rights later when I analyse the rights of indigenous peoples more specifically in 4.2.3.

4.1.3 Participatory rights and the right to a healthy environment

All regional systems recognise the value of participatory rights. However the importance of the three pillars of participation are probably best epitomised in the African regional system in the interpretation of obligations surrounding the substantive right to a healthy environment found in the ACHPR. The *Ogoniland* case states clearly that procedural environmental rights should have been respected to avoid violations of

349 Boyle "Human Rights or Environmental Rights"
350 *Centre for Minority Rights Development (Kenya) and Minority Rights Group International on behalf of Endorois Welfare Council v Kenya*, Comm. No. 276/2003, 2010.
351 Ibid, para 79.

substantive human rights of the Ogoni people.[352] The Communication alleges that the government "withheld from Ogoni Communities information on the dangers created by oil activities"[353] and that "Ogoni Communities have not been involved in the decisions affecting the development of Ogoniland".[354] The Commission's decision states that in order to comply with the spirit of Articles 16 and 24 of the African Charter government action should have facilitated scientific monitoring and environmental and social impact studies, and provided "meaningful opportunities for individuals to be heard and to participate in the development decisions affecting their communities".[355]

The "remarkable" decision, according to Boyle,[356] reaffirms how procedural environmental rights to information and participation could have protected substantive rights to health and environment as provided for in the African Charter. The Commission notes that the Nigerian government "facilitated the destruction of the Ogoniland" by giving "the green light to private actors, and the oil companies in particular, to devastatingly affect the well-being of the Ogonis",[357] in violation of Article 21 of the African Charter, which is the right of peoples to "freely dispose of their wealth and natural resources", and in particular without interference from foreign economic powers.[358] Boyle notes that the Commission is "unique in applying for the first time the right of *peoples* to dispose freely of their own natural resources".[359] The three dimensions of participatory rights will now be analysed.

Right to Information

352 *The Social and Economic Rights Action Center and the Center for Economic and Social Rights v. Nigeria*, para 4.
353 Ibid, para 4.
354 Ibid.
355 Ibid, para 53.
356 Boyle, "Human Rights or Environmental Rights", p.475.
357 *The Social and Economic Rights Action Center and the Center for Economic and Social Rights v. Nigeria*, para 60.
358 ACHPR, Article 21.
359 Boyle, "Human Rights or Environmental Rights", p.475.

According to May and Daly, the right of access to information is considered a "cornerstone of good governance";[360] essential for political participation and the proper functioning of democracy.[361] The right of access to information is found across human rights instruments and in international environmental law. As Shelton states, "[h]uman rights texts, like many international environmental agreements, generally contain a right to freedom of information or a corresponding state duty to inform."[362] Where the right to "seek, receive, and impart information" is a cornerstone of good governance and democratic processes, the right to "seek, receive, and impart information" about environmental matters particularly is what underpins the right to participation in environmental decision-making, working to ensure people are aware of local environmental risks which might impact them. That clear connection between the practice of democracy and freedom of expression, and even of freedom itself, was also made by the Inter-American Court of Human Rights in the case of *Claude Reyes v Chile* (2006).

In *Claude Reyes v Chile* (2006), the Executive Director of an environmental foundation who wanted to "exercise social control regarding the actions of the state entities that are or were involved in the development of the Río Cóndor exploitation project",[363] a timber plant with a number of environmental impacts.[364] Reyes had requested information about the project including contracts, identities of foreign investors, an assessment from Chilean regulators of the investors' suitability for

360 James R May and Erin Daly, *Global Environmental Constitutionalism* (Cambridge: Cambridge University Press, 2015), p.239.
361 Boyle "Human Rights or Environmental Rights", p.498; ARTICLE19, *Access to Information: An Instrumental Right for Empowerment,* (London: ARTICLE19, 2007).
362 Shelton, "The Environmental Jurisprudence of International Human Rights Tribunals", p.3.
363 *Claude Reyes et al v Chile*, IACHR Series C no 151, IHRL 1535 (IACHR 2006), 19th September 2006, Inter-American Court of Human Rights [IACtHR].
364 Ibid, paras 57(7).

involvement in the project and the amounts invested,[365] stating that this was information "of public interest".[366] Having never received the information, and having exhausted domestic remedies, the IACtHR case centred around the right to "seek, receive and impart information" as provided for in Article 13 of the ACHR,[367] and the provision on access to information in the Chilean Constitution.[368] Citing the regional Nueva León declaration, the IACtHR held that the right of access to information is an "indispensable condition for citizen participation".[369] It also cited the 1998 Aarhus Convention,[370] the UN Convention against Corruption,[371] and the Rio Declaration on Environment and Development.[372]

What is interesting in *Claude Reyes v Chile* is the clear connection made by the Court between the practice of democracy and freedom of expression, and even freedom itself. Citing previous judgments and an advisory opinion it states that

> freedom of expression represents, in short, the means that enable the community, when exercising its options, to be sufficiently informed. Consequently, it can be said that a society that is not well informed is not a society that is truly free.[373]

It is clear here the value the Court has placed on the right of information for a community in order that it might "exercise its options". Although the Río Cóndor timber exploitation project was never implemented, the Court found that a violation of the right to information had occurred and ordered Chile to provide the information for

365 Ibid, para 57(13). Cf. Letter dated May 7, 1998, from the Executive Director of the Terram Foundation to the Executive Vice President of the Foreign Investment Committee (file of appendixes to the application, appendix 1(1), folios 40 and 41).
366 *Claude Reyes et al v Chile*, paras 8, 58–81.
367 Ibid, paras 75-77.
368 Constitution of Chile, Article 19.8, cited in *Claude Reyes v Chile*, para 80.
369 Organization of American States, *Nuevo León Declaration*, 2004, available at http://www.oas.org/xxxivga/english/reference_docs/cumbreamericasmexico_declaracionleon.pdf [accessed 2 January 2018], cited in *Claude Reyes v Chile*, para 80.
370 *Claude Reyes et al v Chile*, para 81.
371 UN General Assembly, United Nations Convention Against Corruption, 31 October 2003, A/58/422, cite in Claude Reyes v Chile para 80.
372 Claude Reyes et al v Chile, para 81.
373 Ibid, para 85.

the project regardless. The significance of *Claude Reyes* is its clear focus on the procedural environmental right to information. Similarly, in the European system the procedural right to information has been read into Articles 8 (privacy) and 2 (life), such that:

> Where a State must determine complex issues of environmental and economic policy, the decision-making process must firstly involve appropriate investigations and studies in order to allow them to predict and evaluate in advance the effects of those activities which might damage the environment and infringe individuals' rights and to enable them to strike a fair balance between the various conflicting interests at stake (see *Hatton and Others*, cited above, § 128). The importance of public access to the conclusions of such studies and to information which *would enable members of the public to assess the danger to which they are exposed is beyond question*.[374]

A key consideration therefore is the notion that people need access to the information to assess the level of risk to themselves from industrial facilities and development projects located nearby.

Industrial infrastructure and mining projects are often complex and involve numerous stakeholders, including officials of the state, corporate actors and communities or individuals living on or near the proposed site for development. Mining of primary commodities, in particular, has clear impacts on the environment, which are, due to decades of studying their effects, for the most part foreseeable by state or corporate technicians and engineers. Thus, as part of the design and licensing process for most large industrial projects there is a legal obligation imposed on companies to undertake an Environmental Impact Assessment (EIA).[375]

The requirement for an EIA is common within national environmental law, and is enshrined in many international agreements, such as the Convention on Biological

374 *Taskin v Turkey*, para 119, emphasis added.
375 Ulrich Beyerlin and Thilo Marauhn, *International Environmental Law* (Oxford; Portland, OR: [Munich]: Hart; Beck, 2011), p.230–234.

Diversity[376] and the 1992 UN Framework Convention on Climate Change.[377] According to Sands, an EIA should do three key things:

> First, it should provide decision-makers with information on the environmental consequences of proposed activities and, in some cases, programmes and policies, and their alternatives. Secondly, it requires decisions to be influenced by that information. And, thirdly, it provides a mechanism for ensuring the participation of potentially affected persons in the decision-making process.[378]

Best practice now refers not simply to the projected environmental impacts but to the broader economic and social impacts of proposed projects on the local community (known as an "environmental and social impact assessment").[379]

The presentation of an EIA enables those who are set to be affected by an industry or infrastructural development on account of its impacts on their land, water, or air quality, or use of other resources for their livelihoods to understand what is being proposed. One key challenge for states is in bridging the gap between public understanding of environmental issues and the often very technical or scientific aspects of an EIA.[380] A key criterion, therefore, in undertaking an EIA and in fulfilling the right to information is to ensure that EIAs are provided in formats accessible to participants and stakeholders, otherwise they may have their rights to "freedom of thought and expression" (as provided for by ICCPR Article 19) violated by the state, for failing to disseminate clear information.

Participation in Environmental Decision-Making

376 Article 14, *Convention on Biological Diversity*, 1760 UNTS 79; 31 ILM 818 (1992)
377 Article 4(f) UN General Assembly, *United Nations Framework Convention on Climate Change: resolution / adopted by the General Assembly,* 20 January 1994, A/RES/48/189.
378 Philippe Sands, *Principles of International Environmental Law*. Vol. 2nd ed (Cambridge University Press, 2003).
379 Bianca Dendena and Stefano Corsi, 'The Environmental and Social Impact Assessment: A Further Step towards an Integrated Assessment Process', *Journal of Cleaner Production* 108 (December 2015): 965–77, https://doi.org/10.1016/j.jclepro.2015.07.110.
380 Boyd, *The Environmental Rights Revolution*; Boyle "Human Rights or Environmental Rights; Picolotti, "Agenda 21 and Human Rights: The Right to Participate".

The right to participate in decision-making over environmental matters is directly linked to the procedural right to information, as shown above in the *Ogoniland* and *Claude Reyes* cases. However, what constitutes proper public participation in environmental decision-making remains ambiguous and unsettled.[381] What is clear is that public participation in environmental decision-making over issues that may affect individuals and communities has clear links to the provision of information. The ability to act on that information, as illustrated in the cases above, provides opportunities to secure environmental human rights.

The Aarhus Convention states that public participation shall "include reasonable time-frames for the different phases" including for informing and for the public to prepare and participate effectively during the environmental decision-making (Article 6.3), and that the state shall "ensure that in the decision due account is taken of the outcome of the public participation" (Article 6.8).[382]

Notable to an analysis of environmental participation is Principle 10 of the Rio Declaration, the outcome of the 1992 conference on environment and development,[383] which states:

> Environmental issues are best handled with *participation of all concerned citizens*, at the relevant level. At the national level, each individual shall have appropriate *access to information* concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the *opportunity to participate in decision-making processes*. states shall facilitate and encourage public awareness and *participation by making information widely available*. Effective access to judicial and administrative proceedings, including *redress and remedy*, shall be provided.[384]

Here the link between state provision of information and participation is clearly drawn.

[381] Chiara Armeni, 'Participation in Environmental Decision-Making: Reflecting on Planning and Community Benefits for Major Wind Farms', *Journal of Environmental Law*, 29 October 2016, eqw021, https://doi.org/10.1093/jel/eqw021.
[382] Aarhus Convention, 1998, Articles 6.3 and 8.
[383] *Rio Declaration on Environment and Development*, UN Doc. A/CONF. 151/26/Rev. 1, June 14, 1992, Principle 10. Picolotti, "Agenda 21 and Human Rights: The Right to Participate".
[384] Rio Declaration on Environment and Development, Article 10, emphasis added.

The concept of access to information is twice reiterated as essential to participation, and the third "pillar" (access to justice) concludes the principle.

Building on Principle 10 of the Rio Declaration, Picolotti lays out four useful modalities of participation: Informative participation, consultative participation, participation in decision-making, and participation in management.[385] Informative participation should not be confused with the right to information, and is the weakest of the four modalities where stakeholders have little active role and are simply informed about the project.[386] Consultative participation can involve consultation in the form of public hearings, however the responses are not usually binding on the state.[387] Participation in decision-making creates outcomes that are minimally binding on the state; participation in management would involve community members as executors or monitors of the project.[388] These categories can help in analysing how much power participants hold in terms of modifying the project, which is useful when considering indigenous peoples' rights to participation in the form of consultation later on in this chapter and thesis. A key point to raise here is that effective participation requires at its most basic level the correct identification of participants, or stakeholders, to engage in participatory processes when considering implementing any action that would affect the environment in which they live or on which they depend.[389] Picolotti notes that this is particularly important because "the state will naturally rely on its own categorization and identification system" of affected actors, which can lead to the "exclusion of certain of those social actors, who, although affected, are not viewed or recognized by the state, the so-called 'invisible sectors'".[390] This becomes particularly relevant when I

385 Picolotti, "Agenda 21 and Human Rights: The Right to Participate".
386 Ibid, p.55 (n.4).
387 Ibid.
388 Ibid, p.52.
389 Ibid, p.53–54.
390 Ibid, p.53.

consider the marginalisation of indigenous peoples from the administrative processes that are managed by states' federal or regional capitals, far from the geographical areas in which mining projects are necessarily located.

Access to Justice

The final pillar, access to justice, is found in ICCPR Article 2.3.a, which states that "any person whose rights or freedoms as herein recognized are violated shall have an effective remedy",[391] even where the violations have been found to have been committed by the state. The provision also states that "any person claiming such a remedy shall have his right thereto determined by competent judicial, administrative or legislative authorities" and that states party to ICCPR shall undertake "to ensure that the competent authorities shall enforce such remedies when granted".[392] Fulfilling the legal requirements of the right of access to justice entails access to a court system with laws on the issue to enforce, and, more practically, funds to access trained lawyers to litigate the case in the correct jurisdiction.

The issues of funding and legal training, and even access to the language spoken in the tribunals, obviously can create barriers for indigenous communities, who may have their own legal systems and traditions of justice separate from those of the settler nation. This issue will be analysed in the final section of this chapter focusing on participation rights specific to indigenous peoples.

Access to justice is particularly well-supported in Latin American states largely due to the legal tradition of the "writ of *amparo*", which provides protection for constitutional rights in certain Latin American jurisdictions. *Amparo*, literally translated as "protection", enables access to justice for any individual whose rights are protected

391 ICCPR, Article 2.3(a).
392 Ibid, Article 2.3(b).

implicitly or explicitly by their own state Constitution, by customary international law and treaty law to which their state is party.[393] Furthermore, the Inter-American Human Rights System provides access to justice through petitions to the IACHR (following exhausting domestic remedies, such as *amparo*). The IACHR have produced ground-breaking reports on human rights violations in the region, for example during the Chilean and Argentinean dictatorships of the 1980s.[394]

4.2 Indigenous peoples' rights in international human rights law

Across Latin America, there are an estimated 40 million indigenous people,[395] living within the sovereign territories of states that have long been independent from their European imperial powers. This has also meant conflicts with states over decisions affecting land to which both have legitimate claims.[396] This is particularly pronounced around extractive industries. As Chapter 2 makes clear, oil and mining extractivism can affect indigenous peoples gravely in Latin America, where extraction has been increasing due to upswings in commodity prices and state desire for extractive economic development.

This section outlines international law pertaining to the human rights of indigenous peoples, particularly rights to land and natural resources. Expanding on the brief introduction provided in Chapter 2, I will first examine indigenous peoples' rights in the 1989 International Labour Organisation's Indigenous and Tribal Peoples' Convention 169 (ILO169) and the 2007 United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).[397] I then briefly analyse the environmental

393 Government of Bolivia, *Bolivia (Plurinational State of)'s Constitution of 2009*, (Oxford: OUP, 2009).
394 Sandoval, Clara, "The Inter-American System and Approach", p.432.
395 Sieder, *Multiculturalism in Latin America*.
396 Sandoval, "The Inter-American System and Approach", 2013.
397 UN General Assembly, United Nations Declaration on the Rights of Indigenous Peoples: resolution / adopted by the General Assembly, 2 October 2007, A/RES/61/295.

participatory human rights of indigenous peoples particularly. These are closely linked to rights to land and natural resources of indigenous peoples, which I focus on in the final section, examining particularly how these rights have been interpreted within the Inter-American regime. This section establishes how substantive indigenous peoples' rights are closely linked to their land rights, to enable a full analysis of participation rights in the third and final part of this chapter.

4.2.1 Indigenous peoples in international human rights law: ILO169 and UNDRIP

The 1989 ILO169, which has 23 states parties (15 of which are in Latin America), defines indigenous peoples in its Article 1.2.a as

> peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonisation or the establishment of present state boundaries and who irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions.[398]

Article 1.2 also stipulates that those defined as indigenous depend on their own self-identification,[399] not identification by the state. This is important because compliance with certain rights might rely upon the legal status of communities in respect of land they occupy or otherwise use. As determined in Chapter 2 through Harvey's work on neo-imperialism, state governments have a monopoly on definitions of legality, meaning they are able to decide who has a legal right to land and resources through their laws and institutions established for their compliance. Despite the legal definition of self-identification, governments may also deny indigeneity based on their assumptions about ethnicity or location in non-ancestral territories. Furthermore, the state might assume that land is not occupied or used by indigenous communities when

[398] International Labour Organization (ILO), *Indigenous and Tribal Peoples Convention*, C169, Article 1(2)a.
[399] Ibid.

it is in fact is occupied and used by them. As a result, states may not grant property rights to indigenous peoples, with repercussions for other rights.

Indigenous communities often have a deep and long-lasting relationship with the territories upon which their people live,[400] owing to agricultural or subsistence practices and cultural, spiritual or religious practices that have developed as a result of living in particular environments or on specific lands. While indigenous people of course have rights as individuals, their claims to rights as a collective are important particularly because of these shared cultural practices, which are often related to the natural world and are passed down from generation to generation. Interruption of these practices by mining companies can violate rights to life and culture as well as cause more immediate violations of indigenous rights to a healthy environment, such as to food and clean water.[401]

Indigenous peoples in Latin America often face economic hardship and discrimination by dominant *criollo* (Eurodescendent) elites in government and the economy.[402] Chapter 2 details these divergent dynamics in Argentina and Bolivia throughout the twentieth century. As international law holds that states are sovereign over their territories, in many postcolonial societies with non-indigenous settler majorities it was long assumed that assimilation of indigenous peoples into the dominant society was the most appropriate way to construct societal cohesion.[403] The result in international human rights law was ILO107 (1957).[404] Decades later, a revision of this instrument emerged in the form of ILO169 (1989), "with a view to removing

400 Ibid. See also Laura Westra, *Environmental Justice and the Rights of Indigenous Peoples: International and Domestic Legal Perspectives* (London: Earthscan, 2013).
401 McGregor, 'Living Well with the Earth'. pp.207–208.
402 Sieder, *Multiculturalism in Latin America*.
403 International Labour Organization (ILO), *Indigenous and Tribal Populations Convention*, C107, 26 June 1957; see also Raquel Yrigoyen Fajardo, "Peru: Pluralist Constitution, Monist Judiciary – A Post-Reform Assessment", in Sieder, *Multiculturalism in Latin America*., p.160.
404 ILO107.

the assimilationist orientation of the earlier standards",[405] and providing for rights to participation across all aspects of public life[406] within their states to guarantee respect for their integrity, aspirations and ways of life.[407]

Environmental rights for indigenous peoples are addressed in ILO169 Article 4(1), to the extent that it states that "[s]pecial measures shall be adopted as appropriate for safeguarding the persons, institutions, property, labour, cultures and environment of the peoples concerned."[408] Here, procedural environmental rights are arguably invoked by the concept of the need for "special measures" to protect the (substantive) rights to "property,… cultures and environment",[409] all of which are found to be closely linked.[410] In the next section I will focus on the rights of indigenous peoples to land and access to natural resources.

4.2.2 Indigenous peoples' environmental human rights

The fulfilment of indigenous peoples' substantive environmental human rights is linked closely to their land rights, or the ACHR's Article 21 (Right to Property) within the Inter-American regime outlined above. Here, an analysis of this link is provided, before a substantive analysis of rights to land and natural resources in the following subsection.

Awas Tingni v Nicaragua established the need for indigenous participation in procedures that would affect their access to substantive rights to land and natural resources, and consequently their substantive environmental human rights. It is a highly

405 ILO169, Preamble.
406 Ibid, Article 2(1).
407 Ibid.
408 ILO169, Article 4.1.
409 Ibid.
410 *Mayagna (Sumo) Awas Tingni Community v Nicaragua*, IACHR Series C No 79, [2001] IACHR 9, IHRL 1462 (IACHR 2001), 31 August 2001; *Maya indigenous community of the Toledo District v. Belize*, Case 12.053, Report No. 40/04, 12 October 2004; *Yakye Axa Indigenous Community v Paraguay*, IACHR Series C no 125, IHRL 1509 (IACHR 2005), 17th June 2005.

significant case in that it was one of the first of its kind, and such "landmark judgments"[411] like these have created "doctrinally robust"[412] case law for the protection of indigenous land rights. The groundbreaking interpretation was later confirmed in a number of equally significant cases including *Yakye Axa Indigenous Community v Paraguay* (2005).[413] In this case, the Yakye Axa indigenous people were seeking a return to their ancestral lands in Paraguay following being resettled elsewhere. In the interim, their lands were sold to multinational corporations. The IACtHR ruled that Paraguay had violated the Yakye Axa's right to life, "interpreting right to life broadly as encompassing other rights including the right to a healthy environment".[414]

In *Saramaka v Suriname* (2007) this link is made even more clear.[415] Saramaka Head Captain Wazen Eduards described his tribal people's special relationship with the land thus: "The forest is like our market place; it is where we get our medicines, our medicinal plants. It is where we hunt to have meat to eat. The forest is truly our entire life."[416] This is common among tribal and indigenous communities, who may have limited other means for subsistence and trade. In this case, the government of Suriname granted concessions for logging and gold mining on the Saramaka's territory. The environmental damage caused in the process of gold mining would compromise the Saramaka's environmental human rights, but also to their own use of timber as part of their livelihood, to sell as well as use themselves. The case outlines indigenous and tribal peoples' rights to both land and the natural resources (in this case timber) used by the community as part of their own economic structure. The restriction of the

411 "The Double Life of International Law: Indigenous Peoples and Extractive Industries", *Harvard Law Review*, Vol 129, Chapter 5, pp.1755–1820, p.1759.
412 Ibid.
413 *Yakye Axa Indigenous Community v Paraguay*.
414 Boyd, *The Environmental Rights Revolution*, p.98.
415 *Saramaka People v Suriname*, IACHR Series C no 172, IHRL 3046 (IACHR 2007), 28th November 2007. The group now identifies as "Saamaka", but Saramaka (used at the time of the case) will be used here unless in a quotation where the new name is used.
416 Ibid, para 82.

Saramaka's customary land rights are permitted

> only if the State ensures the effective participation and benefit of the Saramaka people, performs or supervises prior environmental and social impact assessments, and implements adequate safeguards and mechanisms in order to ensure that these activities do not significantly affect the traditional Saramaka lands and natural resources.[417]

The next section analyses rights to land and natural resources, with particular attention to this case.

4.2.3 Indigenous peoples' rights to land and natural resources

Rights to land

ILO169 Article 14 provides for the recognition of land rights for indigenous peoples to land they traditionally occupy.[418] As interpreted in *Saramaka v Suriname*, Article 14 further provides for additional measures "to be taken in appropriate cases to safeguard the right of the peoples concerned to use lands not exclusively occupied by them, but to which they have traditionally had access for their subsistence and traditional activities."[419] These rights are important because access is required to those lands to perpetuate traditional livelihoods for their survival and pass on their ancestral cultures linked specifically to that land.

Rights to agency over priorities for development of indigenous social institutions and traditional lands are detailed in ILO169 Article 7.1, which states that indigenous peoples "shall have the right to decide their own priorities for the process of development as it affects their lives, beliefs, institutions and spiritual wellbeing and the lands they occupy or otherwise use".[420] UNDRIP also contains indigenous rights to land in Article 26, which gives indigenous communities rights to "the lands, territories and resources which they have traditionally owned, occupied or otherwise used or

417 Ibid, para 158.
418 ILO169, Article 14.
419 Ibid.
420 Ibid, Article 7.1.

acquired".[421] Notably in both articles, the wording relates to both "lands they occupy or otherwise use", and there is no requirement of land title. This is further affirmed by the rulings in *Awas Tingni v Nicaragua* (2001) and *Saramaka v Suriname (2007)*, ordering the recognition of land rights as well as the requisite consultation and in the case of *Saramaka*, benefit-sharing procedures.

An interesting point about the *Awas Tingni v Nicaragua* (2001) judgment is that Nicaragua was found to have violated the "customary" land rights of the Awas Tingni,[422] based on land they lived on following movement there in the 1940s,[423] rather than "ancestral land" lived on since time immemorial. The state committed these violations, according to the IACHR's communication to the Court, "by considering all lands not registered under formal title deed to be state lands".[424] Demarcation of the land, with full participation from the community, was ordered as part of the remedy.[425] Similarly, contained within the judgment of *Yakye Axa v Paraguay* is an interesting interpretation in terms of land rights because the land was not continually occupied by the group, which indicates that owning title to the land or continual occupation is not a prerequisite for having rights to property under the Inter-American regime. In *Saramaka v Suriname* (2007) it is further affirmed that formal land title is not a requirement for a community to claim their rights pertaining to a particular territory.[426] The Saramaka tribal people alleged that the state of Suriname violated the group's collective right to property (ACHR Article 21) when concessions were granted for both logging and gold mining within the Saramaka's traditionally-inhabited territories.[427]

421 UNDRIP, Article 26.
422 *Mayagna (Sumo) Awas Tingni Community v Nicaragua*, para 155.
423 Ibid, para 80, 93, 96, 115, 120.
424 Ibid, para 140(j).
425 Ibid, para 164.
426 *Saramaka People v Suriname*.
427 Ibid.

Indigenous land rights are often linked to their cultural rights. In *Awas Tingni v Nicaragua*, the state had granted a concession on community lands without the community's agreement. The Court noted that "[f]or indigenous communities, relations to the land are not merely a matter of possession and production but a material and spiritual element which they must fully enjoy, even to preserve their cultural legacy and transmit it to future generations".[428] This reasoning was further cited in a 2004 report from the IACHR relating to *Maya v Belize* judgment,[429] indicating a clear development of a right to land for indigenous peoples relating to the right to culture. In this case the IACHR accepted that logging concessions had threatened long term and irreversible damage to the land used by the indigenous community traditionally for subsistence agriculture. The IACHR concluded, citing *Ogoniland*, that Belize had violated the Maya Community's right to property in their ancestral land.[430]

Furthermore, in the *Awas Tingni* case, within which the IACtHR recognised the connection between environmental degradation and human rights using the San Salvador Protocol,[431] Nicaragua had not demarcated the communal lands of the indigenous Awas Tingni Community, nor taken measures to protect the property rights of the community to the lands they inhabited and the natural resources found within them.

Rights to natural resources

Article 15 of ILO169 states that "[t]he rights of the peoples concerned to the natural resources pertaining to their lands shall be specially safeguarded" and that these "include the right of these peoples to participate in the use, management and

428 Ibid, para 149.
429 *Maya indigenous community of the Toledo District v. Belize*, paras 80, 93 and 96.
430 Ibid.
431 *Awas Tingni Community v Nicaragua*; Protocol of San Salvador.

conservation of these resources",[432] demonstrating clear interrelated rights to land natural resources and the right to their use. UNDRIP Article 29.1 furthermore contains an indigenous "right to the conservation and protection of the environment and the productive capacity of their lands or territories and resources".[433]

Saramaka v Suriname provides a helpful demonstration of how indigenous and tribal peoples' rights to natural resources are assessed in the regional human rights regime. The two proposed activities of logging and gold-mining were expected to interfere with the tribal group's traditional territories and natural resources used for their survival and livelihoods, but were distinguished by the fact that the Saramaka themselves rely on timber logging as part of their economic structure.[434] The ruling held that because any gold mining activity within Saramaka territory will affect other natural resources necessary for the survival of the Saramakas, such as waterways, the state has a duty to consult with them, in conformity with their traditions and customs, regarding any proposed mining concession within Saramaka territory.[435] Concessions for two very different types of development had been granted – logging and gold mining – and as a result the IACtHR had to assess the case based not on probable impacts to the land, but the Saramaka's perception of such activities, which were very different. The Court ruled that

> the state should not have granted logging concessions within Saramaka territory unless and until the three safeguards of effective participation, benefit-sharing, and prior environmental and social impact assessments were complied with.[436]

As timber is considered a "renewable" resource, and further one of importance culturally to the Saramaka, who also used it for their own economic purposes, the court found that the Saramaka had a right to the "three safeguards" described above.

[432] Ibid, Article 15.
[433] UNDRIP, Article 29.1
[434] Ibid para 145.
[435] Ibid, para 155.
[436] Ibid, para 146.

Gold mining, meanwhile, has far greater potential to damage the environment, in this case the environment upon which the Saramaka rely for their survival. Gold mining, unlike logging, was not part of the Saramaka's own economic system, but could *affect* natural resources that "have been traditionally used and are necessary for the survival of the members of the Saramaka".[437] As a result the court found,

> the state has a duty to consult with them, in conformity with their traditions and customs, regarding any proposed mining concession within Saramaka territory, as well as allow the members of the community to reasonably participate in the benefits derived from any such possible concession, and perform or supervise an assessment on the environmental and social impact prior to the commencement of the project.[438]

Here the language of participation is stronger, and begins to show the legal developments in procedural environmental rights for indigenous or tribal peoples particularly: the state has a duty to hold culturally-appropriate consultations, again prior to concessions being officially granted.

Benefit-sharing is analogous to financial compensation. This complicates the terminology of "participation" in Latin America where "participation" can refer to economic participation. There is therefore a reminder in *Saramaka v Suriname* that economic benefits – be they from logging or compensation for gold-mining – are a necessary consideration. Indigenous communities can often be left on the margins of economic society, relying on the "natural resources" existing on their lands to survive. As such, compensation payments may well be welcome, but there is a risk of bribery and corruption if prior consultation and requirements for EIAs are not made in clear culturally-appropriate ways to the decision-makers of the group in question.

437 Ibid.
438 *Saramaka v Suriname*, para 155.

4.3 The participatory rights of indigenous peoples in international law

This final section identifies the specific rights to participation in environmental decision-making of indigenous peoples in ILO169 and UNDRIP. It begins by examining the context for the development of FPIC by analysing participation and consultation provisions in ILO169. I then analyse the concept of "free, prior and informed consent" (FPIC) in detail. This is followed by an analysis of why FPIC is controversial to states who see an indigenous "right to veto" mining projects as a threat to their permanent sovereignty over natural resources. Finally, the section concludes with further reference to the developing right within the Latin American regime, and some practical steps taken by both indigenous communities and mining companies in negotiations over access to land and resources.

4.3.1 Rights to participation and consultation in ILO169

The UNDRIP (2007), while not legally-binding, has had a role in developing indigenous peoples' rights to consultation through the "free, prior and informed consent" concept. It also has particular relevance to this thesis, as it was made part of Bolivian national law (see Chapter 2). However, participation and consultation are dominant themes within legally-binding ILO169. A right to participation of indigenous peoples in the protection of their own rights is provided in ILO169 Article 2.1: "Governments shall have the responsibility for developing, *with the participation of the peoples concerned*, co-ordinated and systematic action to protect the rights of these peoples and to guarantee respect for their integrity."[439] Furthermore, in Article 6.1(a) governments are mandated, "[i]n applying the provisions of this convention", to "*consult the peoples concerned, through appropriate procedures* and in particular through their *representative*

[439] Author's italics. ILO169, Article 2.1.

institutions, whenever consideration is being given to legislative or administrative measures which may affect them directly".[440] Interpretations on consultation is clear, particularly within the IACtHR. For example, government engagement using appropriate procedures and through representative institutions are suggested in the *Saramaka v Suriname* judgment which states that consultations should be culturally-appropriate.[441]

Rights of indigenous peoples to be consulted on any developments pertaining to their lands and resources contained therein are provided for in Article 15 of ILO169, which mandates the state to establish "procedures through which they shall consult these peoples, with a view to ascertaining whether and to what degree their interests would be prejudiced".[442] Importantly, Article 15 further affirms that this consultation requirement applies even in cases where "the state retains the ownership of mineral or sub-surface resources or rights to other resources pertaining to lands".[443] ILO169 therefore contains a strong right to participation in decision-making over mining for indigenous peoples, particularly as states often own the mineral or sub-surface resource rights,[444] and are thus uniquely able to grant concessions that effectively sell or lease those rights to mining firms.[445]

Furthermore, Article 15 also provides "a right to participate in the benefits of such activities" (benefit-sharing) and to ensure that indigenous groups "receive fair compensation for any damages which they may sustain as a result of such activities".[446] As seen in *Saramaka v Suriname*, this has a dual purpose: the community are

440 Author's italics. Ibid, Article 6.1.a.
441 *Saramaka v Suriname*, para 133.
442 Ibid, Article 15.
443 Ibid. Author's italics. Note that the emphasis shows a clear link to procedural environmental rights.
444 This is the case in both Argentina and Bolivia, and across much of the world. The notable exception is the US, where the landowner owns the rights to the subsurface resources.
445 ILO169, Article 15.
446 Ibid, Article 15.2.

compensated for any damage of their lands, which contains their culturally and economically significant resources, and can even benefit from the activity itself. While of course fair that communities adjacent to mines should be able to see the positive economic impacts arising from mining first, this can become a complex incentivising factor. If communities are offered a share in the benefits without having had the prior right to informed consultation first, they may be at risk of being bribed to accept mining using such incentives.

As highlighted above, 2007 *Saramaka v Suriname* affirms the right to land for indigenous communities under the Inter-American regime, and consequently the right for indigenous communities to be consulted on developments affecting those lands. This is despite the fact that Suriname's legislation did not recognise a right to communal property of tribal communities, nor had signed ILO169.[447] The ruling from the Inter-American Court also included substantial requirements for the participation of the Saramaka in the demarcation of their territories and to participate in the benefits of the logging taking place on their lands. Interestingly, the Court also ordered that Suriname consult with the Saramaka, even though Suriname is not party to ILO169, which provides for the requirement to consult indigenous peoples. Orellana states that to extrapolate the Saramaka's land rights and rights to consultation, "the Court referred to Articles 1 and 27 of the International Covenant on Civil and Political Rights and Article 1 of the International Covenant on Economic, Social and Cultural Rights."[448] Article 1 of both 1966 Covenants grants a right to self-determination for "all peoples", and ICCPR's Article 27 provides a "right to enjoy their own culture".[449]

447 Marcos A. Orellana, 'Saramaka People v Suriname', *The American Journal of International Law* 102, no. 4 (2008): 841–47, https://doi.org/10.2307/20456684., p.843
448 Ibid.
449 ICCPR and ICESCR, Article 1; ICCPR, Article 27.

4.3.2 Free, prior and informed consent in ILO169 and UNDRIP

The right to participation in the form of consultation to obtain "free, prior and informed consent" (FPIC) is found in the 2007 United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).[450] UNDRIP was adopted in 2007 by the UN General Assembly by a majority of 144 states with four votes against from Australia, Canada, New Zealand and the United States. Although soft law, it has proven influential in the uutilisation and further development of the right to consultation found in ILO169.

UNDRIP's Article 32.2 states:

> 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.[451]

It is from here that the right of indigenous communities to grant or withhold their "free, prior and informed consent" has developed.

While the right to FPIC appears most clearly in UNDRIP 32.2, the language of FPIC has deep roots in ILO169 and arguably its interpretations within the Latin American legal regime. The concept of indigenous peoples being able to give or withhold "free, prior and informed consent" for developments on their lands emerged from within the consultation processes mandated by ILO169, in particular Article 15.[452] This details the requirement of the state to implement procedural rights to the consultation of indigenous peoples where extractive developments are planned on territories they traditionally occupy, even where subsurface resources are owned by the

450 UNDRIP Article 32.2.
451 UNDRIP, Article 32.1. Emphasis added.
452 UNPFII, Report of the International Workshop on Methodologies regarding Free, Prior and Informed Consent and Indigenous Peoples (New York, 17-19 January 2005), Fourth Session, New York, 16-27 May 2005, E/C.19/2005/3.

state.

Article 6.1 of ILO169 elaborates upon the manner of consultation expected, which informs FPIC considerably: indigenous or tribal peoples must be consulted "through appropriate measures", through their "representative institutions", and they must be able to "freely participate, at least to the extent of other sectors of the population, at all levels of decision-making in elective institutions"[453] responsible for policies or programmes that concern them. Article 6.2 reads:

> 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.[454]

The links between and the above and UNDRIP 32.2 are clear when comparing "consultations...shall be undertaken…with the objective of achieving consent" in Article 6.1 and "states shall consult…in order to obtain their free and informed consent prior to the approval of any project" (Article 32.2).

The UN Permanent Forum on Indigenous Issues (UNPFII), a high-level advisory body to the Economic and Social Council concerned with indigenous peoples' human rights, disaggregated and interpreted FPIC authoritatively in 2005, suggesting a "common understanding" of FPIC as follows (Table 1).[455]

[453] ILO169, Article 6.1.
[454] Ibid, Article 6.2.
[455] UNPFII, Report of the International Workshop on Methodologies regarding Free, Prior and Informed Consent and Indigenous Peoples, para 46.

Table 2: FPIC defined by the UNPFII International Workshop on FPIC Methodologies.[456]

Free	*Free* should imply no coercion, intimidation or manipulation.[457]
Prior	*Prior* should imply that consent has been sought sufficiently in advance of any authorization or commencement of activities and that respect is shown for time requirements of indigenous consultation/consensus processes.[458]
Informed	Informed should imply that information is provided that covers (at least) the following aspects: a. The nature, size, pace, reversibility and scope of any proposed project or activity; b. The reason(s) for or purpose(s) of the project and/or activity; c. The duration of the above; d. The locality of areas that will be affected; e. A preliminary assessment of the likely economic, social, cultural and environmental impact, including potential risks and fair and equitable benefit-sharing in a context that respects the precautionary principle; f. Personnel likely to be involved in the execution of the proposed project (including indigenous peoples, private sector staff, research institutions, government employees and others); g. Procedures that the project may entail.[459]
Consent	Consultation and participation are crucial components of a consent process. Consultation should be undertaken in good faith. The parties should establish a dialogue allowing them to find appropriate solutions in an atmosphere of mutual respect in good faith, and full and equitable participation. Consultation requires time and an effective system for communicating among interest-holders. Indigenous peoples should be able to participate through their own freely chosen representatives and customary or other institutions. The inclusion of a gender perspective and the participation of indigenous women are essential, as well as participation of children and youth, as appropriate. This process may include the option of withholding consent.[460] Consent to any agreement should be interpreted as indigenous peoples have reasonably understood it.[461]

Developments affecting indigenous peoples such as mining can be complex and detailed undertakings, with multiple preparation stages and long lead-in times. The UNPFII Workshop Report further elaborates that FPIC

> should be sought sufficiently in advance of commencement or authorization of activities, taking into account indigenous peoples' own decision-making processes, in phases of assessment, planning, implementation, monitoring, evaluation and closure of a project.[462]

456 UNPFII, Report of the International Workshop on Methodologies regarding Free, Prior and Informed Consent and Indigenous Peoples.
457 Ibid, 46(i).
458 Ibid.
459 Ibid.
460 Ibid, para 47.
461 Ibid, para 48.
462 Ibid.

These phases may not precisely map against the phases for starting a mine according to domestic regulation (such as prospecting, or submission of an EIA), furthering ambiguity as to when consultations should be held. "In advance of commencement of authorization of activities" suggests prior to any state authority work beginning on the project, and "assessment" and "planning" denote that FPIC should be secured within these early phases (and continually throughout).

In terms of who should be consulted, the UNPFII details that "[i]nformation should be accurate and in a form that is accessible and understandable, including in a language that the indigenous peoples will fully understand".

The legal lineage of FPIC is explicit within two of the three pillars (of rights to information and participation in environmental decision-making), when each of its component parts are examined. First, the "informed" element comprises the right to information found in Article 19 of ICCPR, of "freedom of thought and expression", a right that includes the "freedom to seek, receive, and impart information and ideas of all kinds".[463] As a core environmental human right, indigenous communities have this right both as citizens and as a distinct ethnic collective. However, indigenous communities' dependence on accurate information about potential damage to land they use for survival and culture (and often relative lack of access to information more readily available in urban areas) enhances its importance. Second, participation in environmental decision-making is clearly outlined at the highest levels as a "right to consultation" for indigenous peoples in the majority of circumstances relating to administrative measures or development projects.

The contribution of the ILO to the UNPFII workshop on FPIC maintains that "[e]ffective consultation is consultation in which those concerned have an opportunity

[463] ICCPR, Article 19.

to influence the decision taken".[464] According to the ILO the principle of consultation

> does not mean, however, that a lack of consent will be sufficient grounds under the Convention [ILO169] to block a development programme or project. The Convention requires that procedures be in place whereby indigenous and tribal peoples have a realistic chance of affecting the outcome – it does not require that their *consent* to the proposed measures is necessary.[465]

The legal position, therefore, appears to be that consultation procedures should be adequate for communities to engage constructively in a discussion; however, consent is not required. This position suggests a form of participation in environmental decision-making that is not as strong as it could be if consent were required, although both UNDRIP and *Saramaka v Suriname* serve to strengthen the requirement for FPIC.

In fact, a very strong form of FPIC was included in an earlier draft of UNDRIP, completed in 1993 by the Working Group on Indigenous Populations (WGIP), part of the UN Sub-Commission on Prevention of Discrimination and Protection of Minorities.[466] The original version of Article 32 in this draft declaration stated that

> Indigenous peoples have the right to determine and develop priorities and strategies for the development or use of their lands, territories and other resources, including *the right to require that states obtain their free and informed consent prior to the approval of any project affecting their lands*, territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources.[467]

Compared with the eventual UNDRIP Article 32.2, the draft is therefore much stronger, requiring that states actually "obtain" FPIC rather than consulting "*in order to* obtain" FPIC from indigenous peoples, essentially meaning consent is not required. They still have the right to "free, prior and informed *consultation*", therefore, but not to refuse a project completely. But the question still remains: is the right to a consultation

464 UNPFII, International Workshop on Free, Prior and Informed Consent and Indigenous Peoples, Contribution of the ILO, New York, 17-19 January 2005, PFII/2005/WS.2/4, para 5.
465 Ibid, para 12.
466 This is the same Sub-Commission for which Ksentini wrote the report on procedural environmental rights.
467 UNDRIP Draft Declaration cited in Barelli, Mauro. "Development projects and indigenous peoples land: Defining the scope of free, prior and informed consent" in Lennox, Corinne and Short, Damien", Handbook of Indigenous Peoples' Rights, London: Routledge, 2016, p.71. Emphasis added.

where communities cannot veto the project a strong procedural right? I would argue that the answer to this lies in the quality of the consultation: if communities can be informed and consulted in a culturally-appropriate way, then if there are concerns, at least they are fully aware and can litigate through the courts or decide strategies for resistance (using transnational legal and activist networks, for example).

A look at the socio-legal development of FPIC is useful to understand the unequal power dynamics at play where states' sovereignty over natural resources is threatened. Barelli recounts that the 1993 draft "was essentially the product of the five independent members of the WGIP and indigenous representatives, because states' delegates did not actively participate in the session of this body".[468] When states were invited to participate, in the Working Group on the Draft Declaration, it became clear that "several states opposed the fact that indigenous peoples could have the power to veto development projects allegedly of benefit to the entire country".[469] Canada's delegation explicitly stated their concerns over FPIC read as an effective "right to veto" as the reason for not voting to adopt UNDRIP,[470] for example, although a decade later they agreed to adopt the declaration.[471] While the changes could be said to be a weakening of the concept of FPIC, there is an argument to be made about acknowledging the state's reticence to agree to an indigenous "right to veto". In the delicate balance that must be struck, a stronger FPIC may have had far more states voting against adopting it at the UN in September 2007. Article 32.2 of UNDRIP may have elusive wording, but in many ways, it is a decent start to recognising the rights of indigenous peoples without

468 Barelli, "Development projects and indigenous peoples land", p.71.
469 Ibid, p.72.
470 UN General Assembly, United Nations Declaration on the Rights of Indigenous Peoples: resolution / adopted by the General Assembly, 2 October 2007, A/RES/61/295. Adopted 143-4-11, 107th plenary meeting Issued in GAOR, 61st sess., Suppl. no. 49."Annex: UN Declaration on the Rights of Indigenous Peoples": p. [1]-11.
471 Brandi Morin, "Where does Canada sit 10 years after the UN Declaration on the Rights of Indigenous Peoples?", CBC News, 13 September 2017, accessed 23 May 2019, https://www.cbc.ca/news/indigenous/where-does-canada-sit-10-years-after-undrip-1.4288480

threatening states' permanent sovereignty over natural resources.

Numerous examples of conflicts between differing state and indigenous environmental priorities (for example in oil and mining resource development on indigenous lands used traditionally by a people) have shown that there are challenges implementing the protection of rights to consultation and participation for indigenous peoples. At the same time, this has meant an increase in indigenous land rights cases being heard at the international and regional levels. As indigenous groups become legally empowered by international rights to consultation in ILO169, they must exhaust domestic avenues to access their rights before taking cases or petitions to international and regional bodies to secure respect for their rights. The way in which this has happened in the last few decades as shown above is instructive as to the link between indigenous peoples' land and environmental rights.

4.3.3 Compliance with the right to consultation and developing rights to FPIC

The above shows clear binding obligations to indigenous and tribal peoples in Article 15 of ILO169, which gives indigenous peoples the right to be consulted on any developments pertaining to their lands and resources contained therein, even in cases where "the state retains the ownership of mineral or sub-surface resources or rights to other resources pertaining to lands".[472] This is significant because states will generally claim this, as sovereignty over natural resources is a fundamental principle of international law. However indigenous and tribal peoples' conflicting rights to property and traditional use of land and natural resources are considered in the law to override the state claim, requiring a consultation process, particularly where state-mandated activity would cause damage to indigenous and or natural resources.

The 2007 *Saramaka v Suriname* judgment, published in the same year as UNDRIP,

[472] Ibid. Author's italics. Note that the emphasis shows a clear link to procedural environmental rights.

strengthens the emphasis found in ILO169 on consultation processes. Further, where UNDRIP's Article 32.2 suggests a state duty to "consult and cooperate in good faith… in order to obtain" indigenous peoples' "free and informed consent prior to the approval of any project affecting their lands or territories and other resources",[473] the *Saramaka v Suriname* case is even stronger on the right to consultation and the fullest expression of FPIC. It reads:

> regarding large-scale development or investment projects that would have a major impact within Saramaka territory, the state has a duty, not only to consult with the Saramakas, but also to *obtain their free, prior, and informed consent*, according to their customs and traditions.[474]

This demonstrates that UNDRIP's FPIC is well-supported in the Inter-American human rights regime at the level of the Commission and Court. The direct reference to the wording of the right to a consultation process even to the point of withholding of consent, which is considered to be the effective "right to veto", is highly significant within the context of developing norms, even as the Court "considers that difference between 'consultation' and 'consent' in this context requires further analysis."[475] Nonetheless, there is a clear acknowledgement of the importance of at least consultation with the Saramaka tribal people "according to their customs and traditions" over projects that would have a "major impact", such as gold mining.[476]

The interpretation of the judgment provided by the IACtHR is notable because it outlines further the parameters of consultation ordered by the Court.[477] The state of Suriname "requested interpretation as to the 'meaning and scope' of several issues", the first of which was "with whom must the state consult to establish the mechanism that will guarantee the 'effective participation' of the Saramaka people ordered in the

473 UNDRIP, Article 32.2.
474 *Saramaka v Suriname*, para 134. Author's italics.
475 Ibid.
476 Ibid.
477 Case of the *Saramaka People v Suriname*, Judgment of August 12, 2008, Interpretation of the Judgment on Preliminary Objections, Merits, Reparations, and Costs, Inter-American Court of Human Rights.

Judgment". Specifically, the state asked whether it was required by the judgment to consult with only Saramaka leaders, or with every Saramaka individual.[478] The Court's response was that the judgment had made clear "that the modes of effective participation and the entity or entities that shall participate in decision making are to be determined by the Saramaka in accordance with their custom and traditions' and then communicated to the state",[479] and that if the state required clarity on any aspect of the participation, it may "communicate with the Saramaka to seek clarity."[480]

There is little evidence that the state of Suriname has complied with the ruling, claiming that it will resolve the situation "only as part of a broader reconsideration of the place of all Indigenous Peoples and Maroons within Suriname, unilaterally (and illegally) postponing compliance with the Court's judgment."[481] States appear reluctant to accept the agency of indigenous or tribal peoples to participate in environmental matters, particularly where such participation might have the effect of delaying lucrative mining projects, or halting them completely.

There is evidence, furthermore, that states struggle with the legal empowerment of indigenous peoples. In *Awas Tingni v Nicaragua*, for example, the indigenous claimants were represented by lawyers from the Iowa Project, led by James Anaya who was later to become the UN Special Rapporteur on the Rights of Indigenous Peoples. Writing following the submission of the case to the Court by the Commission, Anaya and Crider (another lawyer from the Iowa Project) noted that one of the main issues for the case was "the recognition by all parties of the status of the indigenous community in

478 Ibid, para 11.
479 Ibid, para 13.
480 *Saramaka v Suriname*, cited in *Saramaka v Suriname Interpretation*.
481 Price, Richard, "'Development' versus human rights: the Saamaka Maroons' fight for the rainforests of Suriname, LSE Latin America and Caribbean blog, 31 May 2018, at http://blogs.lse.ac.uk/latamcaribbean/2018/05/31/development-versus-human-rights-the-saamaka-maroons-fight-for-the-rainforests-of-suriname/#author-info

question as a full and coequal partner", as "it conflicts with the ingrained paternalistic tendency of many government agencies and politically empowered elites to either assume to act on behalf of indigenous groups or to provide at best symbolic recognition of their interests".[482] It was particularly difficult for the state actors to "recognize the right of the Community to advisors who pursued the Community's interests with vigor",[483] referring to the Iowa Project and his own work as legal counsel. The experience of Anaya and Crider serves to demonstrate how even with robust procedural legislation in place, the sociocultural attitudes and priorities of state actors can have a detrimental effect on the realisation of indigenous peoples' rights.

In summary, the law requires that indigenous peoples are able to participation through free, prior and informed *consultations*, at a minimum, as stated in ILO169. Whether indigenous communities should be consulted in order that they might give or withhold consent is still ambiguous. However, the Inter-American regime through *Saramaka v Suriname* has reaffirmed the importance of obtaining consent from the people concerned prior to permitting damaging developments (such as gold mining in this case) on indigenous lands. This suggests that any proposed activity that compromises environmental quality impacting traditional resources of an indigenous or tribal people should certainly be subject to free, prior and informed consultations in accordance with the people's norms and traditions, if not their free, prior and informed consent. What is clear is that early (and sustained) state–community negotiations are necessary in order for projects to proceed without violating the rights of indigenous peoples.

482 Anaya, James and Crider, Todd, "Indigenous Peoples, The Environment, and Commercial Forestry in Developing Countries: The Case of Awas Tingni, Nicaragua", *Human Rights Quarterly* 18:345, 1996, p.365.
483 Ibid.

4.3.4 Indigenous right to remedy

Indigenous and tribal peoples may have their own political and legal systems unconnected to those of the dominant mainstream societies. They may furthermore find that they are discriminated against within institutions, providing the basis for such developed international law to secure their rights (compared to other minorities, for example). As a result, ILO169 Article 12 provides that

> The peoples concerned shall be safeguarded against the abuse of their rights and shall be able to take legal proceedings, either individually or through their representative bodies, for the effective protection of these rights. Measures shall be taken to ensure that members of these peoples can understand and be understood in legal proceedings, where necessary through the provision of interpretation or by other effective means.[484]

Particularly notable is the attention to use of the appropriate language found in the implementation guidelines for consultation above.

ILO169 affirms rights to justice found across Latin America through *amparo*, and universal rights of access to justice, which is also the the third "pillar" of procedural environmental rights. For example, in *Awas Tingni v Nicaragua*, the state was found to have granted concessions without permission from the Awas Tingni and did not ensure an effective remedy in response to the community's protests regarding its property rights.[485] The judgment ruled that the state had committed violations to procedural rights to judicial process and remedy provided by ACHR Articles 2 (Domestic Legal Effects) and 25 (Right to Judicial Protection).[486]

Therefore, as well as unambiguous rights to informed consultation and access to justice in environmental matters affecting them, indigenous peoples also have the right to have their rights and duties made known to them "measures appropriate to the traditions and cultures of the peoples concerned", in ILO169 Article 30.

484 ILO169, Article 12.
485 *Awas Tingni Community v Nicaragua*, para 2.
486 Ibid, para 155.

4.3.5 Negotiated justice: community protocols and business and human rights

Despite its inconsistencies FPIC is a central concept "currently invoked by virtually all bodies dealing with indigenous peoples rights", according to Barelli.[487] Szlabowski refers to FPIC as a "negotiated model of justice" within resource governance,[488] and it is worth noting that parts of the extractive industry, including the International Council of Mining and Metals, an industry association of dozens of global mining firms, are engaging with the concept of FPIC through mining best practice guidance,[489] in order to pre-empt grievances which may cause conflict or delay to mining projects. According to Lewis, UNDRIP has been even instrumental in developing the right of consultation "into a customary international law standard".[490]

While international human rights law is only binding on states, there is a clear responsibility for companies to participate fully in discussions on projects they lead that could have social and environmental impacts. Most states require that an EIA is approved by them, for example, before activities can commence. This participation benefits all stakeholders, by increasing transparency and thereby avoiding conflict. To make this point Shift, a group established by the first (and only) UN Special Rapporteur on Business and Human Rights, Professor John Ruggie, and the Harvard Kennedy School quantified the potential costs of delays to mining projects in a study on mining projects called "Costs of Company-Community conflict in the Extractive Sector".[491] This approach, relying on quantifying the cost of delays due to dissenting communities,

487 Mauro Barelli, 'Free, Prior and Informed Consent in the Aftermath of the UN Declaration on the Rights of Indigenous Peoples: Developments and Challenges Ahead', *The International Journal of Human Rights* 16, no. 1 (1 January 2012): 1–24, https://doi.org/10.1080/13642987.2011.597746.
488 Szablowski, 'Operationalizing Free, Prior, and Informed Consent in the Extractive Industry Sector?'
489 ICMM, 'Indigenous Peoples and Mining Good Practice Guide.' (London: International Council on Mining and Metals (ICMM), 2015), http://app.knovel.com/hotlink/toc/id:kpIPMGPGS1/indigenous-peoples-and.
490 Lewis, 'Indigenous Peoples and the Corporate Responsibility to Respect Human Rights'.
491 Rachel Davis, and Daniel Franks, Costs of Company-Community Conflict in the Extractive Sector, Harvard Kennedy Law School, Shift and the University of Queensland, 12 May 2014, accessed 2 January 2018, https://sites.hks.harvard.edu/m-rcbg/CSRI/research/Costs%20of%20Conflict_Davis%20%20Franks.pdf

exposes the soft law limitations of the UN framework, which mediates between powerful profit-seeking companies and determined communities, often fighting for their lives.

Within the developing field of business and human rights, indigenous peoples' rights are acknowledged to be directly affected by development projects sanctioned by states and enacted by (often foreign or multinational) corporations. Within the UN Forum on Business and Human Rights which now occurs yearly in Geneva, there has been a push led by the Ecuadorean delegation for a legally-binding treaty on business and human rights, to consolidate the guidelines and protocols so far developed such as the UN Global Compact[492] and the UN Guiding Principles on Business and Human Rights.[493] Mining and energy companies are a key stakeholder in these international discussions as their projects often impact the environment and thus indigenous communities' land rights.

Where states are unwilling to comply with their duties to indigenous communities under IHRL, corporations can avoid conflict by ensuring that their community relations strategies are well thought-through, properly funded and staffed. A number of strategies have developed as a result, ranging from "corporate social responsibility" (CSR), where companies donate to or even deliver wholesale community projects and public services,[494] to obtaining a "social licence"[495] from the community for their project.

[492] United Nations Global Compact, *The Ten Principles UN Global Compact*, 2000, accessed 2 January 2018, https://www.unglobalcompact.org/what-is-gc/mission/principles
[493] UN Human Rights Council, *Protect, respect and remedy : a framework for business and human rights : report of the Special Representative of the Secretary-General on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises, John Ruggie*, 7 April 2008, A/HRC/8/5

[494] Nicholas Connolly, 'Corporate Social Responsibility: A Duplicitous Distraction?', *The International Journal of Human Rights* 16, no. 8 (1 December 2012): 1228–49, https://doi.org/10.1080/13642987.2012.731193.
[495] Juliette Syn, 'The Social License: Empowering Communities and a Better Way Forward', *Social Epistemology* 28, no. 3–4 (2 October 2014): 318–39, https://doi.org/10.1080/02691728.2014.922640.

On the community side, communities who might feel under threat from extractive projects in their territories are increasingly able to access organisations that can facilitate legal education and help them plan a response. As a result, some have developed their own "community protocol", that can help outline their understanding of their rights. These take various forms, but often include, according to Lewis:

> a description of the group, including its values, relationship with their land and resources, customary laws and governance system; a statement of the community's development aspirations; their rights and responsibilities under national and international laws; and the process for obtaining the community's 'free, prior and informed consent'.[496]

Lewis's summary of a typical protocol shows clear overlaps with the binding law on indigenous community consultations analysed above. A description of the group can enable consultors to understand whom they might best approach to begin to facilitate consultations that best represent the interests of the whole group. An understanding of the areas of land and resources the group uses can ensure an iterative consultation, where the impact information presented is directly relevant to the group's probable concerns.

The 33 Communities of the Salinas Grandes in Argentina worked with a number of national and international NGOs, such as the *Fundación Ambiente y Recursos Naturales* (FARN) and the *Henrich Böll Foundation*, to produce a community consultation protocol, *Kachi Yupi: Huellas de Sal*, which has been celebrated perhaps as the first protocol of its kind. The next chapter uses fieldwork data and an analysis of the legal case of the 33 Communities to document the fulfilment of the rights laid out above in Argentina.

[496] Lewis, 'Indigenous Peoples and the Corporate Responsibility to Respect Human Rights'.

Conclusion

This aim of this chapter was to analyse the environmental human rights of indigenous communities in IHRL and its regional regimes, with a particular focus on procedural environmental rights – participation, consultation, access to justice – and specific rights to consultation and FPIC for indigenous peoples. It highlighted how indigenous peoples are recognised in international legislation and case law as having a particular connection with their ancestral territories, showing how this link has informed the consultation debate. Numerous cases within the Latin American System have demonstrated that the right to consultation and even the right to grant or withhold consent for projects is a developing precedent within international law. Alongside this, the practice of conducting an EIA prior to a project is widely accepted, is included in international environmental law and is commonplace in national law.

The background to these environmental human rights laws creates the central tension of this thesis. While states have the responsibility to respect environmental human rights of their citizens, with extra obligations to indigenous collective groups, the state has permanent sovereignty over natural resources. The state is itself bound by this key principle of international law (permanent sovereignty over natural resources) and is obliged to use revenues to raise living standards in the country (ICESCR). Thus, the state supports industry by granting concessions and tax incentives to extract or develop land and natural resources. This incentive for "development" is supported by an international economic system that prioritises growth and profit, often at the expense of human rights.[497]

The specific purpose of identifying these rights and precedents was to ascertain

[497] Helle Abelvik-Lawson, 'Sustainable Development for Whose Benefit? Brazil's Economic Power and Human Rights Violations in the Amazon and Mozambique', *The International Journal of Human Rights* 18, no. 7–8 (17 November 2014): 795–821, https://doi.org/10.1080/13642987.2014.946800.

which rights apply to the indigenous communities living around the lithium-rich Argentinean and Bolivian salt flats, who have been or will soon be living in the vicinity of large or multiple lithium extraction zones and associated processing facilities. The chapter has established that as indigenous communities, the Kolla, Atacama and Quechua communities living around the salt flats of northern Argentina and southwestern Bolivia have a right to participation in environmental matters under international human rights and environmental law both as individuals and indigenous peoples. Whether rights to participation and consultation or indeed the right to give or withhold FPIC (in the case of Bolivia) have been fulfilled adequately in each state, and to what extent, is the central research question that the rest of the thesis hopes to answer.

CHAPTER 5 ARGENTINA: KOLLA AND ATACAMA PEOPLES' ENVIRONMENTAL PARTICIPATION IN LITHIUM MINING IN JUJUY PROVINCE

Introduction

The northwestern Argentinean provinces of Catamarca, Salta and Jujuy are at the centre of what the Economist has described as a lithium "white gold rush".[498] In Jujuy Province, this is mostly centred around the Olaroz-Cauchari salt flat, upon which two companies have mines that are currently in production. Sales de Jujuy's facility on the Salar de Olaroz produces 17,500 tonnes of battery-grade lithium carbonate annually, although this increasing.[499] Founded in 2010,[500] Sales de Jujuy is a joint venture between Australian mining firm Orocobre, Japan's Toyota Tsusho, and the Jujuy state firm, Jujuy Energía y Minería Sociedad del Estado (JEMSE).[501] The company began commercial production of lithium in 2014.[502]

Operating on Olaroz's neighbouring (and much smaller) salt flat Cauchari is Exar, another joint venture between two foreign mining companies and JEMSE, including Lithium Americas, a Canadian company that counts Japanese automotive corporation Mitsubishi as one of its shareholders.[503] Chilean lithium company Sociedad Química y Minera (SQM) owned 50 percent of Exar until late 2018, when it sold to the Chinese

498 Economist, 'A Battle for Supremacy in the Lithium Triangle'.
499 Juliana Castilla, 'Argentina Lithium Projects Seek Financing as Production Seen Tripling', *Reuters*, 8 February 2017, https://www.reuters.com/article/us-argentina-lithium/argentina-lithium-projects-seek-financing-as-production-seen-tripling-idUSKBN15N2VN.
500 Former leader, Olaroz Chico, Susques Region, Jujuy Province, 6 February 2017.
501 Sales de Jujuy, 'About Us', Sales de Jujuy, n.d., http://salesdejujuy.com/about-us/.
502 Sales de Jujuy, 'Sales de Jujuy'.
503 James Atwood and Jonathan Gilbert, 'Argentina Eyeing Lithium Superpower Status Amid Battery Boom', *Bloomberg*, 6 March 2017, https://www.bloomberg.com/news/articles/2017-03-06/argentina-s-lithium-superpower-ambition-is-good-news-for-tesla.

firm Gangfeng Lithium.[504] Exar had not started actually mining lithium at the time of my fieldwork, but was working closely with local communities. Their plant came into production in November 2018,[505] and has an expected output of 25,000 tonnes of battery-grade lithium carbonate per year.[506]

In order to answer the research question (*to what extent have communities had opportunities to participate in decision-making over the lithium industry?*), compliance with the law presented in Chapter 4 is measured through my analysis of the experiences of two set of communities in the vicinity of these two salt flats, the Salinas Grandes and Olaroz-Cauchari, and one activist group in the based in and around the main town of Susques near Olaroz Cauchari, called the Colectivo Apacheta.

As stated in Chapter 2, Jujuy Province is home to Argentina's largest indigenous population by percentage compared to other provinces.[507] In this region, the communities are predominantly Kolla and Atacama indigenous communities engaged in subsistence farming and, in the case of some of the 33 Salinas Grandes communities, the traditional practice of salt-gathering.

The chapter has three parts. The first analyses Argentinean provincial and federal mining, environmental and indigenous rights law. The second examines the 33 Communities of the Salinas Grandes and the Olaroz Communities, with a focus on their relationship with the land and natural resources. It also summarises the key concerns of the communities (where there are concerns), which are primarily related to

504 Panorama Minero, 'SQM Se Retira de Cauchari-Olaroz – Se Conforma JV Entre Lithium Americas y Ganfeng Lithium – Panorama Minero'.
505 TECH2, 'Minera EXAR Started Its Lithium Production at Cauchari Olaroz'.
506 MarketWired, Lithium Americas Announces Positive Feasibility Study for Stage 1 of the Cauchari-Olaroz Lithium Project, 29 March 2017, accessed 14 March 2018 http://www.marketwired.com/press-release/lithium-americas-announces-positive-feasibility-study-stage-1-cauchari-olaroz-lithium-tsx-lac-2206125.htm
507 INDEC, 2001, accessed 14 March 2018 http://coleccion.educ.ar/coleccion/CD9/contenidos/recursos/datos-mapas/mapa3.html

water and damage to the salt flats used for the traditional practice of salt gathering (in the Salinas Grandes only). The third analyses the extent of consultation based on the criteria laid out in the previous Chapter 4.

This aim of this chapter is to assess levels of community participation based on environmental human rights (the three pillars) and rights as indigenous peoples (to consultation and free, prior and informed consent) identified and analysed in Chapter 4. It also aims to provide an overview of the potential risks to the substantive environmental rights of indigenous communities in the northern provinces of Argentina, based on the limited environmental impact information available. The chapter is the first of two chapters based on primary fieldwork data and background legal and documentary research pertaining to the two communities.

5.1 Mining, environmental and indigenous rights' law in Argentina

This section outlines federal and provincial law in Jujuy pertaining to mining, environmental and indigenous peoples' rights. Law in Argentina is administered by both federal and provincial courts, with federal courts only dealing with cases of a national character or where different provinces or inhabitants are parties. The provisions set out below form the framework upon which compliance is measured in the following sections, which also analyse Argentina's obligations under the international law set out in Chapter 4.

5.1.1 Mining and environmental law in Argentina

Argentina's 2002 General Law on the Environment No. 25.675 gives effect to the constitutional right to a healthy environment (Article 41),[508] and a number of provinces have adopted such a right into their provincial constitutions. Moreover, this article is directly referred to in the national Mining Code Chapter XXII,[509] which the Jujuy Mining Code further references.[510] Many of the Jujuy Mining Code provisions related back to the national code, including the article on environmental protection standards.[511] Chapter XIII, Second Section of the (national) Mining Code elaborates upon the environmental obligations of any entity establishing a mine. It applies to "individuals and legal entities, public and private, centralized or decentralized entities and Companies of the National, Provincial and Municipal state"[512] (Article 247) developing any of the following activities:

> a) Prospecting, exploration, exploitation, development, preparation, extraction and storage of mineral substances included in this Mining Code, including all activities designed to close the mine.[513] (Article 249)

Article 251 stipulates that the miner "must submit an Environmental Impact Report to the enforcement authority, before the start of any activity specified in Article 249" (above),[514] which notably includes both "prospecting" and "preparation", but these are not specifically defined in the law. This report has to meet the standards laid out in Law 24.585, incorporated into the Mining Code, which regulates environmental protection

508 Government of Argentina, *Argentina (Republic of)'s Constitution of 1853, Reinstated in 1983, with Amendments through 1994,* translated by Jonathan M. Miller and Fang-Lian Liao (Oxford: OUP, 1994), Article 41.
509 Government of Argentina, National Mining Code of Argentina enacted by Law No. 1,919 in 1886 and subsequently amended several times since, Chapter XII.
510 Province of Jujuy, Law 5186 Code of Mining Procedures, 2000, refers to Chapter XII, Article 34 of National Mining Code.
511 Government of Argentina, National Mining Code of Argentina enacted by Law No. 1,919 in 1886 and subsequently amended several times since, Chapter XII.
512 Ibid, Article 251. Author's italics.
513 Ibid. Author's italics.
514 Ibid. Author's italics.

for mining activities.[515] Following this, the enforcement authority issues an "Environmental Impact Declaration" to allow the applicant to develop the activities.[516]

National Argentinean environment law states that all activities that could modify or alter the environment, resources or the quality of life of the population "in a significant form" must be subject to the process of an Environmental Impact Assessment (EIA),[517] although it does not define a "significant" modification. The state is responsible for the management of this process,[518] the practice of which is devolved to the provinces. Furthermore, Argentina's General Law on the Environment Article 20 provides for public hearings prior to the authorisation of activities that may generate "negative and significant effects on the environment", again without defining 'significant'.[519] Article 21 states that

> Citizen participation must be ensured, mainly, in the environmental impact assessment procedures and in the environmental planning plans and programs of the territory, in particular, in the stages of planning and evaluation of results.[520]

Although the law again is unclear on exactly when citizen participation must occur, the repetition of "planning" suggests that this should be before any substantive mining activity takes place.

Jujuy's General Law on the Environment's Article 45 states that

> The regulations shall provide for mechanisms to ensure the proper dissemination of environmental impact studies of the projects submitted for evaluation, so that they may be consulted by interested parties who wish to make observations. Likewise, it will also provide for the holding of public hearings in order to submit the project to the community concerned for consultation.[521]

515 Government of Argentina, Law No. 24.585, on environmental protection for mining activities in Title XVIII, section 2 of the Mining Code.
516 Thomson Reuters, 'Mining in Argentina: Overview', Practical Law, n.d., http://uk.practicallaw.thomsonreuters.com/7-572-8327?transitionType=Default&contextData=(sc.Default)&firstPage=true&comp=pluk&bhcp=1.
517 Government of Argentina, *Ley General de Ambiente No. 25.675*, 28 November 2002, Article 8.2 and 11–13.
518 Ibid, Article 12.
519 Ibid, Article 20.
520 Ibid, Article 21.
521 Province of Jujuy, *Ley General de Ambiente No. 5063*, 1998.

Interestingly the language changes here to "studies", rather than reports, indicating that the earlier report is only for the competent authority to approve the activity. These are what are supposed to be taken to interested parties.

Taken together there are clear rights for environmental participation at some point in advance of the establishment of mining projects in Jujuy, including obligations on the mining company to present an EIR at the earliest stages to the enforcement authority, and for studies to be presented to "the community concerned" in public hearings.

5.1.2 Environmental impact assessments and the right to consultation

Above I established that the national Mining Code (referenced in the Jujuy Mining Code) requires an EIR submitted to the enforcement authority before any kind of activity takes place, including prospecting. The Province of Jujuy's General Law on the Environment No. 5063 outlines the process for producing and disseminating an EIA. This process is partially outlined in Article 42, which states that:

> In the planning of works or public or private activities susceptible to produce environmental deterioration the accomplishment of prior studies of environmental impact will be obligatory in all the provincial territory.[522]

Furthermore, Article 43 of Jujuy's environment law states that:

> The projects of works or activities included in the stated regulations must be communicated, *before the beginning of their execution*, to the enforcement authority or to the corresponding competent provincial organs, which determine, within the term the regulations establish, whether or not they should be submitted for the environmental impact assessment.[523]

The "prior" submission of the request here is key: the company must communicate to the mining authority before beginning work, in the form of an EIR, the projected "environmental deterioration". Then, the "competent provincial organs" decide on

[522] Ibid, Article 42.
[523] Ibid Article 43. Emphasis added.

whether the activity needs an EIA. The distribution of the EIA is determined by Article 45 above, which includes public hearings "in order to submit the project to the community concerned for consultation".[524]

The *Fundación Ambiente y Recursos Naturales* (FARN), an Argentinean NGO that worked closely with the 33 Communities on legal education following the prospecting on the Salinas Grandes in 2010, interprets Jujuy's environmental law as follows. According to FARN, there are four stages of submitting and presenting an EIA to the public, which are: 1) the presentation of the Environmental Feasibility Request with the Environmental Impact Study (EIS); 2) the Public Hearing (where the community is informed of the contents of the study); 3) the Environmental Feasibility Report, that can approve or reject the project (and can also submit modifications or conditions); and 4) in the case it is approved, the Environmental Aptitude Certificate.[525]

The Jujuy Law on Public Hearings No. 5317 further stipulates that contents of the EIS must be made known to affected parties in advance of the public hearing. It also requires that the public hearing must be publicised and be held in a place, on a day and at a time that is convenient for its expected audience to attend. [526] These are similar provisions to those found in supporting conditions for the enactment of consultation of indigenous peoples under ILO169.[527] However, there is nothing in the law to suggest that responses should be taken into account. Therefore, the modality of participation could be seen as weak, according to Picolotti,[528] as responses from communities heard

[524] Ibid Article 45
[525] Fundación Ambiente y Recursos Naturales (FARN) *EIA en Jujuy*, presentation from workshop in Abra Pampa, 25 August, 2008, accessed 2 January 2018, http://farn.org.ar/wp-content/uploads/2008/08/taller_jujuy250808.pdf
[526] Ibid.
[527] Barelli, "Free, prior and informed consent in the aftermath of the UN Declaration on the Rights of Indigenous Peoples".
[528] Picolotti, "Agenda 21 and Human Rights: The Right to Participate". It is also worth noting that new legal instruments are being developed to account for the unique way lithium resources are exploited (i.e. due to brine resources needing to be shared between two or more mining companies) and in order to

within "public hearings" are unlikely to be binding on the state.

Environmental participation rights are however well represented in Jujuy's environmental law, as outlined above. However, the requirement to present an EIA to an *audiencia pública* (public hearing or meeting) is determined by the authorities' assessment of the EIR and whether damage will likely be significant. Even where an EIA is required, it appears that the community's opinion is not likely to be binding.

5.1.3 Indigenous peoples' rights law in Argentina

The Argentinean Constitution mentions indigenous peoples only once. Article 75.17 of the provides that "The Congress shall have power… [t]o recognise the ethnic and cultural pre-existence of indigenous Argentine peoples" and "to recognize the legal standing of their communities, and the possession and community property over lands they have traditionally occupied". Moreover, Congress also has power to "to assure their participation in the related administration of their natural resources and of other interests affecting them".[529] The article concludes that "[t]he Provinces may exercise these powers concurrently.[530] While this appears to grant rights to indigenous peoples to legal recognition, property and participation, it could be assessed as weak: the article's opening clause grants that "Congress shall have power" to "recognise the legal standing of their communities" and other rights; it does not grant the rights themselves.

There are two national laws of note on the rights of indigenous peoples. The 1985 Law on Indigenous Policy and Support for Aboriginal Communities No. 23.302 recognises indigenous communities (Article 2), creates the National Institute of Indigenous Affairs (Article 5), and commits to, *inter alia*, land allocation (Articles 7–13),

administrate in cases where a salt flat crosses provincial borders as is the case with the Salar de Hombre Muerto (Catamarca–Salta) and Salinas Grandes (Salta–Jujuy), according to the Salta legal counsel.

529 Government of Argentina, *Constitution of Argentina 1853 (1994).*

530 Ibid.

education (Articles 14–17) and health (Articles 18—21) for Argentina's indigenous populations.[531] The second is the Indigenous Land Law No. 26.160,[532] which was established as an emergency law in 2006 for only four years to suspend evictions and register land rights for over 1,500 indigenous communities in Argentina.[533] To date, only around 500 communities have been granted rights to their land,[534] evictions have continued and indigenous protests for land have been violently suppressed by the state.[535] As recently as September 2017, representatives of communities from across Argentina camped outside Congress to demand the extension of the law, which was granted.[536] It is still temporary (or "emergency") legislation however.

Article 50 of the Jujuy Constitution (developed from the constitutional reforms that occurred in 1986) states that "[t]he Province shall protect the aboriginals by means of adequate legislation that drives their integration and social and economic progress".[537] The use of the outdated "aboriginals", and the drive for "their integration and social and economic progress" recall the assimilationist principles within ILO107, in force at the time of this reform (1986), before the updated ILO169 (1989).[538]

531 Government of Argentina, *Ley No. 23.302 sobre Política Indígena y apoyo a las Comunidades Aborígenes* [Indigenous Policy and Support for Aboriginal Communities], 1985.

532 Government of Argentina, *Ley No. 26.160, Declárase la emergencia en materia de posesión y propiedad de las tierras que tradicionalmente ocupan las comunidades indígenas originarias del país, cuya personería jurídica haya sido inscripta en el Registro Nacional de Comunidades Indígenas u organismo provincial competente o aquéllas preexistentes,* 2006.
This law was approved in 2006 for an initial period of four years, extended to a total of 11 years. Following protests, marches and an encampment, and some months after the forced disappearance of Mapuche indigenous activist Santiago Maldonado, the law was extended for another four years in September 2017.

533 Giacoppo, Silvia, "Ley 26.160: una deuda historica con los pueblos indigenas", *Telam*, January 2, 2018 at http://www.telam.com.ar/notas/201709/207406-le.y-26160-una-deuda-historica-con-los-pueblos-indigenas.html

534 Ibid.

535 Amnesty International, 'Indigenous Peoples in Argentina'.

536 Resumen Latinoamericano, "El Senado aprobó la prórroga de la Ley de Tierras para los Pueblos Originarios/ Representantes de las cuarenta comunidades originarias acamparon frente al Congreso", September 27, 2017, accessed January 2, 2018, http://www.resumenlatinoamericano.org/2017/09/27/argentina-el-senado-aprobo-la-prorroga-de-la-ley-de-tierras-para-los-pueblos-originarios-representantes-de-las-cuarenta-comunidades-originarias-acamparon-frente-al-congreso/

537 Province of Jujuy, *Constitucion de la Provincia de Jujuy*, 1986, Article 50.

538 Translation by author. Original: Article 50: "*La Provincia deberá proteger a los aborígenes por medio de una legislación adecuada que conduzca a su integración y progreso económico y social*"

Although ILO169 is present in national law in its own discrete piece of legislation, the mining authorities in the region see their obligations under international indigenous human rights law as *not* requiring the seeking of consent from indigenous communities, nor that they are bound by any prior consultation. The Salta legal counsel I interviewed told me that

> *in practice, the communities in Jujuy may confuse what is consultation (free prior and informed), with consent. A consultation may be binding or not. Consent, which means that the community does or does not want it, this can close or develop the project. In Canada, if the community does not want it, it isn't developed. In Canada there is consent. In Argentina, these laws do not require prior consultation.*[539]

The idea that Canadian First Nations have a "right to veto" is erroneous, but there is a certainly a lack of clarity within the Salta Mining Ministry as to whether consent should be sought, or consultations performed at all (and whether if they are, they should be binding).

Notably Jujuy has no specific laws relating to the rights of indigenous peoples in the province, and their special status pertaining to land rights is not acknowledged in provincial or environmental codes. Despite this, the legal counsel for the Salta Mining Ministry, however, told me that (presumably like anyone else set to be affected) indigenous communities in Salta and Jujuy must be informed:

> *From the first stage. From prospection, it is already required. It's like a ladder of requirements. The more the project advances towards exploitation, the greater the requirements for social issues, and the links between the company and the community must become bigger. Larger meetings, larger public hearings.*[540]

The response is vague, indicating that the process for involving communities is primarily through increasingly larger meetings, and that this is considered a "social issue". Notably, the government mining officials I spoke to in both provinces were keen to point out that Argentinean law stipulates that it is the *state* that owns any

539 Legal counsel, Salta Mining Ministry. Interview with author, Salta, 18 May 2017
540 Ibid.

subsurface resources, not the owners of the land.[541] Argentinean Constitution Article 124 affirms that "[t]he original ownership over natural resources existing in their territory belongs to the Provinces."[542] This is a common claim by states, and exactly why it is referenced in ILO169 Article 14, which grants a right to consultation for indigenous communities even where the state claims ownership of subsurface resources.[543]

In sum, there is no evidence in the law in Jujuy that indigenous communities are afforded any special protection measures (such as a right to consultation clearly provided for in international law) when a mine is being proposed.

This conclusion reflects a general sense that Argentina's indigenous peoples struggle to access their rights. Ruteere, the UN Special Rapporteur on racism and related intolerance, has stated that Argentina's indigenous people are "largely invisible in society and are excluded from the country's senate, congress and judiciary".[544] It is notable that across Jujuy, in the suburban indigenous communities of the Humahuaca Valley, there are evident problems with discrimination and indigenous rights violations. These include the imprisonment without trial for over a year of indigenous leader Milagro Sala on spurious allegations of corruption, a case which drew attention from

[541] Ibid; Salta Geology Professor and former Salta Mining Minister, Interview with author, Salta, 10 May 2017; Mining Minister of Jujuy Province. Interview with author, San Salvador de Jujuy, 22 May 2017.
[542] Government of Argentina, *Argentina Constitution 1853* (with revisions to 1994), Article 124.
[543] This is further compounded in the lithium triangle states by their categorization of lithium as also a "strategic" mineral, a line that was used by one of company community relations' lead. According to Fornillo, it was "[t]hrough the Governmental Decree No. 7592 of March 2011, the government of Jujuy declared lithium a 'strategic natural resource', forcing exploration and mining exploitation projects to be subject to prior study by a Committee of Experts for the Comprehensive Analysis of Projects of Lithium." Bruno Fornillo, "Del salar a la batería": Política, ciencia e industria del litio en la Argentina", in Bruno Fornillo, *Geopolítica*, 2015, p.72 (fn 11). There is little detail as to what that might mean in practice for the communities. The implication is that the state's claim to the resource is strengthened, and that consultation processes or FPIC for indigenous communities, even those that own the land, do not apply in Argentina.
[544] Mutuma Ruteere, "Full text of the press statement delivered by the United Nations Special Rapporteur on contemporary forms of racism, racial discrimination, xenophobia and related intolerance", Buenos Aires, Argentina, 23 May 2016, accessed 2 January 2018, http://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=20005&LangID=E

Amnesty International and the United Nations (see Chapter 2).[545]

5.2 Communities around the Salinas Grandes and Olaroz-Cauchari salt flats

The following section primarily uses data gathered during fieldwork to set out the legal interest of indigenous communities of the high Andean plains of Argentina's Jujuy province in land and natural resources in the region. While this naturally focuses on the salt gathering communities of the Salinas Grandes, responses of both these and the Olaroz Communities to lithium mining are also explored in full. The section concludes with a brief overview of the environmental concerns surrounding lithium mining in Argentina.

5.2.1 Kolla and Atacama communities' use of the salt flats and surrounding land

Jujuy has been home to Kolla and Atacama indigenous communities since 500AD.[546] Their reliance on the environment for their survival, particularly reliable access to water in an arid region, and traditional livelihoods creates a natural tension with the incoming mining companies. As the Mining Minister of Jujuy told me "*We are the capital of mining. We are capital of the Pachamama as well."*[547] *Pachamama* is the Quechuan and Aymaran indigenous word for the Inca "Mother Earth" fertility goddess,[548] and also refers to "mother nature" generally. Jujuy's status as the "Pachamama Province" is used in tourism advertising, such as on billboards promoting the province's natural attractions that span north towards Bolivia along the UNESCO World Heritage-recognised

545 Amnesty International, "Argentina: further information: arbitrarily detained for over a year: Milagro Sala", 2 February 2017, Index number: AMR 13/5612/2017, accessed 31 October 2018, https://www.amnesty.org/en/documents/amr13/5612/2017/en/; James Anaya, Report to the Human Rights Council on the Situation of Indigenous Peoples in Argentina, 4 July 2012, U.N. Doc. A/HRC/21/47/Add.2.

546 Wikiwand, Atacama people, nd, accessed 12 January 2019 http://www.wikiwand.com/en/Atacama_people#/History

547 Mining Minister of Jujuy Province. Interview with author, San Salvador de Jujuy, 22 May 2017

548 Lira, Jorge A. *Diccionario Kkechuwa–Español* . Tucumán, Argentina, 1944. *"La" Pachamama*, which is what Miguel says here; this usually denotes nature rather than the goddess herself.

Quebrada de Humahuaca valley.[549] These natural attractions include the Salinas Grandes, the fourth largest salt flat in South America.

The Kolla and Atacama indigenous communities in the *puna* generally comprise a few hundred people per community, and are widely dispersed across the landscape, often many kilometres apart. The communities self-organise through monthly meetings led by a community association leader, who is democratically elected every two years by the community.[550] Decisions are made at these meetings by consensus, and enacted by the leader who is often supported by a smaller committee.

The communities have similar subsistence traditions to their counterparts in neighbouring Chile and Bolivia. This includes grazing llamas and other camelids for meat, milk and wool as well as rearing goats and donkeys for food and transport. For some of the communities in the Salinas Grandes basin, salt harvesting is a very important part of their economic history and culture.[551] A traditional activity of the communities here since pre-Columbian times, salt is still cultivated on the Salinas Grandes salt flat and harvested according to a seasonal pattern of salt "growth", which depends on stable water cycles. In an economic structure that goes back to before the Spanish Conquest, salt is then transported to the valleys to trade for other goods.

The salt harvest relies on the natural hydrological cycles of the salt flat. As salt production has occurred for centuries on the Salinas Grandes, it is not only economically but also culturally and even spiritually significant to these communities.

549 This is a UNESCO World Heritage site as it follows the line of the Camino Inca (Inca Way), a major cultural route that has been used over the past 10,000 years as a crucial passage for the transport of people and ideas from the high Andean lands to the plains", and is "the most important physical linkage between the high Andean lands and the extensive temperate plains in south-eastern South America." UNESCO World Heritage List, at http://whc.unesco.org/en/list/1116

550 It is notable that there seem to be few demographic barriers to entry for this role, and numerous social groups were represented: many communities I visited elected leaders who were women, very young, or who lived with a disability, for example.

551 Göbel, 2013: 144. Göbel describes this region as a space of transition and socioeconomic articulation between highlands and lowlands that is characterized by a high degree of social fragmentation (cited in Fornillo, Geopolitica, 2015).

When a news reporter interviewed a former leader of a community near the Salinas Grandes called the Santuário de Tres Pozos, she said: "The salt lake is a sacred place for us, a part of our family. We can't destroy it."[552] Of the 33 Communities who live all across the Salinas Grandes and Lake Guayatayoc watershed or basin, many of them (but not all) are actively involved in salt-gathering through three cooperatives. Nonetheless, the salt flat appears to be culturally and even spiritually important to most if not all of the communities. The representative of the 33 Communities told me that

> *it is important that the work of the community is recognised ... because if not it is like it's just in the air. We said that we wanted to take into account that many activities are done in the Salinas, because they were not talking about our use of the salt.*[553]

He continued that the land also *"has the theme of water, issues of pasture, the issues of the cycle…"* he continues, referring to a cycle of salt "growth" that occurs in a seasonal pattern, which is detailed in the *Kachi Yupi* consultation protocol (see Appendix A).

According to my informant from the 33 Communities, only some have official communitarian land title from the state. Although I was unable to visit them all to verify either way, it appeared that more of the Olaroz Communities had had their communitarian land rights regularised by the state. In contrast to the Salinas Grandes communities, none of the Olaroz Communities are directly engaged with salt gathering practices. Interestingly, despite their proximity to the Olaroz salt flat, none of the inhabitants of Olaroz Chico practise salt gathering or use the natural resources from the Olaroz-Cauchari salt flat as some of the Salinas Grandes communities do. This is not for want of trying: "*We tried [mining] iodine once, but it didn't work*", I was told by the former community association leader.[554]

In this region the unifying geography is not just the salt flat but the watershed, or

552 Pellettieri, 'Mining Firms Seek Argentina's "White Gold," But Local Approval Proves More Elusive'.
553 Representative from 33 Communities. Interview with author. Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.
554 Ibid.

basin. Although the communities are widely dispersed, this can mean that a community many kilometres away from the salt flat can still be concerned for its integrity, for environmental as well as economic, cultural or even spiritual reasons.

5.2.2 Responses to lithium mining company proposals around the Salinas Grandes

In 2010 a team from a company called "American Salar" arrived in Salinas Grandes and started prospecting for lithium, by drilling holes in the salt flat. According to my interviewee, and other studies in this area, there was no information sent in advance to the communities by either state authorities or the company. Even by 2017, lithium mining processes were unclear to my informant:

> *We do not really know, nor have we seen how lithium is exploited. When American Salar's workers were doing a little exploitation... the people who were working there were lunatics! They looked like they were extra-terrestrials, with all this equipment. If it is not polluting, why there near their encampment was the sign with the mask that says it was forbidden to pass on danger of death?!*[555]

Seeing the workers in hazmat suits and the skull-and-crossbones signs was clearly alarming to community members. He said that the people in his village, located around 12 kilometres from the main road that runs through the salt flat, only found out about the activity when the salt cooperative workers felt that neighbouring villages needed to be aware, and so sent a local on a mule to notify them.[556] The prospecting by the company, known to community members as "American Salar", spurred the communities into organising and forming the *Mesa de comunidades originarias de la Cuenca de Salinas Grandes y Laguna de Guayatayoc para la defensa y gestión del territorio.* According to their lawyer, this provided them with "*institutional weight within the provincial government*".[557] Eight of the 33 Communities are located in Salta Province; the rest are in Jujuy, and

555 Representative from 33 Communities. Interview with author. Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.
556 Ibid.
557 Alicia Chalabe, Lawyer for the 33 Communities. Interview with author, San Salvador de Jujuy, 3 February 2017.

these communities have a population totalling approximately 6,500 people.[558]

Interestingly, the Mesa was only formed in response to lithium prospecting, to galvanise allegiances between widely dispersed communities in pursuit of a common goal. It bears repeating that only some communities are engaged with salt gathering, but it is clear that concerns over damage to the salt flat are not restricted to those who use the salt directly. As the lawyer for the 33 Communities noted:

> *the environmental impact not only passes by one community, but also by the basin – because that is what will take all the impact, right? It's not just impacting a single community, but the whole basin.*[559]

This framing of the basin as a collective area of impact matches with the indigenous communitarian importance of "living well" in harmony with nature and others. This was elaborated by the representative of the 33 Communities:

> Buen vivir *has to be with nature. You cannot live without nature in accordance, really. If you do not have… if you take everything out of nature, what are you going to do, what are you going to have? You don't have anything. You do not have shade if you do not plant the trees to make the shade. The idea* [buen vivir] *means consolidating and accompanying nature.*[560]

Interestingly, he invokes the indigenous cosmovision more commonly associated with Bolivia and Ecuador (see Chapter 2), as a defence against lithium mining on the Salinas Grandes.

In 2011, following the arrival of lithium prospectors on their traditional territories a year earlier, the 33 Communities took a legal case against the Jujuy and Salta Provinces to the Argentinean Supreme Court.[561] The case put forward a demand for

[558] Comité de Derechos Económicos, Sociales y Culturales, *Informacion Paralela Al Comite De Derechos Economicos, Sociales Y Culturales Con Respecto Al Tercer Informe Periodico De Argentina* (Un Doc. E/C.12/Arg/3) Segun El Pacto Internacional De Derechos Economicos, Sociales y Culturales, Preparada por la Mesa de comunidades originarias de la Cuenca de Salinas Grandes y Laguna de Guayatayoc para la defensa y gestión del Territorio, Con el apoyo de la Comisión Internacional de Juristas, 47a Sesión, 14 de noviembre – 2 de diciembre de 2011.
[559] Lawyer for the 33 Communities. Interview with author, San Salvador de Jujuy, 3 February 2017.
[560] Representative from 33 Communities. Interview with author. Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.
[561] Supreme Court of Argentina "Comunidad Aborigen de Santuario Tres Pozos y otros c/ Jujuy, Provincia de y otros s/ amparo" December 18, 2012 C.1196.XLVI accessed January 2, 2018, http://public.diariojudicial.com/documentos/000/020/091/000020091.pdf

consultation, clearly based on the belief that they were entitled to be consulted based on their traditional use of the salt flat and occupation of the surrounding areas. They lost this case, on the grounds that the prospecting activity was unlicensed, and did not affect the communities directly.

However, the communities had commissioned a report stating that following the prospecting activity, which included the drilling of at least 47 perforations in Salinas Grandes, the area had become contaminated.[562] Elaborating on this during the case, one of the lawyers participating in the lawsuit, Solá, said of the prospecting company:

> They drilled the aquifer. And they committed a double wrong. They contaminated the aquifer from where [the communities] obtain water for animal husbandry and orchards. And, worse, the fresh water that rose to that part of the salt bank ruined the salt, so it cannot be cut and sold anymore.[563]

This shows that there were impacts from the prospecting activity, although it was denied by the judges in the case taken to the Supreme Court that these impacts had affected the communities directly.[564]

Following the prospecting in 2010, national and provincial indigenous and environmental NGOs such as FARN began to assist the communities in helping them identify, understand and mount a legal challenge demanding their rights. This assistance developed into community-centred meetings and workshops, and the publication of the community consultation protocol *Kachi Yupi: Huellas de la Sal: procedimiento de consulta y*

[562] "Consideraciones ambientales en relación con la construcción de pozos de prospección minera y/o hidrogeológica en las Salinas Grandes" [Environmental aspects of drilling wells for mining or hydrogeology prospecting in Salinas Grandes], cited in Valente, 'Native People in Argentina Demand a Say in Lithium Mining'.
[563] Dario Aranda,, "Lithium Fever," Página 12, June 6 2011, accessed March 11, 2019, https://www.pagina12.com.ar/diario/sociedad/3-169555-2011-06-06.html.
[564] The communities were not able to "demonstrate […] that the alleged grievances affect them in a 'sufficiently direct', or 'substantial' manner; that is, that they [the grievances] possess 'sufficient concreteness and immediacy' to be able to procure said process." "Comunidad Aborigen de Santuario Tres Pozos y otros c/ Jujuy, Provincia de y otros s/ amparo", para 6.

consentimiento previo, libre e informado para las comunidades indígenas de las Salinas Grandes y Laguna de Guayatayoc (see Appendix A).[565] This protocol establishes the communities' interest in the Salinas Grandes salt flat and surrounding watershed for their subsistence and traditional activities. Interestingly, "Kachi Yupi" is Quechua for "tracks in the salt", despite Quechua not being widely spoken across these communities.

The 33 Communities continue to resist lithium mining proposals, staging protests in which "*No comemos baterías, se llevan el agua se va la vida*" has become their rallying slogan.[566] There are small signs of this ongoing resistance, in the form of anti-mining graffiti on the long road from San Salvador de Jujuy to the Salinas Grandes (see Photograph A9).

The Salinas Grandes communities has received some attention from international human rights institutions, most notably when the former Special Rapporteur to the Secretary General of the Office of the High Commissioner for Human Rights (OHCHR) on the Rights of Indigenous Peoples James Anaya visited the region in 2011. His report stated that

> it is feared that the proposed extraction of lithium will reduce the water level in this arid region, where water is needed to raise sheep, goats and llamas and is also essential to salt production and harvesting, an important activity within the traditional economy in the area.[567]

This visit was effective in providing international attention, highlighting the traditional salt economy and warning that substantive environmental rights might come under threat from proposed lithium mining on the Salinas Grandes.

While there was no lithium mining taking place on the Salinas Grandes by 2019, a

565 The 33 Communities of Salinas Grandes and Guayatayoc, 'Kachi Yupi / Huellas de Sal [Footprints in the Salt]: Procedimiento de Consulta y Consentimiento Previo, Libre e Informado Para Las Comunidades Indígenas de La Cuenca de Salinas Grandes y Laguna de Guayatayoc'.
566 Darío Aranda, '"No Comemos Baterías": Reclamos Por La Avanzada En La Explotación de Litio', *Página12*, 16 February 2018, https://www.pagina12.com.ar/96013-no-comemos-baterias.
567 James Anaya, Report to the Human Rights Council on the Situation of Indigenous Peoples in Argentina, 4 July 2012, U.N. Doc. A/HRC/21/47/Add.2

complex web of concessions on the salt flat have been bought and sold by various companies since the industry arrived there in the mid-2000s. Orocobre, the Australian firm actively now mining at Olaroz-Cauchari through Sales de Jujuy, acquired a company called South American Salar in 2008,[568] and bought concessions in Salinas Grandes which were then sold in 2017 to LSC Lithium. In 2016 Dajin Resources also signed a deal to share the concession with another lithium firm, Lithium S, who now owns 51 percent of the concessions on Salinas Grandes.[569]

While the above indicates that there was little notification about the prospecting activity, a full analysis of whether and how the Province of Jujuy breached the communities' rights to consultation is found in the third section of this chapter.

5.2.3 Responses to lithium mining around the Olaroz-Cauchari salt flat

Upon turning north off the westbound border-crossing road towards Chile, a large Sales de Jujuy billboard signals the presence of Jujuy's first lithium mining plant, situated on the edge of the Olaroz-Cauchari salt flat. The billboard reads "From Jujuy to the world" (see Photograph A8). This marks the turning to the mine and also the village of Olaroz Chico, the closest village to the salt flat upon which Sales de Jujuy has its lithium mine, established in the early 2010s.

I learned from company officials that ten communities around the Olaroz-Cauchari salt flat region were working with or for Sales de Jujuy; six of these ten with Exar.[570] Further away from the salt flat, but closer to the town of Susques, are three of these communities: Huáncar, Pastos Chicos and Puesto Sey. In contrast to the 33 Communities of the Salinas Grandes who have resisted lithium mining since

568 Relationship Science database, South American Salar Minerals Pty Ltd., nd, accessed 14 March 2018, https://relationshipscience.com/organization/south-american-salar-minerals-pty-ltd-1651427
569 Dajin Resources, Projects, 2017 at http://dajin.ca/en/projects [Accessed 28 October 2017]
570 Argentina Municipal, Seis comunidades jujeñas trabajan en torno a proyecto de litio, 7 January 2016, accessed 14 March 2018 http://argentinamunicipal.com.ar/argentina/?p=22208

prospecting took place in 2010, these communities appear to have long-standing relationships with one or both of the two companies, Sales de Jujuy and Exar. Although it was hard to ascertain the nature of these relationships due to being refused interviews in two of these three communities, the relationships appear to comprise three key elements: 1) contracts called *servidumbres*, 2) company jobs, and 3) funding for community projects.

Although the nature of the relationships was difficult to determine clearly, I was able to establish some basic facts: The first company arrived in 2004, and the communities have generally viewed the companies favourably since, perhaps due to the actual and potential work opportunities for community members they provide. Furthermore, the communities have signed contracts agreeing company access to their lands and resources such as water, in exchange for cash payments, known as "*servidumbres*". *Servidumbre* is the Spanish word for "easement", a legal term granting the right to pass through or use land or resources for a specified purpose, granted by the owner of that land. In this region many of the communities, presumably having communitarian title to their land, have signed *servidumbres* with either Sales de Jujuy or Exar.[571]

Long before reaching the community of Olaroz Chico, which sits on the hill overlooking the Olaroz salt flat, the scale of the lithium mining operation in their midst is clear. The community is a good twenty minutes' drive from the plant, so although the salt flat is visible from the community, the plant itself is not. I conducted a detailed interview with a former leader of Olaroz Chico, who explained the timeline and what the company did, albeit with some confusion over whether the company first arrived in

571 The word *servidumbre*, which I will continue to use in the original Spanish, directly translates as "servitude" or "bondage", which is particularly interesting given the postcolonial context within which they are currently being used.

2004 or 2006:

> *They arrived in 2006. Well, I'll tell you… I believe the community already had title. It was organised that they would do a presentation of the environmental impact, which the community waited for around two years… two years waiting for authorization to enter the community to work. […] The company is came in 2004. Yes. The company came in 2004, of course empowered with a lawyer. They left a folder and in 2006 were authorised to enter to work. But this… they did the whole process as it has to be done in the province, let's say.*

Notably, it seems that the community had only just received title to its land when the company arrived. This title may have encouraged the stated deliberate engagement of the community as per provincial legislation. That the company were "*of course empowered with a lawyer*" may suggest that the process was done precisely according to Jujuy's environmental law. Notably, he did not mention the community having its own lawyer.

There was no indication that early mining activities had caused any concern amongst the community, perhaps as they do not use the salt flat in the same way as some of the 33 Communities of the Salinas Grandes area. To the communities in the vicinity of the Olaroz-Cauchari salt flat, which include Olaroz Chico, and (at a greater distance from the salt flat) Huáncar, Pastos Chicos and Puesto Sey, lithium mining is seen as a decent option for local work, which is generally scarce. As a former leader of Puesto Sey, and now Exar employee, told me, "*in the* puna*, there's only raising animals, for our own sustenance, and mining. There's not much else*".[572] My informant in Olaroz Chico echoed this, saying that the only source of work is "*mining and cattle; a little crafts, but very little*".[573] The economic benefits of cash from mining companies through *servidumbres* and salaries is already apparent in this community: reporters from the Washington Post came to Olaroz Chico in 2016 and interviewed the local primary school teacher who had "noticed new wooden windows and doors on some of the mud-brick homes in

572 Former community association leader, Interview with author. Puesto Sey, Susques Region, Jujuy Province, 5 February 2017
573 Former community association leader, Interview with author. Olaroz Chico, Susques Region, Jujuy Province, 6 February 2017

Olaroz Chico", and that "[h]er schoolchildren appear better dressed than before".[574]

However not all who live in this area are happy with the arrival of lithium mining. Based in the region's capital, the town of Susques (which is perhaps quadruple the size of any of the communities by population), a small anti-mining collective called the Colectivo Apacheta was founded in 2012 in response to the lithium mining proposals. An activist group comprising a few farming families that lived in and around Susques, their concerns over environmental impacts on traditional livelihoods align closely with the concerns of the 33 Communities.

The name for the collective, *apacheta*, is fundamentally linked to the Andean indigenous experience. An *apacheta* is a small stone mound to which passing travellers add stones for good luck. It grows slowly but surely with each passing traveller, and this is how the head of the group characterises the movement. He said they are only five now, but this will grow "*because we believe a lot in Pachamama. Mother Earth generates everything. And* buen vivir. *Yes, we believe in that. A lot.*"[575] The use of the Andean concepts of the *apacheta*, *Pachamama*, and *buen vivir* further signify an indigenous paradigm for the resistance to lithium mining, also apparent in the approach of the 33 Communities. The head of the Colectivo Apacheta told me that:

> *The Colectivo Apacheta does not agree with the development of mega lithium mining. Why not? It worries us, the consumption of water. The consumption of water, because according to what they say it uses two hundred litres per second.*[576]

He does not accept that lithium mining uses only brine. He says, "*brine* is *water; it's liquid for us.*"[577] In a dry region, where groundwater is extremely important for survival, the position is understandable.

574 Frankel and Whoriskey, "Indigenous people are left poor as tech world takes lithium from under their feet", Washington Post, 16 December 2016.
575 Ibid.
576 Representative from Colectivo Apacheta. Interview with author, Susques, Jujuy Province, 3 February 2017.
577 Ibid.

This respondent is well-known locally for the anti-mining group he has founded. He is referred to as an anti-mining "*catastrophist*" by one lithium company's community relations executive. She questions his anti-mining stance, and even his right to comment on regional development on the basis that he is a "*false representative*" who "*grew up in San Salvador*" (the capital city of the province) and only came to Susques because he identified "*the possibility of becoming a leader*".[578] However, the motivations he himself gave for the protection of the territory were typical of someone with indigenous ancestral claims to a particular area:

> *Our grandfather has left us these fields. Tremendous fields. And we have to take care of them. Because it is thanks to that countryside we are able to live. Because my grandfather lived there; my grandfather, my mother, and so did we. So let's see it as what has given me life for a long time, year after year. They talk of the [Susques cactus-beam] chapel that is 500 years old. Like this, it's 500 years that my grandfather lived here.*[579]

Furthermore, his interest in the land of his grandfather has directly influenced his opinion over lithium mining's potential impacts on water levels:

> *We are afraid as we live in the countryside... From the level of water, the amount that they are taking out, the level of our water will go down. Our fear is to lose the field and lose our livestock, be it the llama, the goat. And we survive from our animals. For example the meat, the wool, they are... this is primordial for us. Talk about history... This has been the life of our grandfather.*[580]

He insisted that *"the fight has to continue because, more than anything, water is a common good for all human beings, animals and plants. If there is no water, no one exists, not rich nor poor."*[581] What this demonstrates is that although the issues of disruption to salt gathering may be a concern to some communities, water is the primary concern, and one relevant to all communities in the region.

578 Community relations executive at lithium company. Interview with author, San Salvador de Jujuy, 20 February 2017.
579 Representative from Colectivo Apacheta. Interview with author, Susques, Jujuy Province, 3 February 2017.
580 Ibid.
581 Ibid.

5.2.4 Concerns over mining contamination and water use

A three-year drought in the region has made measuring the impact of lithium mining on water supplies difficult. There was simultaneous concern in communities over the drought as well as the incoming lithium industry. As the representative for the 33 Communities told me:

> *We have always been raising the issue of land use, and water issues. And we see, and we know, that the water in the area has got very low. Now more than ever, it has not rained… we are in February. If it rained, it rained millimeters; very little or nothing, so this is what worries us the most. And we see, we really know that the water is lower. We are doing constant surveys on how the water levels are dropping, now, while [lithium] exploitation isn't happening.*[582]

Echoing the above, the head of the Colectivo Apacheta also acknowledged to me that "*we are suffering a drought*" and "*can accept that the drought is down to nature, but we do not know how much*",[583] reflecting similar concerns within the 33 Communities around impacts to fresh water availability.

Although the communities believe that the three-year drought experienced across the Andean plains, including in Bolivia, "*is not because of the mining*",[584] the 33 Communities and the Colectivo Apacheta are concerned about current and future water usage by lithium miners, who draw out millions of litres of brines from underneath the salt flats for the pool evaporation stage. Through visits organised by national NGOs, some members of the 33 Communities have seen the effect of operational lithium mines on the salt-flat landscapes in Chile. My informant saw what he called a "flood" stretching kilometres and kilometres, inundating the salt flat's surface.[585]

582 33 Communities representative, interview with author, Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.
583 Ibid.
584 Representative from Colectivo Apacheta, Interview with author, Susques, Jujuy Province, 3 February 2017.
585 Delegations from Salinas Grandes and the Olaroz-Cauchari communities have both been to see Chilean lithium mines, the former with an NGO and the latter through a trip arranged by the company.

Argentinean geologist Díaz states that: "One might estimate that for each tonne of lithium extracted around two million litres of water evaporates, clear evidence that the mining of lithium in *salares* is a mining of water".[586] That lithium is essentially "mining water" is refuted however by a prominent local geologist and the former mining minister of Salta, who told me that *"water is basically not a problem"* and that *"lithium mining only uses a cupful of water"*.[587] In his view, brine is unfit for human or animal consumption, and I was repeatedly told this by other government and company interviewees.[588] However, studies have suggested that excessive drawing out of brine from under the salt flats can lower the water table, impacting local fresh water supplies.[589] Impacts on water supplies in these dry regions by lithium mining have also been acknowledged by researchers monitoring the Chilean situation. The Chilean situation is an important indicator for what might lay ahead for communities in both Argentina and Bolivia, should lithium mining impacts on aquifers continue to be poorly understood and managed.

5.3 Compliance with the right to informed consultation in Jujuy's lithium industry

The final section of this chapter sets out the extent of informed consultation in advance of lithium mining activities taking place in Jujuy. This includes an extended analysis of the Salinas Grandes communities' demands for consultation, as well as an appraisal of

33 Communities representative, interview with author, Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.

586 Fernando Díaz, cited in No a La Mina, "Cuales son los impactos ambientales y en la salud de la explotación de litio?, at https://noalamina.org/general/item/9585-cuales-son-los-impactos-ambientales-y-en-la-salud-de-la-explotacion-de-litio, cited in Julian Zicari, "*El mercado del litio desde una perspectiva global: de la Argentina al mundo. Actores, lógicas y dinámicas*" (fn 16), in Fornillo, Geopolitica, 2015, p.46.

587 Salta Geology Professor and former Salta Mining Minister, Alonso, Ricardo, Prof. Interview with author, Salta, 10 May 2017.

588 Ibid. 2017; Mining Minister of Jujuy Province, Miguel Soler. Interview with author, San Salvador de Jujuy, 22 May 2017.

589 A study by Boutt et al, funded by lithium company Albermarle, cited in the Washington Post article, suggests this. Frankel and Whoriskey, 'Indigenous People Are Left Poor as Tech World Takes Lithium from under Their Feet'.

the relationship between the Olaroz Communities and the lithium mining companies operating on the Olaroz-Cauchari salt flat. This includes details of the Colectivo Apacheta's concerns over a lack of consultation in Susques, and a section detailing the development of the groundbreaking *Kachi Yupi* consultation protocol.

5.3.1 The extent of free, prior and informed consultation in the Salinas Grandes communities

One of the more striking things about interviewing the representative from the 33 Communities was his repeated insistence that there has been no information about lithium given to them by the government, even since the company "*went directly to the salt and directly to exploit"*[590] (this is a notable misunderstanding as the company were only prospecting at the time):

> *Still we haven't come to know… we do not know what lithium even is. We only know by the media, by the newspaper; we only know what the government says, that lithium is for batteries, but not… We as the Salinas Grandes basin do not… we have not clearly had a document from the state. Nor were we informed.*[591]

He emphasised the role of the media in helping them understand the value of lithium: "*It's called white gold and many other things. But it was from media communication [that we know this], not because the state or company came to the community"*.[592]

Fieldwork observations demonstrated that access to information through the "usual" channels such as the media is much more difficult for these geographically and socially marginalised communities. For example, there are no shops that sell newspapers in the region. However, through regular travel to the provincial capital (where there are newspapers), and their active pursuit of information following the 2010 prospecting, the 33 Communities we able to acquire information about lithium

590 Representative from 33 Communities. Interview with author. Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.
591 Ibid.
592 Ibid.

from the media and NGOs, leading to an informed resistance to lithium mining.

During our interview the 33 Communities' representative lamented that the government's response to their concerns over lithium mining was "*that there was nobody there, that we did not exist... But we are almost seven thousand in the [Salinas Grandes] basin*". He continued:

> *Look how they said in the Supreme Court of the Nation that it was an uninhabited area. Of course it looks uninhabited because it is large, it is 200 square kilometres. Here in my village we are over 400 people, but you will not see even three or four because they are all scattered. The state says there are no communities; no people who are alive. But we in the basin have 15 primary schools and seven secondary schools. It is not that there is no one here. They are poorly informed or do not want to understand, the state.*[593]

Here, he views the state as "poorly informed" about the numerous communities of the region, in an inversion of the concept of the state's legal obligations to inform communities about lithium mining.

Furthermore, the idea that Salinas Grandes was taken for a "uninhabited area" recalls a classic concept of colonialism popularised under the "*terra nullius*" principle in Australia, which served to justify invasion and resource capture by the imperial power. The invoking of a resource frontier as *terra nullius*, Latin for "land belonging to no one", echoes through numerous indigenous land rights conflicts. The idea that resource-rich land is uninhabited is commonly used by the state to ignore indigenous peoples' right to information, consultation or participation, and to justify the development of natural resources.[594]

Although the law does not make clear whether the state should have informed the communities about the prospecting activity, the denial of the existence of communities in the 2012 case indicates with some certainty that they would not have been approached for consultations anyway. In our interview, the Mining Minister of Jujuy

593 Ibid.
594 Abelvik-Lawson, 'Sustainable Development for Whose Benefit?'

acknowledged the lack of compliance and critiqued the previous government's way of handling the situation (as it occurred before his tenure began with the new government in 2015).*"In fact, we believe that a large part, and the objections that are opening up has been because of a total absence of the state, and the lack of transparency due to lack of control."*[595] This "absence of the state" was made clear to me when my 33 Communities informant asked me if I knew of any sources of funding for his community to fix his village's water pipe, saying that they do not want to have to ask the government.

As established above, there are no laws in Jujuy to manage the relationship between the state and explicitly indigenous communities in respect of mining licensing. The 33 Communities' lawyer acknowledged in our interview that the Argentinean Mining Code was first developed a century ago, and that "*[a]t that time the government's objective was to eradicate them!".*[596] She further explains how the indigenous communities are at an obvious disadvantage in a consultation processes, regardless of when companies might approach them:

> *Because there is an innate inequality, it is always going to be negotiated in a disproportionate way […] the company is going with all its employees to a meeting with the communities that do not have information or their own technicians.*[597]

There is also a clear compliance gap in the idea that the company goes to the community – within international human rights law that it is *the state* that has the duty to coordinate prior informed consultations with the communities. Furthermore, this "*innate inequality*" has clear impacts upon the right to information and informed consultation.

The company will always have more information about their own proposed

595 Mining Minister of Jujuy Province, Miguel Soler. Interview with author, San Salvador de Jujuy, 22 May 2017.
596 Alicia Chalabe, Lawyer for the 33 Communities. Interview with author, San Salvador de Jujuy, 3 February 2017.
597 Ibid.

mining activity. However, the reports from the EIAs, the lawyer told me, were unintelligible, even to educated professionals:

> *There is a deficit in relation to the indigenous communities because the communities do not have their own technicians; they must evaluate very long technical projects that are often incomprehensible to anyone – I am a lawyer and I do not understand that document. It's huge – full of formulas, for example.*[598]

While Chalabe suggests here that EIAs were presented to the communities (presumably once it was established that they existed), the state is still clearly in breach of their international obligation to facilitate informed consultations if the community cannot understand the documents.

The lawyer pinpoints the problem in terms of the inequality between the communities and company as stemming from a lack of legislation in Argentina that enshrines indigenous communities' rights (as they are established by international law):

> *There's huge inequality. Both of information and the possibility of studying it to make a decision… and then with this I am asked, 'how can it happen that the exploration licenses have followed the Mining Code to the letter and they have granted it, without considering the indigenous communities and their rights?' I insist that it is a deficit of legislation.*[599]

She is correct: neither the Argentinean Mining Code nor environmental law mentions the requirements of informing nor consulting indigenous communities specifically, and there is no indigenous rights law to clarify the obligations in the terms required to be compliant with international human rights law.

The communities went to the Supreme Court, as per the summary in the judgment, "to correct omissions that the aboriginal community claimants attribute to the provinces of Jujuy and Salta and the National State", and to order an arbitration of the

> necessary measures so that they can make effective their rights of participation and consultation and, consequently, express their free, prior and informed consent on the prospection or exploitation programs of the natural resources

598 Ibid.
599 Ibid.

> existing in the territories they occupy in the area of the Guayatayoc Lake– Salinas Grandes, in particular in relation to those administrative proceedings in the process related to the granting of exploration and exploitation permits for lithium and borate.[600]

As Argentina is party to ILO169, the above refers to Article 6.1 (right to consultation on administrative or legislative measures which may affect them directly).[601] The judgment clarifies what it sees as the basis of the application, namely that it was

> not of an environmental nature, but of an indigenous nature, since the purpose of the claim is to implement a consultation process with its representatives that complies with international standards and within the framework of human rights.[602]

This is relevant because it establishes that the Argentinean authorities have obligations to international standards specifically pertaining to indigenous peoples' rights. The communities lost the case, due to lack of legal standing, with the Judges also ruling that the measures did not affect them directly. The state also claimed that the prospecting, as it had not been approved by the province, was illegal.[603]

The Salta Mining Ministry's legal counsel was the most willing government informant to discuss with me Argentina's obligations under Article 14 ILO169:

> *As a community that owns the land, it has greater participation in the management of natural resources, as required by Article 14 of Convention 169 of the ILO, which requires that recognised aboriginal communities that have rights to their lands to participate in the management of natural resources.*[604]

Crucially here he states that only a "recognised aboriginal" community that "owns the land" have such participation rights, referring to government land titling as the

600 Supreme Court of Argentina, C.1196.XLVI "Comunidad Aborigen de Santuario Tres Pozos y otros c/ Jujuy, Provincia de y otros s/ amparo", Buenos Aires, 18 de diciembre de 2012, para 1 [author's translation]. Original: "…las medidas necesarias para que puedan hacer efectivos sus derechos de participación y consulta y, en consecuencia, expresar su consentimiento libre, previo e informado sobre los programas de prospección o explotación de los recursos naturales existentes en los territorios que ocupan en la zona de Laguna de Guayatayoc – Salinas Grandes, en particular en relación a aquellos expedientes administrativos en trámite vinculados con el otorgamiento de permisos de exploración y explotación de litio y borato."]

601 ILO169, Article 6.1

602 Supreme Court of Argentina, C.1196.XLVI "Comunidad Aborigen de Santuario Tres Pozos y otros c/ Jujuy, Provincia de y otros s/ amparo", Buenos Aires, 18 de diciembre de 2012. para 3.

603 Ibid.

604 Legal counsel, Salta Mining Ministry. Interview with author, Salta, 18 May 2017.

benchmark standard. As Chapter 4 details however, it is not the case that communities must be "recognised" or have official title to their lands to have rights to environmental participation as indigenous communities.

A final point on the 33 Communities' case illustrates how the legal empowerment of indigenous communities presents an unusual dilemma for lithium mining firms with plans to mine in the region. Salinas Grandes concession-holder Dajin Resources' chief operating officer stated in a 2017 news article that: "The *Kachi Yupi* has no consultative process. It's a document that says, 'You need to consult with us,' but it doesn't say how you do that. We're waiting for some clarification on that."[605] This is technically untrue: the document outlines Argentinean law applicable to those impacted by environmental projects, and details the discrete components of free, prior and informed consultation developed in ILO169. However, its "comparative table", that details how the communities respect the hydrology of the Salinas Grandes to harvest salt, may be somewhat confusing for the non-indigenous reader. Ironically, the common scenario that faces indigenous people – where EIA documentation presented to them is "full of formulas"[606] and scientific jargon – is here inverted: the company cannot see the relevance of the comparative table, where the stages of salt cultivating, harvesting and gathering are compared with their desired stages of consultation. Therefore, understanding the process by which the communities wish to be consulted relies upon an understanding of an indigenous cosmovision that company operatives may be unable or unwilling to learn about.

The above point establishes what the spirit of indigenous consultation law

[605] Catherine Hickson, Dajin Resources, COO, cited in Pellettieri, Lucila (2017) Mining Firms Seek Argentina's 'White Gold,' But Local Approval Proves More Elusive https://globalpressjournal.com/americas/argentina/mining-firms-seek-argentinas-white-gold-local-approval-proves-elusive/

[606] Alicia Chalabe. Lawyer for the 33 Communities. Interview with author, San Salvador de Jujuy, 3 February 2017.

requires: that the company must try to understand the perspective of the community first, particularly their economic, cultural and even spiritual interest in the land and its resources, in order to put the consultation documents in terms the community would both understand and be able to appreciate. Doing this would also serve to help the company appreciate the environmental and social impacts the mining activity might have on the community. In doing so, the company may be more likely to have community buy-in for the mining project. Of course, detailing the destruction of the landscape in any way at all may have the opposite effect, generating motives for pursuing a "right to veto".

5.3.2 The extent of free prior and informed consultation in the Olaroz Communities

One of the companies' community relations managers was keen to emphasise in our interview that they were in the communities long before their lithium mining project even existed:

> *We have initiated a process of participation and consultation with the communities since before having a project, that is to say that we have worked with them in all the stages of the process.*[607]

She was effusive in her insistence that everyone is able to participate, but (reflecting the above concluding point), she also acknowledged that some topics will not be familiar to community members, which provided a way to improve company processes:

> *There is an active participation of the members of the community, although they do not know something at first. They did not know how the monitoring is carried out. This is interesting because we can also know how to improve our own monitoring.*[608]

In a similar manner to the former *leader* of Olaroz Chico, the community relations manager and mining secretary, this interviewee also acknowledges that "*the best way to break down fears and doubts is talking"* and *"putting ourselves in front of the community in general so*

[607] Community relations executives at lithium company. Interview with author, Salta, 15 May 2017
[608] Ibid.

that all these doubts and questions do not come out".[609] The lawyer for the 33 Communities, however, suggests that this relationship is inappropriate: "*What is inadmissible that it [the fulfilment of communities' human rights] is subject to the will of the companies, and moreso that companies undertake their own community negotiations.*"[610] There is merit to the lawyer's argument, as companies undertaking their own negotiations, particularly with offers of work and cash payments, would likely prejudice opinions. This does not then constitute a "free" consultation, as outlined in the law in Chapter 4.

It did appear that any form of early company–community contact with the Olaroz Communities seemed predicated around offers of work, and payments for *servidumbres.* The former community association leader of Olaroz Chico told me that

> *This consultation, where they did not ask us, that explains the context of the project, what will be done, what work there will be, how many people they will be taking, what work there will be in principle, what is the objective of the work. That was two years.*[611]

The "consultation" is qualified by the leader above as one being where the community were not directly asked for their opinions. Finally, the emphasis within this "consultation" appeared to be heavily weighted towards work: "*what work there will be, how many people they will be taking, what work there will be in principle, what is the objective of the work*".[612]

The Mining Minister of Jujuy confirmed to me that generating work is a legal obligation for companies wishing to mine in the province: "*We have a national and provincial law that says the owner of a mining property has the obligation to create work. If you do not create work, you have to go*".[613] This, he says, is what the people in the province need: "*when*

609 Ibid.
610 Lawyer for the 33 Communities. Interview with author, San Salvador de Jujuy, 3 February 2017.
611 Former community association leader, Interview with author. Olaroz Chico, Susques Region, Jujuy Province, 6 February 2017
612 Ibid.
613 Mining Minister of Jujuy Province, Miguel Soler. Interview with author, San Salvador de Jujuy, 22 May 2017

one speaks with the communities many, many ask for health, education – and they ask for work".[614] State authorities are naturally is keen to support the development of work opportunities, which drive tax revenues. The mining secretary cited the example of the nearby Piriquitas mine, that *"gave employment for over nine years to more than 600 people*",[615] before starting to calculate the tax revenue gained from these jobs during our interview.

This legal obligation perhaps works well for companies in these lithium regions due to the harsh environment that would necessitate a period of adaptation to the altitude and extreme temperatures by a labour force of outsiders. In what seems like a mutually beneficial arrangement, 80 percent of the population of Olaroz Chico is employed by Sales de Jujuy.[616] The benefits of these salaries are noted by the schoolteacher above.[617] There is also a library with Sales de Jujuy-branded signage (see Photograph A10), and a significant part of the village seemed to be under renovation or construction at the time of my visit.

My informant in Olaroz Chico explained to me how community decision-making over mining issues works in his village: *"[t]he community, we have meetings every thirty days. We have an extraordinary meeting, in which is handled all these issues, such as mining.*"[618] According to one of the companies' community relations executives, the communities that have a relationship with the company are given constant streams of information about lithium mining:

> *Because leaders change every two years and you taught them everything, you explained everything to this commission of 12 people and at two years this changes, everything is new. Then you start again and go to a village meeting… So many times, so many times; I*

614 Ibid.
615 Ibid.
616 Former community association leader, Interview with author. Olaroz Chico, Susques Region, Jujuy Province, 6 February 2017
617 Frankel and Whoriskey, 'Indigenous People Are Left Poor as Tech World Takes Lithium from under Their Feet'.
618 Former community association leader, Interview with author. Olaroz Chico, Susques Region, Jujuy Province, 6 February 2017

explained it so many times.[619]

This account indicates that the leaders and their committees are those who are required by law to sign the *servidumbres*; when they change, the information must be transferred. It is unclear whether a new *servidumbre* is signed in these instances.

Notably, there has been a backlash against the Jujuy Law No. 5915 of Administrative Servidumbres,[620] for violating the rights of indigenous peoples in the province.[621] This law, which allegedly deepens the dispossession of indigenous territories through the installation of renewable energy projects, has already damaged the credibility of the Province's new Indigenous Secretariat, according to online reports.[622] The suggestion that *servidumbres* have been responsible for violating indigenous rights in Jujuy adds an interesting dimension to the question of free, prior and informed consultation or consent debates in Jujuy. As there is little indication that there are national or provincial laws that protect indigenous consultation rights, it follows that the procedures governing the law of *servidumbres* also do not respect or allow for the realisation of such rights.

Promises of regular work have clearly been attractive to community members and their elected leaders, and by hiring them the company can not only fulfil their obligations to provide work during a period of low activity (as Exar was still at exploration and testing stage), but also exact influence in the community for the acceptance of the ongoing relationship. However, this could be seen as a form of

619 Community relations executive at lithium company. Interview with author, San Salvador de Jujuy, 20 February 2017.
620 Government of Jujuy, Law No. 5915 de servidumbres de electroducto y el régimen para el desarrollo de proyectos de generación de energía eléctrica, Jujuy Province, at http://www.justiciajujuy.gov.ar:802/legpro/5915.pdf
621 Jujuy Al Momento, "Comunidades piden derogación de la ley de Servidumbre", 26 July 2016, at http://www.jujuyalmomento.com/post/54684/comunidades-piden-derogacion-de-la-ley-de-servidumbre
622 El Federal, "Pueblos Originarios de Jujuy se oponen a la ley de Servidumbre Electrica", n.d. at http://www.elfederal.com.ar/pueblos-originarios-de-jujuy-se-oponen-a-la-ley-de-servidumbre-electrica/

bribery, coercing acceptance of the project through the provision of much-needed funds and wages. One community relations manager admitted to me that the *servidumbre* payments are likely to be "*more money than they've ever had*", and that the communities have had trouble adjusting to the income, and in some cases have not been able to spend it effectively.[623]

Olaroz Chico was always set to benefit more than the other communities from company information and jobs, due to its proximity to the plant. However, the flow of information appears controlled by the company, and participation mediated again through offers of employment. When I asked whether the agreement detailed community participation in the project, my informant in Olaroz Chico answered "*yes, we signed an agreement, of particip… of collaboration*". Notably, participation gives way to "collaboration". He further stated that they had had:

> *many consultations, particularly on the issue of work, because they started with the exploration, well… it was like this until they arrived now in production. But always consulting. I believe this was important.*

Here, as above, consultations, which were apparently plentiful, appear to have particularly focused on the work available. With this focus, it is unclear whether consultations therefore would have been free, prior and informed in compliance with international obligations.

Furthermore, monitoring is a big part of the project at Olaroz Chico, but the details of the agreements were not fully known by my informant:

> *There is state control over the project. It's called monitoring. It's called monitoring and just now a while ago a new guy came, a coordinator. In the monitoring the state participates, the company and community participates. […] They have a... there is one... I do not know what to call it but it has the state, signed, it has a... to see, an amount of extraction, both the brine water and fresh water that must be extracted. And the state controls it every three months.*

[623] Community relations executive at lithium company. Interview with author, San Salvador de Jujuy, 20 February 2017.

While there is an acknowledgement of the participation of all three parties (state, company and community) in this activity of monitoring, there is perhaps an inequality in the provision of information, a risk identified in the previous section of this chapter.

The theme of the three stakeholders' equal participation became an important one in the final parts of the interview with the representative from Olaroz Chico, where he also assumed that if there had been any reticence on the part of the community, the project would not be allowed to go ahead:

> *I think we are clear, very clear, because ... if not, they would not like to come here and I do not think there would be a contract if the communities are not in agreement [...] Because everyone has the right, they as a company, the state, and as a community. […]*
>
> *There are three fundamental parts: the state, the company, and the community. The community is fundamental, because we know that we have... we are the owners of the land and if it's not authorised, nobody comes here.*

For a community so close to the plant, with clear benefits in terms of work and confirmed ownership of the land affording them some form of negotiation, accepting a project (and the benefits that come along with it) appears uncontroversial.

In the three communities of Huáncar, Pastos Chicos and Puesto Sey however, at approximately 30, 60 and 90 kilometres from the plant on the Olaroz-Cauchari salt flat respectively, the presence of the lithium companies is more subtle, but has clearly been influential on their attitudes towards lithium mining. The December 2016 Washington Post article made clear that payments are made by companies to communities, through the signing of *servidumbres*, some of which I was able to view at the Mining Ministry. These contracts agree payments – upon signing and for the first year, for example, and ongoing (annual) payments thereafter – for rights of water use, right of occupation and passage through their land over a number of years. It was unclear how and to what extent these communities had been consulted on the lithium companies' proposals in exchange for signatures on the *servidumbre* contracts, particularly as interviewing here

was difficult.

Informal discussions in these communities, however, and even the interview refusals themselves, indicated that numerous community members, including former leaders, appear to have paid roles within the mining company, Exar.[624] As the company was not yet producing lithium at the time of my visit, it is unclear what was required of employees in these roles beyond community relations work. Nonetheless, I witnessed a meeting of a handful of community members and the community relations official from Exar take place in my hostel, quite a way from the communities, suggesting that perhaps such opportunities were not open to everybody.

The 2016 Washington Post article suggests that those who negotiated the *servidumbre* payments were too uninformed to negotiate a good deal,[625] and that community members who made decisions on behalf of the company have since faced accusations of conflicts of interest on account of the mining company posts they hold. One such figure in Puesto Sey was a community association leader who went to work for the company as soon as the document was signed, for example. Her successor was reported saying that "she works for Exar — she had a personal interest" and that "[t]he community is mad at her now."[626] I was able to see the *servidumbre* signed by this individual in the provincial mining office. Signed in 2011, it promises the community of Puesto Sey US$28,000 for signing the contract; US$35,000 seven days after the agreement; US$90,000 at the start of construction and US$110,000 every year in exchange for rights to water, passage through community lands, and occupation of

624 A young former community association excitedly emailed me from his computer in his office, telling me he was at "work" and thus had access to his email.
625 Quispe, Carlos, interviewed in Frankel and Whoriskey, "Indigenous people are left poor as tech world takes lithium from under their feet", Washington Post, 16 December 2016.
626 Frankel and Whoriskey, 'Indigenous People Are Left Poor as Tech World Takes Lithium from under Their Feet'.

those lands.[627] Other communities' *servidumbres* I saw showed similar and smaller amounts depending on which rights were granted.

The common understanding of the communities' position in society gleaned from the community relations executives is that they have been somewhat forgotten by the government; that they "*had fewer opportunities and did not have a close relationship with government institutions*".[628] Community members who are approached with offers may thus have increased interest in working with the lithium companies who have become "*their closest neighbour*".[629] As a result, one company's "*Shared Value*" framework, comprising 5 pillars of "*education, health, transparency, empowerment and this… production and natural resources*",[630] was presented as a solution, providing an interesting insight into the corporate social responsibility (CSR) activities occurring around lithium mining in Jujuy. The company representatives see their role as beneficial to the communities:

> *How will they have grown without such… ["development" – interjects her colleague quietly] …with more development? Because we have... This [Olaroz Chico] is the first community that we have started working where relationships have been much stronger and also because we have also found people who wanted to change.*
> *[…]*
> *We invest a lot of time and money in working with the community; and we say investing because we really see today that it is worth that… that investment because today is really the stage that communities have continued to grow.*[631]

As the above quotations show, the financial language surrounding the idea of "development" (growth, investment) is pervasive. Work however does seem to be a key driver of both the company enthusiasm to engage the communities, and the communities' positive response to the companies. One company representative told me that that they provide work "*so that the community does not have* to *migrate to the eastern*

627 From notes taken after interview with Dr Miguel Soler in the Jujuy Province mining office, on file with author.
628 Ibid.
629 Ibid.
630 Community relations executives at lithium company. Interview with author, Salta, 15 May 2017.
631 Ibid.

cities".[632] This could be perceived in a way to provide community cohesion, as well as economic opportunity.

Mining has provided jobs for local people before in Jujuy, and the overall impression from within my fieldwork observations and informal discussions was that the Olaroz Communities were changing for the better due to an increase in income, a point naturally echoed by the community relations managers for both Sales de Jujuy and Exar. The community relations women at both companies told numerous anecdotes about projects they had started, such as the attempt to have the community-members grow quinoa (a failure) or learn how to knit handicrafts. There was also a tacit admission that community relations activities also serve as marketing tactics: one company executive complained that the other company's reps were known to arrive at community celebrations and gatherings only "*at the last moment to take the pictures!*",[633] also suggesting that perhaps the companies are in some competition for community (and provincial government) approval and support.

This collection of responses from community representative and the companies' community relations officials, taken together with the previous detail on company relationships with the Olaroz Communities, indicates that there is no conflict currently between companies and communities in this area. However, according to the Washington Post's report, and the likely event of uneven distribution of work and funding, there is certainly scope for developing resentments within and between communities. Furthermore, if increased lithium mining does become a problem for water supplies and the contamination of the surrounding land, conflict may yet emerge, and the early development of relationships based on poor consultation processes may

[632] Community relations executive at lithium company. Interview with author, San Salvador de Jujuy, 20 February 2017.
[633] Ibid.

warrant greater scrutiny.

Importantly, the community members to whom I did manage to speak with insisted that there had been no problems with water thus far, despite the regionwide drought. However, the Washington Post piece does refer to a problem with a water pump during the drought in Huáncar, which was eventually remediated by the provincial authority after a riot broke out.[634]

5.3.3 The Colectivo Apacheta and the lack of free, prior and informed consultation in Susques

According to the leader of the Colectivo Apacheta, the town of Susques signed an agreement that violates their rights to FPIC (consultation), and clearly pollutes the environment through the heavy use of lime (calcium carbonate):

> *It seemed very bad to us. Very bad. Because from the beginning we did not do any free, prior and informed consultation. It was politically dominated, everything here [in Susques], by the head people in the community, and free, prior and informed consultation is not that way. The free, prior and informed consultation has to go to everyone who lives in the field: this Señor or Señora, this so and so; and they should not lie. It has been double the lie: That there will be work, that there will be many things. If it has benefited us; some have benefited, others have not. Of the community as a whole, 80 percent will not benefit. Negotiators will benefit, and the workers who work there and no one else. It is not… It is not something that is beneficial to the community.*[635]

Furthermore, he maintains that Susques agreed to the lithium mining through a politically-managed process, "*not an informed consultation", but "a political meeting".*[636] He says the process *"didn't start with a document from the government"* and by the end of the process, *"a community that has 2000 inhabitants has 35 that signed for it"*. This is corroborated by Fornillo, who documents the meetings that took place in Susques to approve lithium mining within the administrative region for which it is the capital.[637]

634 Frankel and Whoriskey, 'Indigenous People Are Left Poor as Tech World Takes Lithium from under Their Feet'.
635 Representative from Colectivo Apacheta. Interview with author, Susques, Jujuy Province, 3 February 2017.
636 Ibid.
637 Bruno Fornillo, ed., *Geopolítica del litio: industria, ciencia y energía en Argentina*, Colección Chico Mendes (Buenos Aires: Editorial El Colectivo, 2015).

The leader of the Colectivo Apacheta says the studies they commissioned show the water "*going down*", but "*with a year of drought, we have not been able to make the comparison*".[638] Uniquely within my responses, he also demonstrated concern for what then happens to the vast quantities of water that evaporate from the lithium mines, suggesting that he is wary of unintended impacts of industrial-scale extraction: "*because of the amount of water that evaporates here, it will fall elsewhere.*"[639] This is a fascinating insight not just into the nature of the activity in his immediate environment, but concern over its wider climatic ramifications.[640]

Contamination is also a clear concern for the Colectivo Apacheta. My interviewee told me that the others in Susques have not been paying attention: "*So what I see as bad, I say… Because one that does not look does not see the 30 truckloads of lime per day… That lime disappears!*".[641] He continues with further concerns:

> *To take water from the brine will also take other minerals. It won't only take pure lithium. Because it will leach lime, caustic soda, sulfuric acid. This is contaminating. And they say it won't contaminate anything?*[642]

It is unclear the amount of information provided in advance of the political agreement. The Colectivo Apacheta believes a "*profound study*" of the environmental impacts is required, particularly for the communities that have agreed to lithium mining on their territories – emphasising that "*we do not want to lie to them*".[643] What this indicates is that there was little in the way of independent information made available to the people of

638 Representative from Colectivo Apacheta. Interview with author, Susques, Jujuy Province, 3 February 2017.
639 Ibid.
640 I was reminded of this comment when in month following our interview Peru suffered the worst floods in living memory, when ten times the usual amount of rain fell, killing 67 people and causing billions of dollars' worth of damage. Dan Collyns, "How can Peru prepare to withstand more devastating floods and landslides?", Guardian, 13 April 2017, accessed 2 February 2018, https://www.theguardian.com/global-development-professionals-network/2017/apr/13/peru-prevent-floods-landslides-climate-change
641 Representative from Colectivo Apacheta. Interview with author, Susques, Jujuy Province, 3 February 2017.
642 Ibid.
643 Ibid.

Susques and surrounding communities. This, with the concern over the relatively few people that signed on behalf of the whole community, indicate a lack of proper consultation in Susques.

5.3.4 Kachi Yupi and the demand for consultation

Kachi Yupi outlines Argentinean law on mining and environment; constitutional rights to water; and minimum standards of the indigenous right to free, prior and informed consultation as found in ILO169. The core consultation protocol is in the form of a "comparative table" (see Appendix A, p.30–31), that uses the traditional indigenous practice of salt-harvesting on the Salinas Grandes to demonstrate two things. Firstly, it embeds within the protocol how economically and culturally crucial the Salinas Grandes salt flats are to the 33 Communities. Secondly, it shows that to the communities, an effective consultation process relies on a relationship of mutual respect, similar to the relationship the communities have with nature, and its productive sowing and harvest cycles that comprise their traditional practice of salt cultivation.

Kachi Yupi is considered a great success, as "*the first document that there is in the Province of Jujuy on the right of consultation*",[644] and indeed, one of the only examples of such a protocol in existence across the world.[645] It was a challenge to develop, as my interviewee explained:

> *Yes really, it was a... challenge at first because we did not know… Because the state did not force us to see how we could do the consultation protocol. And at that time the state said that it is going to be part of the fund, to put the technicians, the lawyers ... all those knowing about human rights to work with the communities as well. And when we had the assembly the people, the communities, the representatives said, no – the Kachi Yu... the consultation protocol has to be from the communities, and has to be done by the communities. If we let the state in we know that they are going to put what they want. And if we put the company*

644 Lawyer for the 33 Communities. Interview with author, San Salvador de Jujuy, 3 February 2017.
645 Makagon et al., 'Balancing the Scales - Community Protocols and Extractive Industries: Lessons from Argentina, India, Kenya and Zimbabwe'. The process of developing *Kachi Yupi* is examined in some detail in this report, which collected four such community experiences of creating consultation protocols around the world.

> *inside, they will also put what the company wants, and not us.*[646]

This process was therefore undertaken with an understanding that it must be independent of the state and company. *Kachi Yupi*, according to the communities' lawyer, "*has worked as a kind of precautionary measure, because the demand is more cautious; because they know that there is an organisation that is vigilant.*"[647] Indeed, the response from Dajin Resources, while confused, indicates some respect for the process not often seen in cases where communities and companies are in conflict over mining.

The document was recognised by the National Ombudsman in May 2016, providing some degree of recognition from the state. I was enthusiastically shown a copy by the Mining Minister of Jujuy just prior to our interview. He suggested that the Jujuy authorities would also like to officially recognise the protocol, but that this is not within the remit of the Mining Ministry but the newly-established Secretariat of Indigenous Affairs. He said, "*When the government changed the intention was to create this secretariat to specifically address the issues the communities, and really look after them.*"[648] The communities' lawyer acknowledges that the province might think they are solving the problem through this newly-established authority, but the effects are as yet not meaningful:

> *There was a change that some could have seen as beneficial, as Governor Morales, the new government, had created in the ministerial ranks the secretariat of indigenous peoples. This secretariat for indigenous peoples has an indigenous authority to address the issues that concern the communities, but so far it has not had much effect day-to-day…*[649]

Clearly, compliance with international human rights law obligations are greatly dependent on strong institutions with clear national legislation determining their

646 Representative from 33 Communities. Interview with author. Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.
647 Lawyer for the 33 Communities. Interview with author, San Salvador de Jujuy, 3 February 2017. Chalabe here refers to the *Mesa* of the communities of Salinas Grandes and Guayatayoc Lake.
648 Mining Minister of Jujuy Province, Miguel Soler. Interview with author, San Salvador de Jujuy, 22 May 2017.
649 Lawyer for the 33 Communities. Interview with author, San Salvador de Jujuy, 3 February 2017.

activities. As there are few pieces of legislation backing up the remit of new Secretary of Indigenous Affairs, and international indigenous rights law is not considered very fully even within the judgments of the Argentinean Supreme Court, implementation of pro-indigenous measures is likely to be slow.

While it is unclear precisely what has halted lithium exploration on the Salinas Grandes, visits from the UN Special Rapporteur, the bringing of the case to the Supreme Court, and the publication of *Kachi Yupi* have certainly led to a sense of legal empowerment within the 33 Communities. During our interview, my informant repeated the phrase "*prior consultation is binding*" ("*consulta previa es vinculante"*) and that "Kachi Yupi *is binding*", numerous times. I got the impression that the fear of lithium-prospecting "extra-terrestrials" had dissipated, replaced by a trust in international human rights law and those that had worked to help them demand that the state recognise their rights.

Conclusion

This chapter has established that free and informed consultations have not taken place in Jujuy in advance of lithium mining projects being established. While prospecting on the Salinas Grandes may not have required an elaborate consultation process, there is nothing to indicate that the company or state had informed communities that mining activity was being planned. Indeed, the state admits in the Supreme Court proceedings that it was unaware of the presence of communities at all. When information was shared (and if it was, as this is not totally clear either), it was not in a format the communities (or their lawyer) could understand.

The Olaroz Communities on the other hand, had received information from the company prior to mining taking place, and opportunities to participate in the development of the lithium project. It is clear however, that due to the nature of the

relationship between the companies now, that these opportunities were predicated on the availability of work and payments to communities in exchange for *servidumbre* signatures.

In retrospect, it appears the two situations may even be related. The Salta-based office reception room wall where I visited community relations executives for one of the lithium companies was branded with signage saying, "South American Salar", a company I had not come across during my research. The company executives stated early on in the interview that "*we have not had any complaints for lack of prior consultation, we do not; this area does not*".[650] Here, the community relations official implies that perhaps the company has not had complaints for lack of consultation in "this area", meaning the Susques–Olaroz area they had ended up working in. Analysing the transcripts, I came to realise that there may be a link between the Orocobre billboards at Salinas Grandes and the company my interviewee from the 33 Communities said was the company that came, "American Salar",[651] which does not appear to exist. South American Salar however, is an Orocobre subsidiary.

This indicates that it was actually South American Salar that had prospected on the Salinas Grandes in 2010, triggering the response that resulted in resistance of the communities, including the Supreme Court case and the *Kachi Yupi* consultation protocol. Their success in halting mining might be attributed to the use of the 33 Communities of the salt for salt gathering, a practice that does not occur on Olaroz-Cauchari. This appears to be a relevant distinction between the two sets of communities. However, the grounds for the resistance mounted by the 33 Communities and the Colectivo Apacheta is also largely based around concerns of

650 Community relations executives at lithium company. Interview with author, Salta, 15 May 2017
651 Representative from 33 Communities. Interview with author. Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.

excessive drawing out of water in an arid region. This clearly demonstrates a region-wide indigenous interest in free, prior and informed consultations over lithium mining, particularly containing information relating to impacts on water.

CHAPTER 6 BOLIVIA: LOCAL PARTICIPATION IN ENVIRONMENTAL DECISION-MAKING IN THE STATE-RUN LITHIUM PROJECT ON THE SALAR DE UYUNI

Introduction

In order to answer the research question (*to what extent have communities had opportunities to participate in decision-making over the lithium industry?*), this chapter analyses levels of local community participation in the fledgling Bolivian state lithium mining industry. The predominantly Quechua-speaking Bolivian communities living around the Salar de Uyuni generally work in tourism, hard-metal mining (in the San Cristóbal mega-mine) and the two key traditional industries in the region such as quinoa farming and salt-gathering.

The aim of this chapter is to assess participation levels for local indigenous communities in the Southern Bolivian Altiplano in the region around the Salar de Uyuni. This involves an analysis of the change in political regime and in mining, environmental and indigenous rights laws, many resulting from the new 2009 Bolivian Constitution. I also examine the potential socioenvironmental impacts of industrial-scale lithium mining on the Nor Lípez region of the Department of Potosí, along the south "coast" of the Salar de Uyuni. Extraction of lithium carbonate from this salt flat is complicated by high magnesium levels in the brines.

The chapter is split into four parts, following roughly the same structure as the prior chapter. The first part analyses the complex socio-political history of the Bolivian

lithium project, and the potential socioenvironmental impacts of lithium mining in Bolivia, particularly the need for a special process to remove the high levels of magnesium found in the brines in the Salar de Uyuni. Bolivian national law pertaining to mining, environmental and indigenous peoples' rights, including the 2009 Constitution, is analysed in the second part. In the third part I examine the communities around the Salar de Uyuni and their livelihoods in terms of their use of the land and natural resources. The final part analyses levels the extent to which communities have been informed and consulted, and the wider political and social ramifications of the state lithium mining project in the Salar de Uyuni.

The chapter starts with the history of the Bolivian state lithium project because this aids analysis in the later sections determining local community support and levels of consultation. It is also worth foregrounding the complex socio-political context of Bolivian lithium mining. At the time of my fieldwork in the first half of 2017, the Bolivian lithium project was still only at the "pilot plant" stage. Two small-scale plants had been constructed on the Salar de Uyuni by the state company, over a period of about a decade, to test the extraction of lithium carbonate and potassium chloride, a valuable fertiliser. When I visited the office in La Paz in early 2017 to interview the state company's Communications Director, 25 international firms had already bid for the industrial plant construction contract.

6.1 The history of the state lithium pilot plant

Here I outline the history of Bolivian lithium mining, identifying the key actors in the state lithium project from its inception in the mid-2000s following the election of President Evo Morales. I will also introduce the key problem with Bolivian lithium mining, the high levels of magnesium in the Salar de Uyuni. This is compounded by a

lack of industrial infrastructure resulting from Bolivia's historically colonial and neoliberal primary commodity export economy.[652] This section will also examine the potential ways around this problem.

6.1.1 History of the Bolivian lithium mining project

Bolivia's lithium strategy stretches back to 1974, when the Bolivian government declared the Salar de Uyuni and parts of its coastline a "fiscal reserve".[653] This "gives the Bolivian state basic ownership of the Salar and the legal right to exploit and administer all of the natural resources within the reserve's boundaries",[654] and a 2007 Presidential Decree further confirmed these rights of the state.[655] The boundaries of the fiscal reserve have been changes dozens of times in the decades since its establishment, without community consultation, raising questions of land rights for some of the communities that live on and farm the land around the salt.[656]

There has only been one major attempt to mine lithium from the Salar de Uyuni prior to the Bolivian state project. Between 1990 and 1992, the government of President Jaime Paz Zamora attempted to negotiate two contracts for the exploitation of lithium with US firm LITHCO (which later became FMC).[657] The proposed 40-year access contract for FMC–LITHCO was opposed by local organisations, the reason being that projected revenues for the region would have amounted to only two percent

652 Galeano and Belfrage, *Open veins of Latin America.*
653 Daniela Sanchez-López. "From white desert to strategic resource: commodification of the Uyuni salt flat in Bolivia". Presentation at the Anglo-Bolivian Society lithium mini-conference, Senate House, London: UK. 5 April 2018. López and Rua Quiroga, 'An Assessment of the Environmental and Social Impacts of Chinese Trade and FDI in Bolivia'. p.33.
654 Hollender and Shultz, 'Bolivia and Its Lithium: Can the "Gold of the 21st Century" Help Lift a Nation out of Poverty?' p.20
655 Bolivian Government, Supreme Decree No 29117, 1 May 2007, accessed 21 August 2018 http://www.evaporiticosbolivia.org/WEB-INF/Documentos/Legislacion/DS_29117.pdf
656 Hollender and Shultz, 'Bolivia and Its Lithium: Can the "Gold of the 21st Century" Help Lift a Nation out of Poverty?' p.21
657 In local responses, pre-Morales governments are commonly referred to as "neoliberal" governments.

of the company's profits from extraction, which was deemed insufficient.[658] The Bolivian government in 1992 then tried to make a series of modifications to the contract, in response to opposition from the Potosí Civic Committee and the local *Federación Regional Unica de Trabajadores Campesinos de Altiplano* de Sur (FRUTCAS), to make the deal more palatable to local organisations.[659] In 1992, the company denounced the modifications, the deal collapsed, and FMC–LITHCO left Bolivia for Argentina's Salar de Hombre Muerto, where it is now one of the top lithium producers in the world.[660]

FRUTCAS therefore is an important actor in the region. It is a union federation that works under the umbrella of *Confederación Sindical Única de Trabajadores Campesinos de Bolivia* (CSUTCB). The CSUTCB is one of three indigenous social and labour organizations in Bolivia known as "the triplets" that have a close relationship with the MAS government, and which actively work to influence policy in La Paz.[661] According to its president, FRUTCAS organises and represents 40,000 agriculturalists in and around the Salar de Uyuni in the administrative regions of Enrique Baldevieso, Daniel Campos, Nor Lípez, Sur Lípez, and Antonio Quijarro.[662]

There was no notable progress towards developing lithium from the 1990s until the election of Morales in 2006, following which a number of "foreign corporations and governments, including Brazil, Canada, Japanese automakers and the French electric car manufacturer Bolloré… lobbied the Bolivian government for access to the

658 Sanchez-López, "From white desert to strategic resource: commodification of the Uyuni salt flat in Bolivia".
659 Revette, 'Extractive Dreams'.
660 López and Rua Quiroga, 'An Assessment of the Environmental and Social Impacts of Chinese Trade and FDI in Bolivia'.
661 Anna Krausova, "Indigenous resistance to indigenous claims", Presentation at the Bolivian Day of the Sea conference, IALS, Senate House, London, UK, 23 March 2018.
662 President of rural union federation. Interview with author, Uyuni, 23 March 2017.

lithium resources",[663] according to López and Quiroga. These proposals were ultimately rejected by President Morales, who in 2009 had ordered the establishment of a "Scientific Committee",[664] appointing Guillermo Roelants, a Belgian Marxist[665] and FRUTCAS ally, to supervise analysis of the potential for exploitation of lithium from the brines of the Salar de Uyuni.[666] Ricardo Calla Ortega, an expert on the region and author of the socioenvironmental impacts chapter of the only major Bolivian report into the project, told me:

> *The government gave them [the Scientific Committee and FRUTCAS] a bit of money, and they started, you know, the initial phase of the project. The hard phase. […] it must have been very harsh. And the peasant organisation [FRUTCAS] was there the whole time, it was the main actor.*[667]

Calla makes it clear that it was FRUTCAS, the "peasant organisation", that drove the initial stages of the state lithium project, likely through its close links with the MAS government through its affiliation with the CSUTCB. The Mayor of Uyuni also explained to me FRUTCAS's role in the inception of the Bolivian state lithium project:

> *In the first stages it had been fundamental. When this initiative started, this social organisation [FRUTCAS] of which I was a part in those days… So, since 2006, and even before, the region was already thinking about industrialising this resource, but there were other governments, neoliberal, between us, so our voice, our thoughts had no forum. However after 2006 when a progressive government entered, with President Evo, with the MAS [Movimiento Al Socialismo], then the organization [FRUTCAS] started feeling empowered in government, shall we say. Then the President made this order [to start the lithium project] that for many years had been delayed.*[668]

The Mayor here suggests that FRUTCAS is a strong local community organisation with links to the MAS Government, and that it was a key institution in the early stages of the lithium project.

663 López and Rua Quiroga, 'An Assessment of the Environmental and Social Impacts of Chinese Trade and FDI in Bolivia'.
664 Bolivian Government, Ministerial Resolution No. 109-A, 31 August 2009.
665 Seth Fletcher, *Bottled Lightning: Superbatteries, Electric Cars, and the New Lithium Economy*, 1st ed (New York: Hill and Wang, 2011). p.172
666 Ricardo Calla Ortega, author of CEDLA report chapter. Interview with author, La Paz, 23 April 2017
667 Ibid.
668 Mayor of Uyuni. Interview with author, Uyuni, 21 March 2017.

The impact of FRUTCAS's political relationship with the MAS government was made clear to me by a local official in Uyuni.[669] He told me that I should speak to FRUTCAS if I wanted to know about lithium, and told me that they were "*a part of government*".[670] He also said that while there may have been some form of community consultation on the project as a result of this relationship, "*most of what the President says is already approved.*"[671] This statement perhaps indicates that President Morales is uninterested in implementing consultation procedures that could offer a veto. This is reflected in the way he is described as perceiving consultation within the *Territorio Indígena y Parque Nacional Isiboro Secure* (TIPNIS) struggle in 2012. According to Lalander: "Morales has repeatedly expressed that he considers this procedure [FPIC-consultation] to be a waste of time and money, but that this right of the peoples should be respected".[672]

The president of FRUTCAS (at the time of my visit) is a quinoa farmer who lives in a small village to the west of the Salar de Uyuni near the border with Chile, far from the lithium pilot plant (which is in the south-east). Following a mention of the history of the failed contract with FMC–LITHCO in the 1990s, he explained the ideological reasons for the union's strong institutional support of the Bolivian state-run project:

> *Neoliberal governments wanted to favour transnational companies more than anything, and they wanted to take advantage of the use of water and many bad laws, right? Take advantage of our water resources in this region, our natural wealth… We as FRUTCAS, as farmers, we have always bet on nationalization and not the incursion of transnational companies.*[673]

669 Government of Bolivia, Law No. 341 of Participation and Social Control. The Law No. 466 of Public Enterprises has a relevant Social Control clause: "The social control of public companies shall be subject to the provisions of the Political Constitution of the state, Law No. 341 of February 5, 2013, of Participation and Social Control and other applicable regulations; and it will be exercised to promote the transparent management of public companies."
670 Local official in Uyuni. Interview with author, Uyuni, 24 March 2017.
671 Ibid.
672 Lalander, 'Ethnic Rights and the Dilemma of Extractive Development in Plurinational Bolivia'.
673 President of rural union federation. Interview with author, Uyuni, 23 March 2017.

This discursive narrative – that Bolivians no longer want foreign firms to influence their extractive politics – strongly echoes the rhetoric of President Morales, who rose to power on a promise of increasingly nationalised natural resource management, and indeed, the right of Bolivia's indigenous communities to an improved standard of living through the paradigm of *vivir bien*.

Interestingly, Calla suggested to me that around 2010 there had been an effective "coup" against the peasant farmers union FRUTCAS,[674] and thereafter they were no longer directly involved in the project. He maintains it was then fully taken over by central government, and the Scientific Committee was disbanded.[675] In the years since 2010, increasing state investment into the Bolivian lithium project has seen the construction of pilot plants for the evaporation of brines for the extraction, processing and production for lithium carbonate and the potassium chloride fertiliser. It is thought that the government has invested around USD$900m into the project,[676] using revenues from gas projects in the eastern lowlands.

Following the completion of the pilot plant, and during my first visit to Uyuni during my fieldwork in early 2017, a bill was passed in the Bolivian Parliament that separated the state lithium miner subsidiary (the *Gerencia Nacional de Recursos Evaporíticos* or GNRE) from state mining company COMIBOL to form the *Yacimientos Bolivianos de Litio* (YLB).[677] The YLB is managed under the auspices of the newly-created Ministry of Energy, headed by Luis Alberto Echazú, the former manager of the GNRE. By mid-2017 the state firm was examining bids for the construction of the industrial scale lithium plant.

674 Ricardo Calla, author of CEDLA report chapter. Interview with author, La Paz, 23 April 2017.
675 Ibid.
676 Sagárnaga López, 'Bolivia's Lithium Boom'.
677 The name of this state-owned corporate entity reflects naming conventions across South America for national extractive operations. The Bolivian petroleum company is called YPFB (*Yacimientos Petrolíferos Fiscales Bolivianos*), for example.

6.1.2 The two lithium extraction methods for mining lithium in the Salar de Uyuni

While it is thought that Bolivia's Salar de Uyuni contains the bulk of the world's lithium (see Chapter 2), the lithium is contained in brines that have a high magnesium content. This presents a unique barrier to the extraction of a large, valuable reserve of an element in high and increasing demand. In 2014 Bolivian NGO the *Centro de Estudios para el Desarrollo Laboral y Agrario* (CEDLA), published a report with information about two potential methods of lithium extraction that had been researched by the Scientific Committee.[678] These are known as the *sulfato* and the *encalado* methods.

Calla's chapter in the CEDLA report exposed potentially serious negative environmental consequences from the "*encalado*" method of lithium extraction. *Encalado* could be translated to "liming" as it uses large amounts of lime, or calcium carbonate (*cal* in Spanish).[679] The lime is added to the brine early in the evaporation stage to enable the separation of magnesium (in the form of magnesium hydroxide) from the lithium to create lithium carbonate. Calla explains this process thus:

> CEDLA's collection of information also shows that the separation of Mg from Li through 'liming' [*encalado*] in the first stage to achieve an industrial production of the projected magnitudes would require about 1,000 tonnes per day of moistened lime or "lime slurries", which would generate – according to available information – about 4,000 tonnes per day of mud or sludge from residual brines mixed with calcium sulphate and magnesium hydroxide; that is to say, in a year, Llipi would generate the crazy amount of 1,460,000 tonnes of sludge with the mentioned content and they must be dealt with in some way.[680]

The key figures in the quotation above are estimates from Calla's anonymous informant, a chemist who had been on the Scientific Committee. They predict a high amount of waste product that would have to be dealt with in some way – either

678 Ricardo Calla Ortega, author of CEDLA report chapter. Interview with author, La Paz, 23 April 2017; Ricardo Calla Ortega, "Impactos de la producción industrial del carbonato de litio y del cloruro de potasio en el salar de Uyuni" in Calla Ortega, Ricardo, Juan Carlos Montenegro Bravo, Yara Montenegro Pinto, Pablo Poveda Ávila, *Un presente sin futuro: El proyecto de industrialización del litio en Bolivia* (La Paz: CEDLA, 2014)

679 This is also translated as "whitewashing".

680 Ibid, p.29

through local processing and disposal or trucking out to another disposal site, both of which would likely represent further pollution and contamination. It is also worth noting that industrial lime production emits high levels of carbon dioxide through the drying and calcining of limestone, the basic raw material in lime production.[681] "A basic calculation indicates that the industrial lime plant would produce 930 t of Carbon dioxide per day",[682] which at proposed levels of usage would increase total Bolivian carbon dioxide emissions by two percent.

The GNRE manager and lead author of the CEDLA report said in his introduction to the same that the project may well use both methods, the *encalado* and *sulfato*, to lessen the impacts of the former. He writes "the lime process is not the best option, and will only be used for less than 60 percent of the total production".[683] At the projected magnitude of full production, 60 percent of 4,000 tonnes per day is still a large amount of waste however, and at the time of the CEDLA report there was "no in-depth study or a defined strategy to address the treatment or disposal of sludge by the GNRE".[684] The report recommends a study into the "alkalinisation process of soils provoked by the dissemination of magnesium hydroxide [which] could affect the rural production of quinoa in the regions bordering the Uyuni salt flat".[685] The "opportunity cost" of allowing lithium production to squeeze out the region's traditional quinoa agriculture was analysed in a 2010 Master's thesis.[686]

In the introduction to the CEDLA report it is noted very clearly that Calla is

681 Calla Ortega, "Impactos de la producción industrial del carbonato de litio y del cloruro de potasio en el salar de Uyuni", p.33–34
682 Ibid.
683 Juan Carlos Guzman Salinas, "Introducción: Elementos para encarar el debate", in Calla Ortega et al, *Un presente sin futuro*, p.17
684 Ricardo Calla, "Impactos de la producción industrial del carbonato de litio y del cloruro de potasio en el salar de Uyuni" p.30
685 Ibid, p.31
686 Aguilar-Fernandez, 'Estimating the Opportunity Cost of Lithium Extraction in the Salar de Uyuni, Bolivia'.

concerned that the *encalado* method of extraction could have serious impacts on the environment and communities of the area:

> For Calla, the *encalado* process could constitute a very serious and dangerous environmental threat to the fragile ecosystem, in accordance with his interviews, he found that the alkaline nature of the magnesium hydroxide contained in the residues would increase the alkalinity of the soils of the southwest of Potosí, affecting the sustainability of the ways of life of the communities and the biodiversity, and would suppose an impact that should be evaluated and about which the population should be informed.[687]

The CEDLA report explains how the *encalado* method is one of two alternatives that could be used to separate the lithium from the magnesium. The other process is the *sulfato* method (this process uses sulphates to achieve lithium carbonate), but it is unclear how far the Scientific Committee got in this line of enquiry, as they were allegedly disbanded at the time of the so-called "coup" removing FRUTCAS.[688] The environmental consequences for this alternative extraction method are therefore not well known, but Calla's expert informant, the chemist who had been on the Scientific Committee (and notably wished to remain anonymous), apparently believed they could also be severe.[689]

GNRE Annual Reports recently made available online confirm that the extraction method to be used will indeed be the *encalado* – or rather the 2016 document confirms the use of the synonymous "*lechadas de cal*".[690] This was also confirmed to Bolivian economist and researcher Sanchez-López in her interviews with the GNRE,[691] although it was denied to me in my interview with the Communications Director of the GNRE.[692]

687 Guzman Salinas, Juan Carlos, "Introducción: Elementos para encarar el debate**"** in Montenegro et al, Un presente sin futuro, 2014.
688 Ricardo Calla, author of CEDLA report chapter. Interview with author, La Paz, 23 April 2017
689 Ibid.
690 GNRE, Memória 2016, La Paz: GNRE, p.66
691 Sanchez-López, "From white desert to strategic resource: commodification of the Uyuni salt flat in Bolivia".
692 GNRE Communications Director. Interview with author, La Paz, 11 April 2017.

6.2 Mining, environmental and indigenous rights law in Bolivia

The great changes in Bolivian politics that have occurred over the past 10 years have triggered a substantive overhaul of the country's legislation pertaining to indigenous peoples' rights, environment and mining. Bolivia's legislative landscape has developed significantly in recent years to include numerous social and environmental laws including a new Bolivian Constitution (2009), a controversial Mining Law (2014) and a new Law on Mother Earth and Living Well (2012).[693] There is also an older Law on the Environment from 1992 still in force.

This section analyses this legislation in detail, in order that compliance with them can be measured out of responses gathered during my fieldwork. It is worth noting briefly that, like the historical detail and other aspects of the Bolivian lithium project above, information on environmental cases and compliance procedures (particularly with the newer legislation) is difficult to find in Bolivia.

6.2.1 Mining and natural resources law in Bolivia

The importance of natural resources to the economy is clear from the 2009 Bolivian Constitution's Article 349, which declares that the natural resources are owned by "the Bolivian people" but controlled by the state "on behalf of their collective interest".[694] Article 369.II reaffirms that "[t]he non-metallic natural resources existing in the salts, brines, evaporations, sulphurs and others substances are of strategic character for the country." [695] Together with the declaration of a "fiscal reserve" 1974 and the 2007 Presidential Decree outlined above, it reaffirms state rights to manage and own the

[693] Bolivian National Congress, *Ley Marco de la Madre Tierra y Desarrollo Integral para Vivir Bien N° 300*. There is an associated ministry, the "Plurinational Authority on Mother Earth" which manages Bolivia's climate change planning.
[694] Government of Bolivia, *Bolivia (Plurinational State of)'s Constitution of 2009* (Oxford: OUP, 2009) Article 349.
[695] Ibid, Article 369.

resources for the benefit of the whole country, and further in a special category for the sector described as "strategic". "Strategic sectors" in Bolivia, such as lithium and hydrocarbons, are given particular attention in Article 311.II.4 of the 2009 Bolivian Constitution, providing that "[t]he state may intervene in every part of the chain of productivity in the strategic sectors, seeking to guarantee its supply in order to preserve the quality of life of all Bolivians".[696] This hints plans to industrialise lithium, and echoed in Article 346, which declares that "natural assets are of public importance and of strategic character for the sustainable development of the country".[697] This management of natural resources for "sustainable development" for preserving the "quality of life of all Bolivians" is the central foundation Bolivia's neo-extractivist model. Furthermore, the "strategic" status appears to further confirm that the resource is under sole control of the state, even obliging the government to extract it as per the provisions above for the benefit of all citizens' "collective interest".[698]

The Bolivian Constitution clearly provides for a right to consultation for indigenous peoples in its Article 30.2(ii). For those identified in Article 30.1 as a "nation" in Bolivia, which includes all indigenous peoples and the Quechua-speaking native peasants around the Salar de Uyuni

> the right to prior obligatory consultation by the state with respect to the exploitation of non-renewable natural resources in the territory they inhabit shall be respected and guaranteed, in good faith and upon agreement.[699]

Article 30.2(iii). further grants the right "[t]o participate in the benefits of the exploitation of natural resources in their territory",[700] echoing the rights to consultation and benefit-sharing as found in ILO169. Notably the provision is for extraction of

696 Ibid, Article 311.II.4
697 Ibid, Article 346.
698 Ibid, Article 349.
699 Plurinational state of Bolivia, *Constitucion Politica Del Estado*, Article 30(2)ii
700 Ibid, Article 30(2)iii.

"non-renewable natural resources".[701] Presumably lithium falls under this category, although some confusion about this emerged in my interviews with local and national experts.

As well as echoing the provisions of international legal documents pertaining to the rights of indigenous peoples in the Constitution, in 2007 the Bolivian government adopted the entire text of UNDRIP into its own national legislation, with the result that all the provisions of UNDRIP are now adopted into Bolivian Law No. 3760.[702] This means that there are very clear specific national rights to prior informed consultation in Bolivia which should have the aim of *obtaining* free, prior and informed consent (FPIC).

Bolivia's 2014 Mining Law, echoing sections of the Constitution set out above, reaffirms strong state control over all mining activities. It also provides a framework for consultation: the Mining Law's Article 211.II states consultations should be done "in a maximum of three (3) meetings, that must be carried out in the place closest to the execution of the mining exploitation project".[703] These restrictions mean the provision is in breach of Bolivia's domestic UNDRIP Law No. 3760, which would require as many meetings as necessary in seeking to obtain FPIC, and held in a place convenient for affected community members to attend.

It is unclear how provisions for consultation in Bolivia's 2014 Mining Law apply to the pilot lithium project, as the law states in its Article 207.II that prior consultation does not apply to mining exploration or prospecting phases, both of which the pilot

701 Plurinational state of Bolivia, *Constitucion Politica Del Estado* (CPE), 2009, Articles 30(15), 290(I), 293(I) and Article 303(I) on consultation with indigenous or rural native communities.
702 Bolivian National Congress, *Ley N° 3760 elevando a rango de Ley de la República los 46 artículos de la Declaración de las Naciones Unidas sobre los derechos humanos de los pueblos indígenas*, 2007. Law No 3760 states "Pursuant to Article 59, 12th attribution of the Constitution of the state, rising to the rank of Law of the 46 articles of the UN Declaration on Human Rights of Indigenous Peoples, adopted at the 62nd Session of the General Assembly of the Organization of the United Nations (UN), held in New York on September 13, 2007."
703 Ibid, Article 211.

plant might be considered to fall under.[704] Article 73 of the 2014 Mining Law specifically covers evaporate resources, of which lithium is one. It is not substantial, perhaps reflecting the early-stage nature of the Bolivian state lithium project when it was composed, the pilot project having only been inaugurated in 2012.[705] Article 73 states that COMIBOL will manage the 100 percent state-run production and commercialization of the evaporates, and that COMIBOL can create a subsidiary to handle production and commercialisation.

The law does however guarantee continuing rights to *terceros* (third parties) such as salt miners operating on the salt flat. Article 73.VI states that third party rights to concessions on the Salar de Uyuni should be "evaluated" within two months of the publication of the 2014 law.[706] It is unclear whether this was done.

6.2.2 Bolivian environmental and indigenous peoples' rights law

Environmental policy in Bolivia is based upon rights provided in the Constitution, five-year Economic and Social Development Plans,[707] and the 1992 Law on the Environment No. 1333.[708] Bolivia's 1992 Law on the Environment (No. 1333) provides a legal framework for most industrial activity, and this is regulated centrally by the government Ministry of Environment and Water. It requires local authorities to establish a National Information System for Environmental Information to facilitate

704 Article 207(II), *Ley de Minería y Metalurgia* N° 535.
705 López and Rua Quiroga, 'An Assessment of the Environmental and Social Impacts of Chinese Trade and FDI in Bolivia'.
706 Ibid, Article 73(6).
707 See, for example, Decreto Supremo Nº 29272, Plan Nacional de Desarrollo Económico y Social (PDES) "Bolivia Digna, Soberana, Productiva y Democrática para Vivir Bien"2009–2014 [Bolivian National Development Plan "Dignified, Sovereign, Productive and Democratic Bolivia to Live Well"], 2009; Plan de Desarrollo Económico y Social en el Marco de Desarrollo Integral para Vivir Bien, 2016-2020, available at http://www.boliviawdc.org/images/publicaciones/PND.pdf [accessed 30 December 2017]
708 Jorge Inchuaste and Zoya Galarze, "Environment & Climate Change Law 2017 (Bolivia)", *International Comparative Legal Guides*, available at https://iclg.com/practice-areas/environment-and-climate-change-law/environment-and-climate-change-law-2017/bolivia [accessed 30 December 2017]

the right to environmental information.[709] Environmental permits are only granted at the completion of an Environmental Impact Assessment (EIA), with the extent of the studies determined by the regulator on the basis of the level of environmental damage likely to be caused.[710] Article 27 of this law states that the National Secretariat of the Environment is the authority that determines whether and what kind of EIA is necessary.[711] They range from requiring (before the investment stage), a comprehensive analytical EIA to not requiring an EIA at all.[712]

Usually an EIA would not be required prior to the prospecting stage of a project (one reason being that the prospecting and early-stage research generates the information that would go into such an impact study). It is still unclear to me whether and how the pilot lithium plant complies with this law, however two Bolivian researchers, Calla and Sanchez-López, both suggested that no EIA has been completed for the project.[713] I have not been able to find evidence either way. Perhaps an EIA would only be deemed necessary in advance of the industrial-scale plant becoming operational, and this is still some years away. It has furthermore been acknowledged that "Bolivia's environmental protection laws are notoriously flimsy".[714] Where strong commitments are in place, they are relatively new and untested.[715]

The right to a healthy environment appears in the 2009 Bolivian Constitution's Article 33, which states that "[e]veryone has the right to a healthy, protected, and

709 Bolivian National Congress, *Ley de Medio Ambiente No. 1333*.
710 Ibid.
711 *Ley de Medio Ambiente No. 1333*, Article 27.
712 Ibid, Article 25.
713 Ricardo Calla, author of CEDLA report chapter. Interview with author, La Paz, 23 April 2017; Sanchez-López, Daniela. "From white desert to strategic resource: commodification of the Uyuni salt flat in Bolivia".
714 Jessica Szarek, 'Bolivia's Massive Supply of Lithium, and the Implications for the Local Community of Potosi', *Upstream Journal* (blog), 22 May 2018, https://www.upstreamjournal.org/bolivia-lithium/.
715 Government of Bolivia, Ley Marco de la Madre Tierra y Desarrollo Integral para Vivir Bien No. 300, La Paz: Asamblea Legislativa del Estado Plurinacional de Bolivia, 2012

balanced environment.[716] Article 34 provides access to justice on environmental matters particularly, stating that

> [a]ny person, in his own right or on behalf of a collective, is authorized to take legal actions in defence of environmental rights, without prejudice to the obligation of public institutions to act on their own in the face of attacks on the environment.[717]

This is an important clause as it contradicts the spirit of the 2014 Bolivian Mining Law (Articles 99–101) which seek to criminalise social protest against mining. These assert that public force will be used against those protesting against mining, and that protestors will be held liable for economic damages caused in actions against the mining operators.[718]

The 2009 Bolivian Constitution was composed by a Constituent Assembly in the former capital, Sucre, between 2006 and 2007. The process was fractious, divided on national geopolitical lines between the highland elites (represented by the newly elected MAS government) and the lowland *criollo* or Eurodescendant elites who have historically had political control over extraction in the hydrocarbon-rich lowland areas of Bolivia.[719] As well as declaring Bolivia a "plurinational" state, meaning many "nations" or indigenous ethnicities are acknowledged as innately Bolivian in constitutional law, the 2009 Bolivian Constitution offers significant advances in indigenous rights. Article 30.1 defines a nation thus:

> A nation and rural native indigenous people consists of every human collective that shares a cultural identity, language, historic tradition, institutions, territory and world view, whose existence predates the Spanish colonial invasion.[720]

716 Government of Bolivia, *Bolivia (Plurinational State of)'s Constitution of 2009* Trans. Max Planck Institute (Oxford: OUP, 2009)
717 Ibid, Article 34.
718 Government of Bolivia, *Ley de Minería y Metalurgia No. 535,* Articles 99–101. See Angela Cuenca Sempértegui, 'Resisting the Mining Law in Bolivia', War Resisters' International, 29 August 2014, https://www.wri-irg.org/en/story/2014/resisting-mining-law-bolivia.
719 Benjamin Kohl and Linda Farthing , *Evo's Bolivia: Continuity and Change*, Austin (TX: University of Texas Press, 2014.)
720 Bolivian Constitution, Article 30.1.

This marks the 2009 Bolivian Constitution as a significantly progressive document, codifying such numerous rights for indigenous peoples that cannot all be listed here. It should be noted however that while the rights granted in the Constitution are significant, implementation and compliance measures are frustratingly slow and often wholly ineffectual.[721]

As well as engaging substantially with indigenous rights, the Bolivian Constitution in its Article 8 also incorporates the indigenous principle of *vivir bien* ("living well"), *suma qamaña* in Aymara and *sumak kawsay* in Quechua. This concept of development in harmony with nature and society rooted in Andean indigenous cultures is found in both the Bolivian and Ecuadorean Constitutions. However, as Chapter 2 noted, the idea of *vivir bien* as a communitarian, indigenous sustainable development paradigm could be said to be in direct conflict with natural resource exploitation plans in neo-extractivist Bolivia.

What is clear is that the 2009 Bolivian Constitution grants rights to "rural native indigenous communities"[722] to both consultation and participation on a number of matters.[723] Interestingly, where the 2009 Bolivian Constitution is thought to have been influenced by the provisions of UNDRIP, the previous Bolivian Constitution (1994) was similarly thought to have been influenced in its progressive attitude towards indigenous peoples by ILO169 (1989).[724]

While there is scant evidence that cases have been brought under the provisions of these new mining or environmental laws or rights contained in the 2009 Bolivian Constitution, there are, however, a number of academic studies on consultation

721 Robert Albro, "Confounding Cultural Citizenship and Constitutional Reform in Bolivia", *Latin American Perspectives* 37, Iss. 172, No. 3, 2010 71-90.
722 See Bolivian Constitution.
723 Ibid, Chapters IV and VII.
724 Albro, "Confounding Cultural Citizenship and Constitutional Reform in Bolivia".

procedures.[725] These have found consultations to be state-managed processes lacking in genuine participation from stakeholders,[726] commonly excluding certain demographics.[727] A Chapter 4 makes clear, consultations have to be accessible to all members of a community who might wish to attend, and participants should be free from state or company coercion or manipulation in order to be considered "free" (see Table 2, p.XX).

In 2011 major protests over a highway through the Amazonian *Territrio Indígena y Parque Nacional Isiboro Secure* (TIPNIS) national park where 14,000 indigenous people live won some protection for the park and its peoples through the promise of a consultation process. Perhaps as a result, the indigenous peoples protesting the highway through TIPNIS were granted their own specific rights to consultation in an entirely new law.[728] Furthermore, while there is a consultation procedure provided for within the 2005 Hydrocarbon Law, studies have found that this is not well-implemented.[729] As noted in Chapter 2 and above, President Morales has publicly stated a number of times that he believes that while the process of consultation is necessary to respect the rights of indigenous peoples, it is a waste of time and money.[730]

725 Ricarda Flemmer and, Almut Schilling-Vacaflor, "Unfulfilled promises of the consultation approach: the limits to effective indigenous participation in Bolivia's and Peru's extractive industries", *Third World Quarterly, 37:1, 172-188, 2016; Havard Haarstad , "Cross-scalar Dynamics of the Resource Curse: Constraints on Local Participation in the Bolivian Gas Sector", The Journal of Development Studies, Vol. 50, No. 7, 977–990, 2014.*
726 Jessika Eichler, *The Vernacularisation of Indigenous Peoples' Participatory Rights in the Bolivian Extractive Sector*, 2016.
727 Ibid, p.131
728 Bolivian Government, *Ley de Consulta a los Pueblos Indígenas del TIPNIS No. 222*, 10 de febrero de 2012.
729 Eichler, Jessika, *The Vernacularisation of Indigenous Peoples' Participatory Rights in the Bolivian Extractive Sector*; Haarstad, Havard, "Cross-scalar Dynamics of the Resource Curse: Constraints on Local Participation in the Bolivian Gas Sector"; Flemmer and Schilling-Vacaflor, "Unfulfilled promises of the consultation approach: the limits to effective indigenous participation in Bolivia's and Peru's extractive industries".
730 Observatorio de Industrias Extractivas y Derechos Colectivos/OIEDC, "Evo: En la consulta previa se pierde mucho tiempo", 13 July 2015, http://oiedc.blogspot.se/2015/07/evo-en-la- consulta-previa-se-pierde.html

6.3 Communities around the Salar de Uyuni

The next section will examine the communities around the Salar de Uyuni, and their traditional use of the land. This will aid the final section where I aim to understand whether there have been breaches of Bolivian national law pertaining to environmental and indigenous land rights in respect of the lithium mining project.

6.3.1 Rights to land in southwest Potosí Department

This region is one of the poorest in Bolivia but has been relatively economically successful in recent years, thanks in part to the tourism-boomtown of Uyuni, the large San Cristóbal mine, increased government spending and a generally strong economic trajectory nationally. The communities in the region are mainly Quechua and Aymará, and Quechua is widely spoken across the region over Spanish, with some older people speaking mainly or only Quechua.[731] This is important because of the way Bolivian society and its Constitution defines "indigenous". While lowland peoples are more commonly referred to as "indigenous" in Bolivia (see Chapter 2), despite being a majority ethnic group Aymará and Quechua *campesinos* are nonetheless included within the "nations and rural native indigenous peoples" designation in the 2009 Bolivian Constitution.[732]

In terms of land rights, Calla outlines the influence of FRUTCAS on land titling of the *Tierras Comunitarias de Origen* (TCOs) or *Territorios Indígenas Originarios Campesinos* (TIOCs) in his second chapter about the communities in the CEDLA report. He states that FRUTCAS made a deal with the government (to which they were closely aligned at

[731] Local shopkeeper near San Cristóbal. Interview with author, Culpina K, 3 April 2017; Driver. Interviews with author, 3–4 April 2017.

[732] This means that the communities surrounding Uyuni, as those living on "rural native indigenous" territory, have a "right to land, to the use and exclusive exploitation of the renewable natural resources under conditions determined by law" (note renewable), "to prior and informed consultation" and to "participation in the benefits of the exploitation of the non-renewable natural resources that are found in their territory" according to Article 403 of the Bolivian Constitution.

the time) in 2008 that would "cede to the State all the rights of use and exploitation of the *salar* and to fully recognise the fiscal reserve of the *salar*" on the condition that

> the State, through INRA [National Institute of Agrarian Reform], accept and carry out the rapid titling of TCOs or TIOCs in the Bolivian high plateau, including the titling of both the giant TCO or TIOC of Nor Lípez and, taking advantage of the urgent need on the part of the State to clear the question of the titles of dominion over the *salar*, of two other giants previously not demanded, those of the TCOs or TIOCs of Enrique Baldivieso and Sur Lípez.[733]

This resulted in the Nor Lípez administrative region having title to the one of the largest ("unprecedented"[734]) TCOs in Bolivia, at over two million hectares,[735] but no rights to any of the land determined as part of the fiscal reserve of the Salar de Uyuni.

As the TCO is based on the fiscal reserve boundaries, it notably does not include a 25–30-kilometre (50 at its widest parts) section of the coastline directly south of the Salar de Uyuni, around of the coastal area near to where the pilot plant is located. The government's "urgent need" to title this land, according to Calla, was because it had "to consolidate the giant extension of this major *salar* as exclusive territorial domain and fiscal reserve of the Bolivian State for purposes of the industrialisation of its evaporitic resources."[736] The TCO has likely ramifications for the application of the domestic law laid out below, as to those considered entitled to consultation by the state.

6.3.2 Use of natural resources and traditional livelihoods

The people of the region are engaged in a number of productive activities including organic quinoa farming, salt-gathering, tourism, and both large and small-scale mining (of silver and other metals in the San Cristóbal mega mine, and of borax and ulexite

733 Ricardo Calla Ortega, 'Impactos de La Producción Industrial Del Carbonato de Litio y Del Cloruro de Potasio En El Salar de Uyuni'. p.50
734 Ibid, p.49
735 Ibid.
736 Ibid, p.66

from the *salar* coastline areas).[737] The region of Nor Lípez is home to one of Bolivia's largest foreign-owned hard metal mines, San Cristóbal. The capital of this region, Colcha K, is close to but does not have direct access to the salt flat, due to impassable terrain. The villages closest to the salt flat are Rio Grande (directly south of the lithium plant) and Colchani. Many locals are involved in tourism, likely living in Uyuni for this work.

Salt gathering is practised by the inhabitants of one village called Colchani. Colchani is located on the eastern edge of the Salar de Uyuni, on the main route on to the salt flat for tourist vehicles travelling from Uyuni (see Map 3). It is very clear from visiting Colchani that their salt harvesting work is a traditional activity that has been undertaken for centuries on the Salar de Uyuni. This is evidenced by the newest building in Colchani, a government-funded structure with permanent stalls for souvenirs, located in a circle around a central "Salt and Llama Museum", which contains historical images and dioramas depicting the traditional way of life of the village's people (see Photograph B2). My key interviewee in Colchani expressed a desire for more information to give to tourists about their salt gathering and llama husbandry traditions. This made me consider that, certainly compared to Argentina, there was little in the way of tours for the experience of seeing the salt production. The companies focused on tours across the Salar de Uyuni and to the coloured lakes (home to three species of flamingo) and unusual rock formations across the Eduardo Avaroa Nature Reserve southwest of Uyuni.

Quinoa farming and llama husbandry are the main agricultural activities in the coastal regions of the Salar de Uyuni. The region is known as the only place growing organic "royal" quinoa, a source of regional and national pride (see Photograph B4).

[737] Colcha K regional authority official, head of productive development. Interview with author, Colcha K, 4 April 2017

Quinoa is a hardy plant that does not need much water, but even so production fell substantially in 2014–7 due to the persistent drought that affected the whole region.[738]

Salt gathering, practised here (like in the Salinas Grandes) since pre-Columbian times, is also seriously affected by drought. Without a regular cycle of precipitation, salt crystals cannot form. Drought also affects the availability of drinking water for local communities and their animals too. As one informant from the salt-gathering community of Colchani told me:

> *in the community we are suffering a lot with a lack of water. We are lacking. And if there's no water, there is a lot of sickness. The drought these last years is very strong. Before we didn't know drought. The salt was lovely back in the day. If there's no water, the animals suffer.*[739]

Across the region, a common response to my question about the immediate needs of communities was for a reliable way to harness the region's natural hydrology to provide communities fresh water. This is perhaps because of the recent experience of the regionwide drought that led President Morales to declare a State of Emergency in 2016.[740] Although not as dry as the Atacama in Chile, reliable water supplies are clearly important in the region around the Salar de Uyuni.

6.3.3 Responses to the lithium mining project

There is little knowledge among most community members in the region about lithium mining. Many of those that had heard about it were generally keen to see it happen. In San Agustín, notably farther from the salt flat than most of the communities I visited, I spoke to an elderly man who asked me a few times, "*when do you think we can start selling it?"*. He said to me, "*Let's hope we can sell it soon*," as we parted ways, after a conversation which included him lamenting about how the young people often have to go away to

738 President of rural union federation. Interview with author, Uyuni, 23 March 2017.
739 Anonymous, Interview with author, Colchani, 16 March 2017
740 Reuters, 'Bolivia Declares State of Emergency over Worst Drought in 25 Years', *The Guardian*, 21 November 2016, sec. World news, https://www.theguardian.com/world/2016/nov/21/bolivia-drought-state-of-emergency-water-shortages.

Chile to work in mining.[741] I noted palpable frustrations across the region at the delays in the project, perhaps because for most people it represents a potential source of employment and increased government funding. Improved transport infrastructure, such as a road from Colcha K to Rio Grande (only a four-wheel drive can cross the mud flat between the two communities) would make employment at the mine feasible for those living in Colcha K, who perhaps could not find an income in quinoa any more.

The quinoa farmer President of FRUTCAS stated quite unequivocally that quinoa was not the future for the region: "*Quinoa is a very delicate agriculture. It is not very sustainable, it is affected by climate change constantly and it is fragile. They are not a safe bet, quinoa and livestock".* This, he said, is why FRUTCAS supported the Bolivian state lithium project. That, and because the communities "*have the right to have technological development".*[742] He sees the lithium project as many do in the region, as the way to achieve *vivir bien*: "*that is why, as we say, we also have the right to have a better quality of life,* suma qamaña*; with quinoa, we will not have that*."[743] His enthusiasm for the government mining project on these terms was particularly interesting given FRUTCAS's historic links to the Bolivian government regime.

Municipal officials in Colcha K, the capital of Nor Lípez, appeared relatively trusting that the state lithium project will not cause huge environmental damage, as the assumption is that it will be properly managed and extraction will be carefully controlled. The municipal secretary for economic and productive development in Colcha K, in response to whether lithium mining will affect the environment in and

741 San Agustín resident. Interview with author, 4 April 2017. Also, Local shopkeeper near San Cristóbal. Interview with author, Culpina K, 3 April 2017. This was a common theme raised in discussions with young men looking for work and mothers who wished they did not have to travel so far away to find it.
742 President of rural union federation. Interview with author, Uyuni, 23 March 2017.
743 Ibid.

around the *salar*, said:

> *If we do not make a controlled or rational exploitation, if it can be affected. So, that's why, as I was saying a while ago, as a municipality, we are not going to let an exploitation that, say, expands out to, for example, all over the* salar. *It would have to be well controlled, in a certain space. Not all over the* salar. *That's going to take care of us as a municipality, because this wealth attracts many tourists from the world to our territory. So we're not going to let it be exploited like that, in an extensive form, let's say. But, something limited. So with that we are not opposing, but rather, making an exploitation of wealth in a controlled manner based on the laws of the environment that we have as a country.*[744]

For the municipal authorities in the region, the balancing of number of productive (economic) interests, including tourism, is necessary for the "rational exploitation" of an important national resource.

It was unclear whether the local authority officials understood that there had been a deliberation over the method to be used or knew about the waste that would be produced by the *encalado* method. As the Salar de Uyuni is 10,000 square kilometres, it is likely that locals are unconcerned about environmental impacts, unless they work directly on the salt, as salt gatherers or tour operators. Nonetheless, the processing or removal of 4,000 tonnes of alkaline sludge per day from the use of the *encalado* method might have ramifications for the region more broadly, such as through an increased use of trucks on dirt roads that can become unstable after heavy rain.

On the drive back from Rio Grande, the community nearest to the Llipi encampment and lithium pilot plant, we picked up a man who had worked in the plant on the salt flat since the very early days of the project. He told us there was "a lot of work driving trucks in the salt flat",[745] particularly shifting loads for the landscaping of the plant. When I asked him whether a lot of lime was used in the process he responded: "*Arta cal! [So much lime!] In the first phase here we brought lime from all over, including Potosí [the capital of Potosí Department]*."[746] This indicates that the method had

744 Colcha K regional authority official. Interview with author, Colcha K, 4 April 2017.
745 Truck driver in Llipi plant, Interview with author, Rio Grande, 4 April 2017.
746 Ibid.

been tested within the pilot plant. I asked him for his thoughts on potential contamination of the environment more generally. His reply was unequivocal:

> *Yes it will affect the environment. It could affect environment and tourism, with the contamination that you can see there inside with the toxic parts. It could affect the surroundings of the* salar. *For example I live in Rio Grande, it's close to the* salar*, so it can arrive first in Rio Grande. Contamination will arrive. It can happen, you know? The residents and also the tourists, because they pass through the middle of the* salar*, taking photos. All that, and with this contamination there will be damage… there will be contamination.*[747]

While he is clearly not a scientist, it is very clear that he fears that contamination will affect not only the salt flat and its tourism industry, but that it will also spread and "arrive" on the coastal areas, including in communities such as Rio Grande.

He was concerned too about pollution from the trucks that are currently moving in and out of the local village to service the plant:

> *In Rio Grande there is contamination now because of the trucks. They are in great herds and ohhh they make a lot of pollution when they start up. The fumes are toxic for the children. So many huge trucks [in the plant], around two hundred. I enter the community every day, each day they work with around fifty per day. Every day fifty, fifty, fifty, fifty.. In the* salar *they work with almost… over a hundred.*[748]

The CEDLA report also warns that the *encalado* method would require large-scale truck operations to deal with the waste, citing "a flotilla of fifty trucks" as a minimum in the following passage:

> To have in circulation and in running for eight hours, day after day – for years and years – a flotilla of even fifty tipper trucks on the dirt roads of the Southwest of Potosí, would mean, in any case, of course, levels of dust critical for the human population, for the fauna and for the development of the vegetation cover in the affected environment. To this must be added the economic and environmental high cost in diesel, gasoline and oils that would stay in the Southwest of Potosí, and even reach beyond it, creating a massive flood of decay for decades.[749]

747 Ibid.
748 ibid.
749 Calla Ortega, Ricardo, "Impactos de la producción industrial del carbonato de litio y del cloruro de potasio en el salar de Uyuni" p.37

That there are already an unmanageable amount of trucks passing through Rio Grande does suggest that there will be contamination from even partial use of the *encalado* method. It also appears that the contamination will take various forms: the carbon dioxide from the lime production; the fourfold output of alkaline magnesium hydroxide itself (for each tonne of lithium carbonate); and emissions and dust from the trucks that will be necessary to bring in the lime and dispose of the waste.

When we met in London, Bolivian researcher Sanchez-López indicated that she had interview evidence from the GNRE that the process of the *encalado* would in fact be used,[750] and pointed me to the 2016 and 2017 GNRE Annual Reports that stated this fact.[751] This was a revelation to me, because the GNRE Communications Director had insisted in our interview that the *encalado* would not be used. This was also the impression I had from Calla during our interview in La Paz, and from a blog article written by the head of the GNRE in response to the CEDLA project, which will be fully examined in the final section of this chapter below.

6.4 Extent of prior consultation in communities around the Salar de Uyuni

Having analysed the relevant Bolivian law and the potential socioenvironmental impacts of the Bolivian lithium mining project, I now turn to the experience of prior consultation of communities around the Salar de Uyuni. Not all communities close to the Salar de Uyuni are likely to be affected by lithium mining, particularly given the size of the salt flat. Therefore, this section focuses on the quinoa-farming communities of the southern coastline and the salt-gathering-focused community of Colchani to the east, both of which require a healthy environment for their traditional livelihoods.

750 Sanchez-López, 2018. I wrote to Sanchez-López for clarification on the evidence contained within the documents.
751 GNRE Memoria 2016, p.66

6.4.1 Access to information about lithium in and around the Salar de Uyuni

Conducting interviews within the region it emerged that even the highest authorities in Nor Lípez had not read nor heard about the CEDLA report or the *encalado* method. The provincial delegate in Colcha K told me that he had not seen it (and his manner suggested he was not aware of it generally).[752] Our interview ended with him asking me about the environmental impacts of lithium mining in Argentina. This suggests interest in the topic but few avenues for further research.

In general, the region has no newspapers and very few televisions, even in Uyuni town: there would often be a crowd gathered outside the one shop with a television in central Uyuni to watch a football match, for example. Many in Uyuni town and the *salar*'s surrounding villages told me that they have no knowledge of the current state of the project at all. If they had heard about it, it would have been from "*hearing some commentaries*",[753] which I took to mean word-of-mouth talk.

A lady living in a village called Vila Alota in the region of Enrique Baldevieso had said she heard nothing about lithium because, "*it is located in another province*".[754] She also said that, "*only in Rio Grande [had people been informed about the lithium project]. No commission has arrived here, not here in the village nor in the school. Maybe in their province [Nor Lípez].*"[755] This was a common response for those outside Nor Lípez.

Interestingly, when asked about the involvement of FRUTCAS in the project, of which she and her husband were members, she said: "*In 2010 there was a conflict between FRUTCAS and the government… From the leaders [of the project], or through FRUTCAS. It is not known very well, but I heard it was about some corruption.*"[756] She was concerned that

752 Colcha K regional authority official. Interview with author, Colcha K, 4 April 2017.
753 Author conversation with Uyuni street market stallholder. Uyuni, 1 April 2017.
754 This was a response received in Colchani, too, which is located in Antonio Quijarro Province along with Uyuni town. Colchani local. Interview with author, 16 March 2017.
755 Local woman. Interview with author, Vila Alota, 4 April 2017.
756 Ibid.

lithium mining might contaminate the salt: "*Yes [I am worried,] because what is going to be contaminated is the salt. We live from the salt, we are consumers of the salt*".[757] This was surprising, as Vila Alota, being far from the salt flat, is not a salt gathering community. It is however a beneficiary of adventure tourism centred around the Salar de Uyuni, catering for one-night stays of tourists exploring the region in four-wheel drives.

What her responses suggest is that only those living in Nor Lípez would have information about the Bolivian lithium mining project. However, numerous responses indicated that there was a lot of secrecy around the lithium project, even in that in the region. The provincial delegate for Colcha K, the capital of Nor Lípez told me, for example:

> *Well, it's a bit more ... it's a little confidential, the work they are managing, it's not easy to have clear information. But it's a state company, no? In another way… I think in general they will inform us, right? They will inform us all.*[758]

This is an acknowledgement, from the highest official in the municipal authority of Colcha K, capital of Nor Lípez (where the closest coastal village to the plant, Rio Grande, is located), that details for the project are not readily available. This is justified locally by the idea that there is confidence in it because it is state-run. This is seen as the key to being better informed. The main frustration this official expressed is that the work was probably delayed, and he reasoned that this was perhaps why information was not forthcoming.[759]

Information was clearly difficult to come by even for well-connected researchers working from La Paz. During our first meeting, Calla told me that learning about the Bolivian lithium project would not be typical PhD research but more "*like detective work*".[760] Indeed, CEDLA's own research was only made possible through the hiring of

757 Ibid.
758 Colcha K regional authority official. Interview with author, Colcha K, 4 April 2017.
759 Ibid.
760 Ricardo Calla, author of CEDLA report chapter. Interview with author, La Paz, 23 April 2017.

Juan Carlos Montenegro, who was high up in the GNRE at the time, and was eventually made the manager of the YLB in early 2017, when Luis Alberto Echazú was made Energy Minister.

6.4.2 No information about lithium in salt-gathering community Colchani

Colchani, the salt gathering community right next to salt flat on the eastern edge, is the one community that seemed to know nothing at all about the project. My anonymous Colchani informant, a salt miner, repeatedly stated that the community had had no contact from the government about the lithium project. When asked if the community knew much about the lithium plant he said: "*No. We have not been to visit it. We don't have much knowledge here in Colchani. It belongs to Nor Lípez, we are Antonio Quijarro.*"[761] He said that "*we only participated in the years of Jaime Paz Zamora*",[762] referring to the Bolivian president of the time of the LITHCO contract.

Throughout our interview this informant insisted that there had been no information or opportunity for participation in the state project since then at all:

> *We don't know about it – zero. We don't have any kind of explanation. We don't know how much lithium they are taking, nor of what quality. It's worrying for us because of lack of water. Long before, many years ago… the* salar *used to have a lot of water and I would take a lot of salt. It's absorbing all of the water from the* salar. *It lowers the production of salt. It's a little worrying for us. We don't blame the company, but we think… [he trails off]*[763]

Without any information about lithium mining there was a suspicion among salt miners that the mining activity might have something to do with lower salt yields.

Nonetheless, he also reaffirmed state ownership of the Salar de Uyuni, while also giving an indication of the salt gatherers' relationship with the state:

> *The* salar *belongs to the state. It's a fiscal reserve. We have a small area of production rented from the state through COMIBOL. We pay monthly to use it, but not much. But if we don't*

761 Anonymous salt miner. Interview with author, Colchani, 16 March 2017.
762 Ibid.
763 Ibid.

produce much salt… [again he trails off][764]

Here, he confirms that the salt cooperatives rent areas of the salt flat from the state. This recalls reminder of the provision in Article 73 of the 2014 Bolivian Mining Law of the need to guarantee the rights of third parties to the concessions on the salt flats.

That there has been no company contact with this one community that relies on salt gathering as a traditional livelihood was a clear violation of their right to have their traditional livelihoods strengthened and protected.[765] I asked my respondent numerous times about any information he might have had about lithium, and repeatedly he said there had been nothing. I asked a few people in the village square if they knew anything about the lithium project, and only one – a young girl – said that someone had come and showed them a video about electric cars. My anonymous informant said that this must have been in school, because no such thing had happened in the community.[766]

These responses indicate that no form of consultation process about the Bolivian lithium project has taken place in Colchani, despite it being the one community that depends on the salt flat for their traditional livelihood. This is a breach of international law, as indigenous communities have the right to be consulted on projects affecting the lands they occupy or otherwise use, and natural resources found on those lands used as part of their traditional economic structure.

6.4.3 Selective consultations in the form of "socialisations" in 2010–11

The old website (publicly accessible until 2017) of the former GNRE, a subsidiary of state mining firm COMIBOL, suggests that between 2010 and 2011, community meetings were held that are collectively understood as "socialisations" of the lithium

764 Ibid.
765 Article 23, ILO169.
766 Ibid.

project.[767] In sociology, "socialisation" is generally understood as the means by which people internalise societal norms.[768] This definition refers to the individual as the subject that is "socialised", not the project or law, as it is in Bolivia. The Bolivian Chamber of Senators website has a subpage title "*Socialización*",[769] which lists numerous changes to the law that will be "socialised" through meetings about them, usually led by senators and committee members associated with the law in question. Sanchez-López told me that a "socialisation" is a common form of sharing information with local communities about a project in Bolivia, which is reflected in my interview data.

This is interesting considering the legal developments that criminalise dissent against mining, and the likely socio-political pressures on Bolivians to accept industrial or infrastructure projects.[770] However, given the 2009 Constitution's use of "consultation", and that UNDRIP is national law, it is perhaps notable that "consultation" is not more widely used.

As the Community Management section of the now-offline website of the GNRE stated (in early 2017): "Between the 2010 and 2011 administrations, different socialisation activities were carried out in South West Potosí communities, as well as educational and other institutions."[771] The GNRE community relations webpage continues:

> A very important aspect is the direct relationship with the inhabitants of the area, creating in this way an environment of mutual trust between the GNRE and the communities, this fact allows executives, managers, technicians and workers to carry out their tasks with the certainty that together, a project is built that will benefit all Bolivians.[772]

[767] "*Gestion comunitaria* [Community management]", GNRE webpage, n.d., on file with author, accessed 15 March 2017, http://www.evaporiticos.gob.bo/?page_id=112
[768] John J Macionis, *Sociology* (15th ed.) Boston: Pearson, 2013, p.126; Clausen, John A. (ed.) *Socialisation and Society*, (Boston: Little Brown and Company, 1968).
[769] "Socialización", Plurinational Legislative Assembly of Bolivia, Chamber of Senators website, n.d. accessed 22 October 2018, http://senado.gob.bo/etiquetas/socializaci%C3%B3n
[770] The multiple pressures on communities to accept the TIPNIS highway is a good example of this.
[771] Author's italics. "*Gestion comunitaria*"
[772] Ibid.

It is difficult to know precisely what a "socialisation" entails from this alone, but presumably it is a process designed to create "an environment of mutual trust" between companies and communities.

The GNRE Annual Reports from 2011 and 2012 each mention "*socialización*" of the project with local communities once. The 2011 Annual Report states the aims of the Community Management of the GNRE, which has the following objectives: "To make known the aims, scope and objectives of GNRE"; to "Guarantee the social sustainability of the industrialisation of evaporitic resources"; "Participate in the follow-up and supervision of the project" and "Support in community projects (drilling of wells for drinking water, maintenance of roads and others)." Following this, it states that, to achieve the above objectives

> socialisation activities have been carried out in different communities, and educational institutions. Among the 33 communities and institutions visited, a total of 1,689 participants are registered, where 1,007 are male and 682 are female.[773]

While the numbers suggest that there was clearly a lot of socialisation activity, there is a lack of clarity here as to which communities and educational institutions were visited, or what the meetings entailed.

The 2012 Annual Report, which has a section entitled "Socialisation of the community project of Colcha K", is a little clearer on the information shared. It states:

> At the request of the community of Colcha K, the GNRE provided a detailed report on the progress of the project [which explained] the characteristics of Lithium, its main uses, main reserves of Lithium, scope of the reserves of Lithium in Bolivia, background and the Strategy for the Industrialisation of Evaporate Resources and the phases of the project.[774]

It is notable that this was provided "at the request of the community of Colcha K", and not as part of any state-led consultation process. The section quoted above appears to

[773] Author italics. GNRE Memória, (La Paz: GNRE, 2011) p.97
[774] GNRE Annual Report 2012, p.81

take the provision of the detailed report to the community as a form of "socialisation" in itself, as reflected in the heading of the section.

Furthermore, the 2012 Annual Report also has a section on "Public Consultation" which states:

> Public Consultation – As part of the Specific Analytical Environmental Impact Assessment Study (EEIA-AE) for the Modular and Industrial plants of KCl [potassium chloride], the corresponding Public Consultation has been carried out in the facilities of the Llipi camp. This event has not only served the purpose of obtaining the corresponding Environmental License, but has also allowed a fraternal approach with the Regional Federation of Peasant Workers of the Southern Altiplano (FRUTCAS) and other social organizations, having expressed their full support for the lithium industrialisation project in Bolivia.[775]

This statement provides some evidence that an EIA was produced for the potassium chloride (KCl) industrial plant. The mention of FRUTCAS here is notable not just because it confirms their support for the lithium project, but also because it states above that a "public consultation" was carried out as part of the EIA for the production of the fertiliser (KCl).

The above is interesting, particularly because there is no evidence that a consultation was carried out as part of an EIA for lithium. It is unclear why this is from these reports, but perhaps it was because the state company was still deliberating over which lithium extraction method would be used. It appears that this was still unclear at the time of the publication of the CEDLA report in 2014. The president of the local union federation told me, in response to my question about consultation: "*there has not been a recent socialisation, but technologically we cannot contribute much, they didn't explain to us which method would be more healthy, to not damage the environment*."[776] This lack of clarity at the time means the "socialisations" could not have been particularly informative as to the specifics of the lithium project and its environmental impacts.

[775] Ibid, p.94–95
[776] Ricardo Calla. Interview with author, La Paz, 23 April 2017

6.4.4 The Bolivian state lithium project's compliance with national law

Numerous interview responses suggested that any kind of access to information or a socialisation process would be predicated on the municipality in which the community was located. As shown above, the region closest to the mine, Nor Lípez, was able to request information from the state company. It is likely that the communities in this region, given their large area of titled land that excluded the coastal region nearest to the lithium plant, were not considered by the government to be entitled to prior consultation. However, given the lack of an EIA, potential for widespread environmental damage from the use of the *encalado* method, and the trucks required to remove the waste, the decision over who should be consulted based on regional boundaries does appear somewhat arbitrary.

Studies have shown that in Bolivia consultation legislation is both new and poorly implemented where it is in place.[777] While there are provisions in Bolivian law for EIAs and strong provisions for consultation of indigenous peoples through its adoption of UNDRIP as Law No. 3760, it has been hitherto unclear whether, how and when this applies to lithium mining on the Salar de Uyuni. It is unclear whether this is because of lithium's designation as a nationally-owned resource "of a strategic character" in the Constitution,[778] or the protracted nature of the state pilot project, for which, being at prospecting or exploration stage, a full EIA or consultation may not be required. It is common for EIAs to be performed only after prospecting has ascertained the level of damage that could be caused. However, the pilot plant was completed in 2012. Given the scale of the proposed industrial zone on the Salar de Uyuni, it would be unusual if

[777] Eichler, *The Vernacularisation of Indigenous Peoples' Participatory Rights in the Bolivian Extractive Sector;* Haarstad, "Cross-scalar Dynamics of the Resource Curse: Constraints on Local Participation in the Bolivian Gas Sector"; Flemmer and Schilling-Vacaflor, "Unfulfilled promises of the consultation approach: the limits to effective indigenous participation in Bolivia's and Peru's extractive industries"; Roman Bushel and Scott Fletcher, TIPNIS Highway Consultation, 27 February 2017, Participedia, accessed 2 January 2018, https://participedia.net/en/cases/tipnis-highway-consultation

[778] Bolivian Constitution*,* Article 369(II)

the National Secretariat of the Environment did not determine that an EIA was necessary for the project as per the 1992 Law on the Environment No.1333.[779]

Furthermore, consultations are mandated by the Bolivian Constitution in Article 30.1 which provides for "the right to prior obligatory consultation by the state with respect to the exploitation of non-renewable natural resources".[780] I was surprised during my fieldwork to learn that this provision was perhaps overlooked on the grounds that lithium is in fact viewed as a "renewable" resource. The former head of COMIBOL confirmed to me that lithium was being "renewed" by the Rio Grande river discharging into the salt flat:

> *Lithium, potassium, all that is in the mountains and around the salt, each year naturally provides a small supply [into the salar]. As it has been thousands of years of accumulation, we have the biggest lithium reserve in the Salar de Uyuni. But it is still being renewed…*[781]

One could of course say the same for oil, for example, but the idea that lithium is a renewable resource is interesting given the wording of the law, which states that

> the right to prior obligatory consultation by the State with respect to the exploitation of nonrenewable natural resources in the territory they inhabit shall be respected and guaranteed, in good faith and upon agreement.[782]

For the Secretary of Productive Development in the municipality of Colcha K, there was also confidence in the notion that lithium is essentially renewable, that it can be "regenerated". He said it was important to know "*if the same amount is being regenerated or is not regenerated in each phase of the management, and in what time or what time it takes, let's say, to regenerate this resource that is being exploited."*[783] The president of the rural union federation also understood lithium to be innately renewable, telling me that "*but lithium is a renewable metal, we know, if the brine is stirred with the water it is regenerated*". This is an

779 Law No.1333, Article 27.
780 Ibid, Article 30.I
781 Former head of COMIBOL. Interview with author, La Paz, 25 April 2017.
782 Bolivian Constitution, Article 30.15.
783 Colcha K regional authority official,head of productive development. Interview with author, Colcha K, 4 April 2017.

interesting detail to emerge from the interview data, particularly as the law stipulates that "prior obligatory consultation" should be used in the exploitation of non-renewable resources only.[784]

The situation laid out above suggests a question as to whether the Bolivian Constitution itself is correct to suggest consultation is only required when the resource is non-renewable. UNDRIP makes no such distinction, with Article 32.2 stating clearly that FPIC must be sought (although not necessarily obtained) "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."[785] Furthermore, as Chapter 4 has shown, case law from within the Inter-American system unequivocally provides that consultation is a right for communities (even those without land title) prior to the extraction of both renewable and non-renewable resources, including those which the communities utilise within their own economic systems themselves.[786]

Given that UNDRIP is also part of Bolivian law, and that the lithium project (although still at pilot stage) appears to be effectively approved at the very highest level, I conclude here that the government is in breach of its own UNDRIP law. This grants rights to FPIC for "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".[787] While the Nor Lípez and Colchani communities' land does include any area of Salar de Uyuni, or coastal area south of the plant (which belongs to

784 Bolivian Constitution, Article 30.15.
785 UN General Assembly, *United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) resolution / adopted by the General Assembly*, 2 October 2007, A/RES/61/295. Adopted 143-4-11, 107th plenary meeting Issued in GAOR, 61st sess., Suppl. no. 49."Annex: UN Declaration on the Rights of Indigenous Peoples": p. [1]-11, Article 32(2).
786 *Saramaka People v Suriname*, IACHR Series C no 172, IHRL 3046 (IACHR 2007), 28th November 2007.
787 UNDRIP, Article 32.2

the state's "fiscal reserve"), it is clear that the salt gatherers' resources (salt) are extremely likely to affected by the industrial-scale project's use of the *encalado* method. Furthermore, communities engaged in traditional organic quinoa agriculture are also likely to be impacted by the contamination and water use of lithium mining, even at a distance from salt flat.

6.5 Wider social and political context of the Bolivian lithium project

This final brief section examines the wider social and political context of the developing Bolivian lithium project. It will first examine the lack of transparency over the use of the *encalado* method. I will then analyse what the use of the *encalado* method for the Bolivian lithium project might mean, according to Calla. The chapter concludes with an analysis of international involvement in the project.

6.5.1 Lack of transparency in Bolivian lithium mining

In a now-offline blogpost, the former head of the GNRE and now Minister of Energy Luis Alberto Echazú wrote a scathing criticism of the 2014 CEDLA publication.[788] It starts by pointing out that CEDLA's "Energetic Platform" is funded by IBIS, a Spanish bank, and goes on to say that the report

> it is not, as we will demonstrate, either a scientific, technical or even informative contribution, on the contrary it misinforms the people, distorts reality and lies grossly about the production process of Lithium and Potassium salts and the consequent waste.[789]

It takes aim particularly at Calla's chapter in the report, which is careful to explain exactly where the information came from about the two extraction methods, which in one case is from within an interview with Echazú himself.

[788] Perhaps owing to the website redesign as the GNRE became the YLB.
[789] Luis Alberto Echazú Alvarado, "El Litio y las calumnias del CEDLA", GNRE website blogpost, 2014, on file with author, accessed 22 September 2016, http://www.evaporiticos.gob.bo/?p=1622

A key point that emerges from this blogpost is the strong nationalistic and anti-colonial language driving the reaction to the revelation of the method to be used. Echazú continues:

> Repeating old practices of the scribes of the *antipatria*, who came in the past to even dismiss the installation of smelting furnaces in Bolivia with supposedly technical and scientific arguments, CEDLA aims to discredit the project of industrialisation of evaporate resources and generate distrust in the population about its viability.[790]

His first point does have a basis in history, in that there were few opportunities for Bolivia to industrialise its resources in the past – particularly in the case of tin at the turn of the twentieth century (hence the reference to the smelter). What is interesting is how he sets CEDLA against the industrialisation of Bolivia's lithium. Echazú concludes his blog post: "The people and the revolutionary process are stronger than internal and external enemies. The industrialisation of our natural resources is unstoppable."[791]

Interestingly, Echazú's post implies (through referring to IBIS funding) that foreign influences are in some way trying to "sabotage" the project. The GNRE's Communications Director admitted to me that they had stopped allowing foreign journalists to visit the Llipi plant because *"[t]he international press is very critical of the Bolivian state in this project*" and these critiques "*do damage to our country*",[792] indicating a lack of transparency and growing distrust of any entity willing to critique the process of industrialising lithium. While it will be difficult to draw conclusions about the damage to the Salar de Uyuni nearby communities from lithium mining until the industrial-scale project is in production, the reaction to the CEDLA report denying the use of the *encalado* and attacking the critique do point to an increasingly secretive, perhaps even paranoid, lithium state project leadership.

790 Ibid.
791 Ibid.
792 GNRE Communications Director. Interview with author, La Paz, 11 April 2017.

6.5.2 The Salar de Uyuni as a "sacrifice zone" for capitalist countries

While local leaders expect some inevitable environmental damage from lithium mining, at least, they contend, the revenues will remain in Bolivia:

> *The benefit of all this is that everything, everything, everything that we are going to generate is going to be for us to have. But if a private company comes, they will pay us well, but they will loot it. All that profit they will try to take elsewhere.*[793]

With such a focus on the revenues, which could yet take half a decade still to materialise, local leaders are already in the difficult position of trying to negotiate with central government for a better share for their regions. It has been calculated by Sanchez-López that the local municipality Nor Lípez will only receive two percent of the royalties according to the law governing the distribution of lithium profits. This is equivalent to the amount offered to the region by LITHCO in the 1990s.[794]

The FRUTCAS president proudly and repeatedly referred to the "*100 porciento estatal*" status of the project as being a way to improve life for Bolivians. For him, lithium extraction is about the right to development, to *suma qumaña* or *vivir bien*, which cannot be achieved from quinoa alone. He told me it was "*not right*" that

> *the other countries of the First World have all the development, and we are castigated without a right to development. We here in Bolivia think in terms of communitarian socialism. And the political revolution we have had in this country has given us this certain level of economic development. We have seen in these last 10 years with the nationalisation of our natural riches, we have achieved an acceptable standard of living. At least we are dignified people. Before it bothered us, that we were seen as Third-Worlders, ignorant Indians, and now we are on par – we have technology, we have mobile phones, a satellite, we have almost full electricity service in the country. The little villages on the border with Chile, even they have electricity!*

The FRUTCAS president is naturally pleased with increased access to technology and economic development in his region, and this perhaps influences his view of the MAS government and the project. But it is not clear whether the crucial detail of the potential environmental damage – that would likely affect his livelihood as a quinoa

793 Colcha K regional authority official. Interview with author, Colcha K, 4 April 2017.
794 Sanchez-López, "From white desert to strategic resource", 2018.

farmer (he said he would not give up quinoa to work in mining, but that he might want his son to be able to do so) has been made clear to him in the "socialisations".

Lithium mining activity is not yet causing major environmental problems in the region, except some pollution from trucks. But with the use of the *encalado* method the impacts could quickly become overwhelming. This is what led Gúzman Salinas to cite Calla in the introduction to the CEDLA report, stating that, for Calla,

> continuation of the project under the technological definitions of the *encalado* does not only represents danger for the ways of life of the region, but could convert it, in environmental terms, into the "sacrifice zone" for the energy transition for the capitalist centre countries.[795]

The research presented here shows that this is a possibility, even without a host of foreign firms entering the country to mine, as is occurring in Argentina and Chile.

It is interesting to consider the relationship between the communities living around the Salar de Uyuni and "capitalist centre countries" (including China), who will likely be the consumers of the extracted lithium carbonate. It is, firstly, ironically only because of climate change that there is a market for lithium in the industrialised North that has made the Salar de Uyuni so desirable for lithium mining. Furthermore, if mining lithium on the Salar de Uyuni will cause so much damage it could be considered an environmental "sacrifice zone", it is clear that the FRUTCAS president's dreams of development under the MAS regime of communitarian socialism are somewhat misguided. The trust he has placed in his leaders to manage the project responsibly come from his lack of clear information and direct participation about the industrialisation of lithium.

[795] Juan Carlos Guzmán Salinas, 'Introducción. Elementos Para Encarar El Debate', in *Un Presente Sin Futuro: El Proyecto de Industrialización Del Litio En Bolivia* (La Paz: Centro de Estudios para el Desarrollo Laboral y Agrario (CEDLA), 2014). p.18

6.5.3 International and bilateral influences on Bolivia's lithium project

China consumes so much lithium carbonate that the global spot price of the commodity depends in large part on movements in their lithium-ion technology economy.[796] China has also become Bolivia's largest bilateral creditor, with USD$7 billion of infrastructure loans made by China to Bolivia approved in 2016.[797] Only USD$70,000 of lithium carbonate has been reportedly produced and sold so far, in 2016 to China.[798] However, full production from Bolivia could flood the market, causing global lithium price destabilisation.[799] The former head of COMIBOL told me that this concern led to Bolivia contracting a Dutch firm to facilitate its entry into the global lithium market, expected in 2022–3.[800] He also told me that Bolivia had made some attempt to negotiate the establishment of an Organisation of Lithium-Producing Countries (OLEC), modelled after the equivalent petroleum group, but Chile and Argentina had rejected the proposal.

The geopolitics of lithium are a particularly important part of Bolivia's resource nationalism. Bolivia's 2017 contestation at the Hague of Chile's capture of Bolivian territory during the War of the Pacific (1879–1884) concerns precisely the areas of large lithium reserves in the Atacama (see Map 2, p.74). Morales has maintained that, had Bolivia retained its sea coast, it would have had sovereignty over the Salar de Atacama and the significant copper reserves of the northern Chilean State of Antofagasta.[801] The issue over this lost sea coast and land is a huge one in Bolivia, and has been for many

796 Martim Facada, "Industrial Minerals: lithium market, prices and the Bolivian future", Presentation at the Anglo-Bolivian Society lithium mini-conference, Senate House, London: UK. 5 April 2018; Former COMIBOL head. Interview with author, La Paz, 25 April 2017.
797 Reuters, 'Bolivia Says China to Lend $7 Billion for Energy, Transport...', *Reuters*, 19 October 2015, https://www.reuters.com/article/us-bolivia-china-loans/bolivia-says-china-to-lend-7-billion-for-energy-transport-infrastructure-idUSKCN0SD2A420151019.
798 Andres Schipani and Henry Sanderson, 'Bolivia Makes First Shipment of Lithium to China', Financial Times, 17 August 2016, https://www.ft.com/content/78be1902-645c-11e6-a08a-c7ac04ef00aa.
799 Facada "Industrial Minerals: lithium market, prices and the Bolivian future".
800 Former head of COMIBOL. Interview with author, La Paz, 25 April 2017.
801 Ministry of Communication, "Bolivia plantea a Chile restablecer relaciones con el Papa como garante" Discurso Presidencial, 30 July 2015.

years (long pre-dating the MAS government). It is tradition in Bolivia that on 23 March, the "Day of the Sea", the "Bolivian Navy" marches through towns and cities, and children draw maps and pictures to commemorate the loss of the sea coast and associated landmass. This was observed with quite some build-up and fanfare in Uyuni particularly, being so close to the re-drawn border (see Photographs B10 and B11).

Throughout the 2006–2012 period, during Morales' first term as President, there was a huge push for bilateral investment partnerships, similar to those encouraged by various governments. French, Korean, German, Japanese and Chinese firms and diplomatic delegations courted President Morales for a share in Bolivia's lithium, and numerous memoranda of understanding were signed.[802] Former COMIBOL minister noted the "aggressive" nature of these overtures, particularly in relation to France,[803] and indicated that there was palpable surprise from within the international community when the Bolivians

> *rejected offers of France, of Korea, of Japan, of the Chinese, who wanted to join the project immediately, and (as always) take out the raw material and leave, as always. We rejected everything and they could not believe it, our foreign friends, this very firm position of the Bolivian state. We have maintained it and we continue to maintain it.*[804]

However, there is a potential disconnect between the narrative put out by this government, and absorbed and repeated by the officials in the local municipalities and FRUTCAS, and what appears to be actually happening in terms of foreign firms' involvement in lithium. In particular, there is evidence to suggest that there is increasing Chinese involvement in the construction of the lithium carbonate and potassium plants – and in national infrastructure and development projects more broadly.

802 GNRE Annual Report 2012, p.35. The *encalado* method is described here, but not its environmental impacts. It is questionable that these were available on the website at the time of the publication of the CEDLA report – I was not able to find them in my preliminary research.
803 Former head of COMIBOL, Interview with author, La Paz, 25 April 2017
804 Ibid.

As the full "industrialisation" of lithium along the supply chain is a highly technical project, there has been some Chinese involvement, such in the construction of cathode factories. However, very heavy Chinese involvement in the mining projection the Salar de Uyuni could prove yet another source of local resentment, as it has done elsewhere in Latin America,[805] and particularly if the chosen method produces severe environmental damage in the region.

López and Quiroga have examined the growth of China's involvement in mining projects in Potosí (including lithium). According to them "this growth can be explained by the affinity that the Bolivian government has demonstrated for China, since it has shown support for Bolivia's process of political change".[806] Indeed, there is a notable political–ideological parallel between the governments of Bolivia and China, even where there is no geopolitical power parity. In conversations with López and a local civil engineer in Cochabamba, it was clear that the influence of China is felt across Bolivian society, particularly in the tendering of contracts to construction firms such as China's CAM-C.

Finally, it does appear from my interview data that CAM-C are also directly involved in the lithium project. My anonymous Rio Grande informant said that, "*Yes CAM-C, they are working with the plant. This is directly for export.*" When I asked if it was export of lithium, he replied, "*Of lithium*". He also said that *"[t]here are other small companies, like from Mexico, Brazil, there in the Rio [the Rio Grande lithium plant]. Working on the area of cement. For the industrial plant*".[807] When asked if he had seen many foreigners in his years working in the plant he said: "*[i]n the company, when I go inside, there is only one*

805 Nathaniel Parish Flannery, 'How China's Relations With Peru Explain Its Approach to Diplomacy', The Atlantic, 12 September 2013, https://www.theatlantic.com/china/archive/2013/09/how-chinas-relations-with-peru-explain-its-approach-to-diplomacy/279618/.
806 López and Rua Quiroga, 'An Assessment of the Environmental and Social Impacts of Chinese Trade and FDI in Bolivia'.
807 Truck driver in Llipi plant, Interview with author, Rio Grande, 4 April 2017.

Chinese company, CAM-C, no more. The foreigners are from China CAM-C."[808] I noticed the name of the company more readily during the fieldwork due to a scandal that was unfolding in the national press. It involved a young Bolivian woman who was alleged to have been in a relationship with President Morales, and who had also worked for CAM-C. Although there is little evidence to suggest substantive involvement of China in Bolivian lithium mining as yet, the details above perhaps signify that the "*100 porciento estatal*" label may be used a means to consolidate continuing support from local and provincial communities.

Conclusion

This chapter has analysed Bolivian law pertaining to the rights of indigenous people living near proposed lithium mining on the Salar de Uyuni in Bolivia. Analysis of the historical and socio-political dimensions of the project have revealed a determination to pursue lithium mining by the government, despite potential ramifications for local communities due to contamination from the use of the *encalado* method.

The violations of both Bolivian national law and international human rights law are clear: the right to information has remained unfulfilled, and environmental participation has been weak, primarily conducted as "socialisations" in 2010–11, that concluded long before accurate information about potential environmental consequences was confirmed by the company in 2016. However, despite being seemingly approved at the highest levels of government, the project is still in its pilot stage, meaning there is still time for an EIA and consultation process to be implemented.

Furthermore, support from the local social organization FRUTCAS and the

808 Ibid.

national anti-colonial, "revolutionary" rhetoric used to promote the state-owned project has no doubt helped in securing local and regional acceptance. Naturally the prospect of revenue has helped, even though information about the project's progress has not been forthcoming, and thus local frustrations are emerging. The increasingly centralised and secretive nature of the lithium project, and the strong reactions of the state company to critique suggest a determination to proceed regardless of the potential environmental damage.

What is clear however, is that the proposed use of the *encalado* method, producing 4,000 tonnes of waste material a day, even at only 60 percent of full production would cause huge contamination of the Salar de Uyuni and surrounding areas, and also through the amount of trucks required to remove it. There remain serious concerns over how large-scale lithium production will affect the local livelihoods of indigenous communities in the southwest of Potosí, particularly given the confusion over the methods to be used and their impacts, and the complete lack of knowledge of the process among local officials and community members. This is particularly concerning for those in the traditional salt-gathering village of Colchani. The damage that may be caused by the possible use of the *encalado* method is deeply troubling, and my qualitative field research makes clear that it is not (and has not been) widely understood in the region as a prospective method for the industrial-scale lithium plant. If indeed the plant is to be constructed soon, this information should be made available to communities, who should also be consulted according to Bolivian law.

CHAPTER 7 DISCUSSION: COMPARING ARGENTINA AND BOLIVIA'S COMPLIANCE WITH ENVIRONMENTAL AND INDIGENOUS HUMAN RIGHTS LAW

Introduction

As this thesis has so far detailed, two salt flats in Jujuy, Argentina, and the Salar de Uyuni in Bolivia are either currently being mined or will soon be mined for lithium. There have been different responses and levels of participation from surrounding communities. There are also different potential environmental impacts, with water a key concern in Argentina, and contamination from *encalado* waste and pollution from trucks a particular concern in Bolivia. To answer the central research question: "*To what extent do indigenous communities have the opportunity to participate in lithium mining in their ancestral regions in the high Andean plains of Argentina and Bolivia?*", I had to ascertain how compliant Argentina and Bolivia are with international and regional legal regimes, and their own law, policies and environmental procedures.

In both countries, the indigenous communities make similar use of the salt flats and surrounding lands, with some focused on rearing livestock, some on cultivating quinoa and others on salt gathering. Tourism and mining are also common options for work, particularly in Bolivia, and economic migration is common. The region, at high altitude and with an (increasingly) extreme climate, lacks infrastructure such as reliable roads, public transport, water supplies and healthcare. The communities are widely dispersed, with relatively low socioeconomic status and weak political power, although this is more complex in Bolivia, where the local union federation is closely linked to the government in power.

This chapter is split into four parts, which present the key findings of the study. The first section addresses the indigenous human right to a consultation process in both countries. The second analyses compliance in both states with the broader environmental participation law, focusing on the right to information. The third section examines the potential environmental damage from lithium mining in both regions. Together, these three sections answer the central research question of the thesis. The fourth and final part builds on this conclusion to examine both governments' justification of extractivism in the case of lithium particularly.

There are growing concerns among researchers and indigenous people that industrial-scale lithium mining will impact the ecological and hydrological balance required for the traditional indigenous activities of salt gathering, quinoa and animal agriculture across the region. Furthermore, the impacts of climate change are increasing across the high Andean plateau, evidenced by a recent severe drought. Lithium mining at scale is likely to make these impacts worse. This is alarming to indigenous communities that rely on reliable seasonal temperatures and rainfall to sustain their livelihoods. There is some irony in the fact that this commodity is found in great abundance in a region already suffering from the impacts of climate change, which are likely to be exacerbated by the impacts of mining lithium.

7.1 Indigenous peoples' rights to consultation in advance of lithium mining

All communities living in close proximity to Argentina and Bolivia's lithium-rich salt flats are indigenous. This means that they possess rights to consultation on projects likely to affect their lands, livelihoods and cultural traditions, provided for in international human rights law analysed in Chapter 4.

An assessment of compliance with international indigenous human rights law is

crucial to determine not just the extent of participation in practical terms, but if and how the quality of participation complies with international norms relating to indigenous peoples' rights. This section presents a key finding of the study: that moves to mine lithium are already causing violations of indigenous peoples' rights in Argentina and Bolivia through lack of free, prior and informed consultation provided for in ILO169 (and UNDRIP in Bolivia).

7.1.1 Compliance with rights to free, prior and informed consultation and consent

ILO169 is binding on both Argentina and Bolivia and interpretations of these obligations are commonly drawn upon within the decisions of the Inter-American Commission and Court of Human Rights.[809] The provisions in ILO169 that should be read in tandem are Article 7.1. and Article 15.[810] Article 7.1 provides indigenous communities the rights to

> decide priorities for the process of development as it affects their lives, beliefs, institutions, 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.[811]

This combined social, cultural and economic development is closely linked to indigenous use of land.[812] In these cases the communities have a claim to the land on and around the salt flats as they use it for salt harvesting (the Salinas Grandes and Colchani communities), llama grazing, and for quinoa farming (in Bolivia only). Chapter 4 established that even without land title, indigenous communities have rights to land they occupy or otherwise use for traditional activities.

Furthermore, Article 15 states that, even in cases where "the state retains the

809 International Labour Organization (ILO), *Indigenous and Tribal Populations Convention C169,* 1989 (ILO169), Article 7(1)
810 UN PFII, International Workshop on Free, Prior and Informed Consent and Indigenous Peoples, New York, 17-19 January 2005, PFII/2005/WS.2/4
811 Article 7.1, ILO169
812 Westra, *Environmental Justice and the Rights of Indigenous Peoples*.

ownership of mineral or sub-surface resources or rights to other resources pertaining to lands",[813] governments are obliged to

> 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.[814]

The final part of ILO169 Article 15 maintains that indigenous communities "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."[815]

Traditional indigenous interests are likely to be prejudiced by the development of lithium in both Argentina and Bolivia in a number of ways. In the short term, drilling and pool-construction on the salt flats might affect areas traditionally used for salt harvesting. Longer term, a reduction in water supplies from excessive drawing out of brines from salt flats could affect all areas around salt flats where industrial-scale lithium mining takes place. Specifically in the case of Bolivia, contamination of the Salar de Uyuni and the quinoa-focused agricultural lands surrounding its southern coast could result from the proposed use of the *encalado* method for all or part of the proposed production. Lithium mining may also affect community members' work in tourism, which, while not traditional, is a particularly large industry in the Salar de Uyuni.

Procedures to consult indigenous communities in both Jujuy and the southern Bolivian *altiplano* have not complied with their own domestic laws or state obligations under ILO169. In Argentina, unlicensed company activity on the Salinas Grandes meant no warning for communities in advance of the prospecting activity, and the impact studies eventually submitted were incomprehensible to the communities. In

813 Article 15, ILO169
814 Ibid.
815 Ibid.

Olaroz there are regular meetings and the community is involved in some forms of environmental monitoring, but it is unclear how much the community were able to influence the early stages of the project. In the town of Susques, according to the Colectivo Apacheta, the municipality approved mining in an unrepresentative way, with 35 signing for a community of over 2000, without free, prior and informed consultation. In Bolivia, "socialisations" were held instead of informed consultations, in selected communities and educational institutions. These meetings were presumably held too early to communicate the ramifications of the *encalado* method to quinoa farming communities on the southern coast of the salt flat, who require a healthy environment for their traditional agricultural activities. East of the Salar de Uyuni, the salt-gathering community of Colchani has not been informed at all about the lithium mining project. This is despite a clear reliance of the community on the salt flat for the traditional practice of salt gathering.

As detailed in Chapter 4, the concept of FPIC has evolved from the same sources as the right to free, prior and informed consultation provided for in ILO169.[816] To briefly recap, the "common practical understanding" of FPIC from the UN Permanent Forum on Indigenous Issues (UNPFII),[817] "free" means decisions are free from coercion, manipulation or intimidation; "prior" that consultation and/or the seeking of consent should be sought prior to any licensing or the commencement of activities; and "informed" that information received should be satisfactory in relation to key areas.[818] The overlap between indigenous peoples' environmental rights and rights to participation and FPIC is apparent in the specification of the right to be "informed" in

816 The ILO suggests that the ILO169 consultation articles already contain the principle of FPIC. UNPFII, International Workshop on Free, Prior and Informed Consent and Indigenous Peoples, Contribution of the ILO, New York, 17-19 January 2005, PFII/2005/WS.2/4.
817 UNPFII, Report of the International Workshop on Methodologies regarding Free, Prior and Informed Consent and Indigenous Peoples (New York, 17-19 January 2005), Fourth Session, New York, 16-27 May 2005, E/C.19/2005/3.
818 Ibid.

order to participate through meaningful consultation (or give/withhold consent in the case of FPIC).

While certainly strengthened by the case law from the Inter-American System, and associated through its content to other UN treaties, UNDRIP is only soft law, except in Bolivia, where it exists as a statute in national legislation. Despite this fact, and numerous other clauses in the Bolivian Constitution that provide for rights to consultation, it is clear that there have been no consultations at the standard required by UNDRIP in Bolivia in respect of their state lithium project.

7.1.2 Meaningful consultation rights and the "right to veto" controversy

While it is generally accepted that indigenous peoples have a special relationship with their ancestral land,[819] it is also accepted that states own subsurface resources and have a right to develop these resources on behalf of all nationals. As well as being a common refrain from officials in both countries during my fieldwork, this is a fact also accepted by several community members I spoke to, many of whom were unaware of their environmental rights and rights as indigenous peoples. The former leader of Olaroz Chico told me that all three parties in the arrangement – the state, the company, and the community – "*all have rights*",[820] confusing mining rights with human rights. This statement prompts the following questions. Do all three parties understand their rights? Are the rights equally balanced? Communities appear to have far less knowledge of their rights than either the state authorities or companies (who have greater economic resources enabling access to information and legal assistance). This results in companies and state officials being able to deny a local community's right to information, and rights to raise any concerns in advance of any mining activity taking place. (The notable

819 Barelli, 'Free, Prior and Informed Consent in the Aftermath of the UN Declaration on the Rights of Indigenous Peoples'.
820 Former *leader*, Olaroz Chico, Susques, Jujuy Province, 6 February 2017.

exception here is the 33 Communities of the Salinas Grandes, who were able to access legal education through NGOs following lithium prospecting in 2010.)

This unequal power dynamic (where the state has a monopoly on definitions of legality[821]), is observable very clearly in the development of FPIC at the UN. An earlier draft puts a clear obligation on the state to actually obtain consent to mine. The eventual formulation adopted, of an obligation only to "consult… in order to obtain" FPIC was heavily influenced by state delegates who wished to ensure UNDRIP did not offer an indigenous veto to natural resource development. It is likely that the idea of meaningful, informed consultation with communities prior to any mining activity taking place is generally unacceptable to states because it might amount to allowing communities to refuse the project, or having a "right to veto". However, the former UN Special Rapporteur for Indigenous Peoples, James Anaya, has specifically said that FPIC should *not* be "framed in terms of whether or not indigenous peoples hold a veto power that they could wield to halt development projects".[822] This is presumably to ensure indigenous delegations maintain an open dialogue with states at the highest levels, which is arguably what has occurred in Argentina in the case of the 33 Communities.[823]

Furthermore, having a right to refuse a project will have implications for the process of consultation more broadly. As reflected in the comment from Anaya above, states generally argue that the power of veto is an unacceptable level of power for indigenous communities to wield.[824] Rights granted to communities "must be balanced by the need for governments to own or regulate resources in the interests of all their

821 Harvey, *The New Imperialism*.
822 James Anaya, 'Report of the Special Rapporteur on the Situation of Human Rights and Fundamental Freedoms of Indigenous People' (15 July 2009), UN Doc. A/HRC/12/34, para. 48.
823 The acknowledgement of *Kachi Yupi* in the mining authority and National Ombudsman demonstrates the open dialogue.
824 ibid

citizens."[825] As Barelli explains, "[t]his means that indigenous peoples should not have the power to block projects that are considered of *strategic* importance for the development of the entire country".[826] In attempting to understand how and why consultation has been so lacking around Argentina and Bolivia's lithium-rich salt flats, the idea of a "strategic" extractive project is important. This will be analysed in the final part of this chapter where I consider national development as a motivator for state violation of indigenous rights to consultation.

7.1.3 Bolivian indigenous rights law obscuring potential industrial damage

One of the most interesting findings from my research is that, despite the distinct political ideologies in Argentina and Bolivia (see Chapter 2), and particularly the latter's rhetorically anti-colonial, pro-indigenous and pro-"Mother Earth" stance, the fundamentals of resource governance relating to non-compliance with indigenous peoples' rights are very similar. These fundamentals are that the lithium belongs to the state, and the state has the power to decide how it is managed. This power is effective in denying communities meaningful consultation, albeit in breach of international human rights law.

In Bolivia, where indigenous rights law is stronger, the law has failed to protect indigenous communities' procedural environmental rights. Socialisations, where they were held, provided little opportunity for communities to participate meaningfully. The potential socioenvironmental damage of the proposed *encalado* method has therefore been hidden from the communities it would likely affect. And yet, local support for the project is strong, bolstered primarily through the influential local union federation

825 This point was highlighted by the representative of New Zealand during the negotiations on the text of the declaration. Cited in Barelli, 2012. Report of the Working Group on the Draft Declaration on its 5th session, UN Doc. E/CN.4/2000/84, para. 93.
826 Barelli, 'Free, Prior and Informed Consent in the Aftermath of the UN Declaration on the Rights of Indigenous Peoples'. Emphasis added.

promoting the communitarian socialist "development" narrative of the central government, and particularly by espousing the (potentially inaccurate) "100 percent state-owned" profile of the project.

My finding reflects Burman's finding on Bolivian hegemonic indigeneity, one that is "intimately tied to notions of Bolivian nationhood and a strong Bolivian state",[827] reflected in support across the region for the state lithium project. In the absence of reliable information about lithium mining, the project's parameters are reasonably assumed to be based on the decolonising, pro-indigenous development model of the MAS government, incorporating the concept of *vivir bien*, present in the 2009 Constitution and the 2012 Law on Mother Earth and Living Well. This is hugely problematised by the concern that the project could produce up to 4,000 tonnes of alkaline waste per day.

It is also interesting to analyse pro- or anti-lithium mining stances in the context of the political allegiance to the MAS of FRUTCAS, part of the CSUTUB, a group who is closely aligned with the MAS government. Given this link to the central government regime, one might assume that indigenous communities are able to influence decision-making about their region in a meaningful way. However, it cannot be assumed that FRUTCAS, even if they had been provided adequate information, speaks for all the potentially-affected communities of the region. Moreover, although the federation played an important role early in discussions, evidence from Calla and others suggests they have been increasingly marginalised since 2010 when they were pushed out in a "coup".[828]

There are also signs that the Morales government has becoming increasingly

827 Anders Burman, 'Now We Are Indígenas! Hegemony and Indigeneity in the Bolivian Andes', *Latin American and Caribbean Ethnic Studies* 9, no. 3 (2014): 247–71.
828 Ricardo Calla Ortega, author of CEDLA report chapter. Interview with author, La Paz, 23 April 2017.

authoritarian, such as the law criminalising mining protests, and the presumed suppression of the CEDLA report that revealed the waste from the *encalado* method. The case of the *Centro de Documentación e Información Bolivia* (CEDIB) eviction is another case in point. CEDIB, which according to Director Marco Gandarillas is "a human rights organisation that has been denouncing human rights violations by transnational companies – including Chinese ones", were asked to move out of their premises to make way for a Chinese institute.[829] The threat to remove them with "the help of the security forces" came from the MAS-linked rector of Cochabamba University – giving the impression that the government is working across numerous channels to shut down criticism of extractivism and the work of organisations focused on social and environmental research. This is reflected in contemporary research on Bolivia.[830] The conclusion is that, despite an optimistic start to the project with close involvement with the local indigenous peasant union, not even the "anti-colonial" MAS government is willing to submit to a process – to which they have subscribed through the national UNDRIP law – which may result in opposition to (or a right to veto) lithium mining on the Salar de Uyuni.

7.1.4 Indigenous land title in Argentina and Bolivia and its bearing on consultation

Indigenous land rights are complex in both countries. Indigenous communities in the region have a history of self-organisation and traditional practices on ancestral land, which are considered by the Inter-American human rights regime to confer customary land rights, even where the state has not granted title. There are indications in both case study areas that land ownership (according to state title) is a factor in indigenous access

829 David Hill, 'Top Bolivian NGO Facing Eviction - given Just Days to Move Archive', *The Guardian*, 8 April 2017, sec. Environment, https://www.theguardian.com/environment/andes-to-the-amazon/2017/apr/08/top-bolivian-ngo-faces-forced-eviction.
830 Coletta and Raftopoulos, 'Counter-Hegemonic Narratives and the Politics of Plurality'; Raftopoulos, 'Contemporary Debates on Social-Environmental Conflicts, Extractivism and Human Rights in Latin America'.

to company information. For example, the Olaroz Communities are entitled to payments from *servidumbres* on account of their communitarian land title.

In the case of the Salinas Grandes, the very existence of indigenous communities was called in to question. Puente and Argento refer to the Argentinean Supreme Court hearing, where

> state Treasurer Alberto Matuk … was concerned to clarify that where the effective explorations were taking place it was in the area of the department of Susques (Jujuy), in the Salar de Olaroz, where there was consent from the inhabitants. The affirmation underlying this statement was that where the consultations had not been carried out, it was because there were no native peoples living in the area.[831]

They conclude the point by stating that "the link between 'existence' and registration in state bodies, suggests that by not being registered… many of the Salinas Grandes communities were considered 'nonexistent'".[832] Puente and Argento's commentary certainly reflects the experience relayed to me by the 33 Communities representative, who told me that there were 40,000 people living in the *puna* region of Jujuy and Salta.[833] However, not all of the 33 Communities had title to their land, suggesting they were "unregistered". This shows starkly the wide power gap between government bodies and indigenous communities. In echoes of *terra nullius*, government officials deny the very existence of the communities, leading to a denial of rights. And yet, it is the state itself that has not registered their occupation of their ancestral land. This is one of the reasons the Supreme Court case was rejected: the judges believed they had no jurisdiction in a provincial matter, and particularly one where those bringing the claim had irregular communitarian land title.[834]

831 Florencia Puente and Melisa Argento, 'Conflictos Territoriales y Construcción Identitaria En Los Salares Del Noroeste Argentino'. p.134
832 Florencia Puente and Melisa Argento.
833 Representative from the 33 Communities. Interview with author. Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.
834 Supreme Court of Argentina "Comunidad Aborigen de Santuario Tres Pozos y otros c/ Jujuy, Provincia de y otros s/ amparo" December 18, 2012 C.1196.XLVI accessed January 2, 2018, http://public.diariojudicial.com/documentos/000/020/091/000020091.pdf

The unequal power dynamic recalls the right to comprehensible information from the state. This problematic is well expressed by Scott, who describes modern property law as "mediated through the state and readily decipherable only to those who have sufficient training and a grasp of the state statutes."[835] He further acknowledges that state myopia when it comes to land "value" is best represented by the fact

> that the cadastral map and assessment system considered only the dimensions of the land and its value as a productive asset or as a commodity for sale. Any value that the land might have for subsistence purposes or for the local ecology was bracketed as aesthetic, ritual, or sentimental values.[836]

Of course, for indigenous communities, there is far more to their relationship with the land than can be contained in its commodification – it is the foundation upon which life itself is sustained, and the basis of their environmental rights. It is notable that in a majority-indigenous state like Bolivia, rhetorically committed to *vivir bien*, this appears to have been overlooked in favour of the industrialisation of lithium.

In Bolivia, Calla writes in the CEDLA report, FRUTCAS had been lobbying for the titling of their communitarian land around the southern coast of the salt flat since the 1990s.[837] This process was completed in 2008, when the Bolivian government required the land issue to be resolved urgently for the proposed industrialisation of the salt flat for lithium mining. Calla writes that FRUTCAS, therefore, was effectively "taking advantage of the urgent need on the part of the state of to clear the question of the titles of dominion on the *salar*" to secure their land titles.[838] It is significant that the relationship between FRUTCAS and the MAS government appeared to have broken down in the years immediately after the titles were granted, with inadequate information shared with communities, many of which will be affiliated with FRUTCAS.

835 Scott, *Seeing like a State*. p.63
836 Ibid.
837 Ricardo Calla Ortega, 'Impactos de La Producción Industrial Del Carbonato de Litio y Del Cloruro de Potasio En El Salar de Uyuni'.
838 Ricardo Calla Ortega. p.66

The Bolivian case provides an example of Scott's argument above. Despite the clear perceived differences between regions in the area as regards rights to consultation, that the Salar de Uyuni "belongs to the state" was a fact accepted by the communities, including in Colchani (the salt gathering community), and particularly by officials in Colcha K. Some community members in Bolivia appeared to believe they had no rights to information or participation as they did not live in Nor Lípez.[839] In both Argentina and Bolivia, state-administrated boundaries are what appear to determine the dissemination of information or invitations to participate from the company or government as mandated by law.[840] Both the *servidumbres* and *socializaciones* appear to work this way – only communities within official, registered boundaries determined by the state to be "near" or "bordering" the coast of the salt flat where lithium operations are taking place are afforded these processes, regardless of their use of the salt flat. This has meant the exclusion of important communities from the process of establishing mining, such as the traditional salt-gatherers of Colchani and Salinas Grandes.

Furthermore, the regularisation of indigenous land rights in Argentina has been seriously problematic, leading to numerous protests and sit-ins in Buenos Aires since the temporary "emergency" 2006 land titling law was promulgated (but not confirmed into law or enforced with any consistency).[841] The two Olaroz Communities' leaders I managed to speak with reported they had communitarian land title. It is likely that, for example, the Argentinean communities who were offered the chance to sign *servidumbres*, were only given that chance because the provincial authorities had them registered as holders of communitarian land title. However, as Chapter 4 explains, the

839 Colchani local. Interview with author, 16 March 2017; Local woman. Interview with author, Vila Alota, 4 April 2017; Local business owner. Interview with author, Uyuni. 30 March 2017.
840 Legal counsel, Salta Mining Ministry. Interview with author, Salta, 18 May 2017.
841 Government of Argentina, Ley No. 26.160, *Declárase la emergencia en materia de posesión y propiedad de las tierras que tradicionalmente ocupan las comunidades indígenas originarias del país, cuya personería jurídica haya sido inscripta en el Registro Nacional de Comunidades Indígenas u organismo provincial competente o aquéllas preexistentes,* 2006.

numerous indigenous rights cases heard at the Inter-American Court of Human Rights make it clear that there is a *customary* right to land title (through the right to property in the American Convention of Human rights) for indigenous peoples.[842] This means that, indigenous peoples have rights to land they "occupy or otherwise use" as stated in Article 7.1 of ILO169, and subsequent rights to consultation, regardless of state title.

7.2 The three pillars of participation and lithium mining

Any individual likely to be impacted by mining have a right to environmental participation comprising the "three pillars" – the right to information, the right to participate in environmental decision-making, and the right of access to justice. This section analyses the main findings of the study using the three pillars as a guide, focusing in on the right to information, as a particularly complex aspect of the case of lithium mining and compliance with indigenous peoples' rights.

7.2.1 Access to information

While reliable, independent information about lithium mining is scarce,[843] details are emerging suggesting serious hydrological impacts from lithium extraction in Chilean operations,[844] and potentially severe damage from the use the *encalado* method of extraction in Bolivia.[845] Meanwhile, the lithium industries are growing quickly in an already arid region that has suffered from water stress due to a three-year drought. In

842 *Mayagna (Sumo) Awas Tingni Community v Nicaragua*, IACHR Series C No 79, [2001] IACHR 9, IHRL 1462 (IACHR 2001), 31 August 2001; Organization of American States (OAS), *American Convention on Human Rights*, "Pact of San Jose", Costa Rica, 22 November 1969, Article 21

843 Barandiarán, 'Lithium and Development Imaginaries in Chile, Argentina and Bolivia'.
844 Gutiérrez, Navedo, and Soriano-Redondo, 'Chilean Atacama Site Imperilled by Lithium Mining'.
845 Ricardo Calla Ortega, "Impactos de la producción industrial del carbonato de litio y del cloruro de potasio en el salar de Uyuni" in Calla Ortega, Ricardo, Juan Carlos Montenegro Bravo, Yara Montenegro Pinto, Pablo Poveda Ávila, *Un presente sin futuro: El proyecto de industrialización del litio en Bolivia*, (La Paz: CEDLA, 2014)

the next three sub-sections I focus on three dimensions of the right to access to information, notably who provides it, when and how much.

Available information about lithium mining

In Argentina, there is contradicting evidence on the scale of lithium mining's water use. Geologist Díaz explains: "It can be estimated that for every ton of lithium extracted, about two million liters of water evaporate, clear evidence that lithium mining in salt mines is a mining of water".[846] This is echoed by Chilean salt flat expert Ingrid Garces, who also sees lithium mining as "mining water".[847] Professor Alonso, who is also a geologist, insists that the use of fresh water in the process of mining lithium is not an issue: lithium mining uses "*only a cupful of water*",[848] and that lithium brines are inappropriate for human consumption.[849]

This contradiction shows clearly that realising a right to environmental information is not straightforward, as there are often conflicting views and evidence in science as to the nature and scale of environmental impacts. However CONICET, the national Argentinean scientific research council, was by 2014 working with authorities in the Province of Jujuy "to enhance research projects that seeks to extract lithium with the least possible use of water".[850] This suggests that there are at least nominal concerns within the Argentinean government about levels of water use in lithium mining. In terms of contamination, the work of the Bolivian "Scientific Committee" produced some information about the two options available to the state project to reduce the

846 Fernando Díaz, from No a La Mina, "Cuales son los impactos ambientales y en la salud de la explotación de litio?, at https://noalamina.org/general/item/9585-cuales-son-los-impactos-ambientales-y-en-la-salud-de-la-explotacion-de-litio, cited in Julian Zicari, "*El mercado del litio desde una perspectiva global: de la Argentina al mundo. Actores, lógicas y dinámicas*" (fn 16), in Fornillo, Geopolitica, 2015, p.46.
847 Sherwood, 'In Chilean Desert, Global Thirst for Lithium Is Fueling a "Water War"'.
848 Salta Geology Professor and former Salta Mining Minister, Alonso, Ricardo, Prof. Interview with author, Salta, 10 May 2017.
849 Ibid.
850 Fornillo, *Geopolítica del litio*.

levels of magnesium in the lithium-rich brines, the *encalado* and *sulfato* "lines".[851]

The way the two industries have been managed by the state within the two countries has had a direct impact on the realisation of environmental rights. Extractive companies tend to have a monopoly on the information about their industry, much like states have a monopoly on definitions of legality.[852] This is particularly true of the lithium industry. Lithium from brines is not gold, or oil; it has not been extracted for centuries with known parameters of environmental damage in different geological contexts. Due to the "experimental" nature of the industry, there is a lack of available independent information on the processes required to extract lithium from each salt flat. Communities must therefore rely on information from mining companies. Then, where information (independent or otherwise) does exist, there is the crucial matter of the communities' access to this information.

Access to information about lithium mining methods and companies

Information on lithium mining impacts may be unavailable at the very early stages of a concession, as it is first created by the companies, and may belong to them, particularly if they take out a patent for a particular type of extraction.[853] Companies should share this information with the state, but this does not guarantee it will reach the communities. This is likely to apply to some of the companies currently exploring for brines to test in laboratories in Argentina. In Bolivia, as it is a state company that has been developing extraction methods, one might expect better dissemination of

851 The use of the term "lines" by Calla in our conversations perhaps suggest that these are still considered "lines" of enquiry: Indeed it was not clear to Ricardo which option had been chosen by the company.

852 Harvey, *The New Imperialism*.

853 This is particularly the case in the Catamarca–Salta Provinces' Salar de Hombre Muerto, in which Canadian firm FMC-LITHCO uses a special technique that is said to require much less evaporation time from the typical 18-24 months. Like many details in the chemical processes required to mine lithium, is unclear how this has been done, and the technique is patented so cannot be used by another company. Alonso, Ricardo, Prof. Interview with author, Salta, 10 May 2017

information. In this case however, there may be political reasons for withholding information.

In both countries, my data shows that the little information that does exist has not reached the communities, which (to compound the issue) are lacking in communications infrastructure. Furthermore, as the lawyer for the 33 Communities of Salinas Grandes and Guayatayoc stated, the communities "*must evaluate very long technical projects that are often incomprehensible to anyone – I am a lawyer and I do not understand that document. It's huge; full of formulas, for example.*"[854] Like most people, the communities are lacking the specialist education required to comprehend complex technical information about a varied chemical mining process that differs from brine to brine.

In this case, there is also a point to be made about access to information about the companies themselves. The 33 Communities discovered industry interest in lithium mining and the company's prospecting activities on the Salinas Grandes "through anecdotal information, such as news outlets, and because people they did not know were digging holes in the ground".[855] The representative with whom I spoke from one of these communities, told me a local came to their village on a mule to report that a company was drilling on the Salinas Grandes salt flat.[856] As the fieldwork progressed it became clear that this representative, even after seven years and a Supreme Court case, was unaware of the link between the prospectors from the company he knew as "American Salar", and the company mining in Olaroz–Cauchari, Orocobre (parent company to "South American Salar). During our interview, I asked about the Orocobre billboards visible by the side of the road through the Salinas Grandes (see Photograph

854 Alicia Chalabe, Interview with author, San Salvador de Jujuy, 3 February 2017.
855 Makagon et al., 'Balancing the Scales - Community Protocols and Extractive Industries: Lessons from Argentina, India, Kenya and Zimbabwe'.
856 Flores, Clemente. Interview with author. El Moreno, Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.

A4 and A5). He insisted that those billboards, which showed images of Olaroz–Cauchari overlaid with words like "RESPECT" and "INTEGRITY", were "*not from here, these communities. They are of Cauchari"* where "*many people are in agreement [with the mining]*".[857] Once I had seen the "South American Salar" logo on the wall of the Salta-based reception of Sales de Jujuy, I checked online to find that "South American Salar" was a subsidiary of Orocobre, the owners of Sales de Jujuy (and the billboards). I also quickly confirmed that there was no company called "American Salar". Orocobre's subsidiary was the prospector in the Salinas Grandes. This was suggested in my interview at Sales de Jujuy, whose community relations staff told me that, "*we have had no complaints from communities… not in those parts*",[858] implying that there had been complaints elsewhere (like from the 33 Communities of the Salinas Grandes). Therefore, opaque company ownership structures had obscured the fact from the 33 Communities altogether that the two companies were linked, demonstrating a lack of access to the most basic information for the communities about who is prospecting and operating in the region.

In fact, both country cases demonstrate that companies are able to switch public identities depending on which is more expedient for their purposes. This can obscure which key actors are required to comply with national and international law, and can further affect which companies can be held liable in the case of environmental damage, and within which jurisdictions cases can be brought.[859] For example, the Bolivian state lithium company known as the GNRE (which was before January 2017 a subsidiary of

857 Representative from the 33 Communities. Interview with author. Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.
858 Community relations executives at lithium company. Interview with author, Salta, 15 May 2017.
859 This is commonly a problem in environmental disputes, where companies buy and sell subsidiaries and are thus able to argue in court that previous entities had caused environmental damage. Chevron–Texaco in Ecuador is an example of this. Sara Randazzo, 'Tribunal Condemns Ecuador's $9.5 Billion Ruling Against Chevron', *Wall Street Journal*, 7 September 2018, sec. Business, https://www.wsj.com/articles/tribunal-condemns-ecuadors-9-5-billion-ruling-against-chevron-1536337680.

COMIBOL), is now the YLB, and part of an entirely new Ministry of Energy. On a very basic level, this makes it unclear to which law Bolivian lithium mining is subject. There is only one article related to lithium in the 2014 Mining Law, which appears out of date as it only deals with the establishment of a separate company within COMIBOL (the GNRE).[860] This company effectively no longer exists, and therefore it is unclear who is subject to the obligations specified in the Mining Law's Article 73, most notably to regularise third party rights for salt miners.

In terms of access to information about extraction methods in Bolivia, the 2010–11 *socializaciones* were held by the state company, that, according to the head of FRUTCAS, "*did not explain to us which methods are the healthiest… for not damaging the environment*" (while also acknowledging that "*technologically we cannot contribute much*").[861] It is therefore unclear whether the communities had any knowledge of the high-waste output of the prospective *encalado* method, or its alternative. Certainly in my interviews, no local community official in Nor Lípez, nor the head of FRUTCAS quoted above, had read or even heard of the CEDLA report which calculated the *encalado* waste output.[862] That this information had not been made available to the Uyuni communities raises questions of when the information should be provided (should it be only once the method is decided?) and who should provide it.

Providers of information

In both countries, and internationally, the law stipulates that information should be provided to affected communities in advance of the approval of a project, not including prospecting or exploration stages. In the case of the Salar de Uyuni, the pilot project perhaps therefore falls into the "pre-approval" stage, although as one Uyuni local

860 Government of Bolivia, *Ley de Minería y Metalurgia No. 535*, Article 19.
861 President of rural union federation. Interview with author, Uyuni, 23 March 2017.
862 Ibid; Colcha K regional authority official. Interview with author, Colcha K, 4 April 2017.

official opined, "*most of what the President says is already approved.*"[863] This perspective, triangulated with material on the Bolivian regime's growing frustration with requirements for consultation,[864] is indicative of a regime determined to pursue industrialisation of lithium.

In the case of the Olaroz Communities, it appears that all of the prior information came from the companies, who came to Olaroz Chico "*of course, empowered with a lawyer*",[865] according to the former leader. It was not clear whether the communities also had a lawyer at these early meetings, or indeed if they were "empowered" themselves – by being aware of their rights to independent information, and to proper participation through consultation. According to the community relations manager for Sales de Jujuy, the company "*began a process of participation and consultation with communities since before having a project, i.e. we have worked with them at all stages of the process*".[866] While this is corroborated by then-leader of Olaroz Chico, who said the community works closely with the company on ongoing environmental monitoring, he did not indicate that any *independent* information was provided to the community.

Even where the law suggests prior information (to affect informed consultation) is not required at the prospecting and exploration phases, industrial actors arriving unannounced can engender fear in communities. As the representative from the 33 Communities told me:

> *They looked like they were extra-terrestrials, with all this equipment. If it is not polluting, why there near their encampment was the sign with the mask that says it was forbidden to pass on danger of death?!*[867]

863 Local official in Uyuni. Interview with author, Uyuni, 24 March 2017.
864 Lalander, 'Ethnic Rights and the Dilemma of Extractive Development in Plurinational Bolivia'.
865 Former community association leader, Interview with author. Olaroz Chico, Susques Region, Jujuy Province, 6 February 2017.
866 Community relations executives at lithium company. Interview with author, Salta, 15 May 2017
867 Representative from 33 Communities. Interview with author. Salinas Grandes y Guayatayoc, Jujuy Province, 2 February 2017.

This reaction illustrates the logic of the state arranging the provision of prior, independent information to communities, in order to ensure advancement of the project through transparent engagement with potentially-affected communities. Ignoring the rights of the people set to be affected by mining can ultimately result in greater opposition due to a lack of transparency, and demands for consultation based on their rights in international law, which is ultimately what occurred in Argentina.[868]

In sum, this research has found that in both Argentina and Bolivia, information provided to communities has been lacking, incomplete or difficult to understand. Furthermore, the information that was provided came directly from the companies, with a focus on jobs and economic development rather than socioenvironmental impacts. Crucially, important information about water and contamination either does not fully exist or has been withheld from communities, a factor which diminishes the strength of any ongoing participation processes such as monitoring.

7.2.2 Participation in environmental decision-making

Meaningful environmental participation is clearly compromised by a lack of information. There are stronger laws in Argentina relating to the requirement for public hearings to present environmental impact assessments (EIAs) than in Bolivia. Jujuy's General Law on the Environment No. 5772 clearly states the process of presenting an EIA in public meetings, and this process is set within a context of strong environmental governance in Argentina more generally. However, if the information presented within these meetings does not contribute to the communities being

[868] This dynamic has been analysed in a report from the research institutes to which the former special rapporteur on the business and human rights, John Ruggie, is associated: Davis, Rachel and Franks, Daniel, *Costs of Company-Community Conflict in the Extractive Sector*, Harvard Kennedy Law School, Shift and the University of Queensland, available at https://sites.hks.harvard.edu/m-rcbg/CSRI/research/Costs%20of%20Conflict_Davis%20%20Franks.pdf [accessed 2 January 2018]

adequately "informed" – in order that they might raise questions or eventually re-shape aspects of the project – then the right to information and participation are both weak.[869]

In Bolivia, a country with a long mining tradition, the "socialisation" of a project is a commonly-accepted form of environmental participation for communities. These socialisations only took place in one of the regions bordering the salt flat, Nor Lípez. Adequate information was not provided at these meetings. While full information may not have been available, the socialisations seem to have had the effect of bolstering support for the Bolivian lithium project (through promises of jobs and local development) before any resistance or demand for information or consultation could have been mounted. There are many indicators that the Bolivian state lithium project is lacking the form of strong participation for indigenous peoples mandated by Bolivian Constitutional and national law. These include the use of "socialisations" instead of prior informed consultations and the failure to update communities on the progress of the pilot project in any meaningful way since they took place in 2010–11. Furthermore, the idea that there had been a "coup" ousting FRUTCAS from involvement in the project suggested by Calla,[870] and the backlash from the head of the project at the release of the 2014 NGO report revealing the details of the *encalado* method's waste levels, also indicate increasing state control over lithium mining.

In the Olaroz Communities it appears that a weak form of participation is ongoing in the form of employment, monitoring and payments to communities. Where there are structured programmes that manage the interaction between company and community, such as Sales de Jujuy's "Shared Value" initiative,[871] this is more indicative of a

869 Romina Picolotti, "Agenda 21 and Human Rights: The Right to Participate"in Picolotti, Romina and Taillant, Jorge Daniel (eds) *Linking Human Rights and the Environment*, Tuscon, AZ: The University of Arizona Press, 2003.
870 Ricardo Calla Ortega, author of CEDLA report chapter. Interview with author, La Paz, 23 April 2017.
871 Community relations executives at lithium company. Interview with author, Salta, 15 May 2017.

corporate social responsibility (CSR) plan than an opportunity for the communities to effectively participate in decision-making over the activities taking place on the Olaroz–Cauchari salt flat. Despite the well-meaning work of community relations staff, they are not chief executives nor operations managers. They work in service of a company whose main goal is to create profit and protect the investments made by numerous external actors, including private (and state) mining and transnational investment companies. While the "cost of conflict with communities" may run high if there are disputes,[872] if the community is on-side and benefitting financially from very early on in the project, there is less likely to be the conflict in the first place.

It is also worth pointing out here that communities are not homogenous: there will be differing opinions within any community on the way projects such as these should be handled. In my interview with the Mining Minister of Jujuy, I was reminded that although the 33 Communities had eventually formed an organisation to oppose the lack of participation afforded to them, there would be some members of some communities (and indeed some entire communities – he cited four of the 33) that "wanted" lithium mining on the Salinas Grandes.[873] This perhaps misses the point of the demand by the 33 Communities. As the communities feel strongly that they are the keepers (if not the owners) of the Salinas Grandes, which they consider sacred,[874] any form of unannounced prospecting was always likely to have been seen as an "invasion" of sorts. Furthermore, if full-scale mining occurs without consultation, would be a violation of their customary land rights under the Inter-American regime. It will be interesting to see if and how the case progresses in the regional system.

872 Rachel Davis and Daniel Franks, Costs of Company-Community Conflict in the Extractive Sector, Harvard Kennedy Law School, Shift and the University of Queensland, 12 May 2014, accessed 2 January 2018, https://sites.hks.harvard.edu/m-rcbg/CSRI/research/Costs%20of%20Conflict_Davis%20%20Franks.pdf

873 Mining Minister of Jujuy Province, Miguel Soler. Interview with author, San Salvador de Jujuy, 22 May 2017.

874 Pellettieri, 'Mining Firms Seek Argentina's "White Gold," But Local Approval Proves More Elusive'.

7.2.3 Access to justice and the right to seek legal remedy

Without information and participation rights, communities are left unaware of potential problems and will thus be unlikely to seek remedy unless environmental impacts occur, or they are made aware of their rights. As the lithium industries are still in their very early stages in both countries, I will use the demand of the 33 Communities to analyse the lack of demand for consultation elsewhere.

As stated above, the fear of the prospecting company's operatives drilling on the salt flat (that many use for salt-gathering) motivated the 33 Communities into accessing their rights. The 33 Communities were able to learn about these rights through the Argentinean *Fundación Ambiente y Recursos Naturales* (FARN), who arranged visits to lithium operations in Chile, and through a visit of the UN Special Rapporteur on the Rights of Indigenous Peoples in 2011.[875] It is likely that these experiences, and the development of a national and transnational network generally, furthered the 33 Communities' demand for justice in the Supreme Court.

Meanwhile, Bolivian community members and local officials are lacking in ways to access information and consultation about lithium mining in Bolivia or elsewhere. This means that they are unaware of the potential environmental damage that might be caused. This was evidenced by requests I had for information about what was happening in Argentina,[876] and for a copy of this thesis when it was finished.[877] There was furthermore a clear lack of awareness of the CEDLA report in the Nor Lípez

875 Alicia Chalabe, Interview with author, San Salvador de Jujuy, 3 February 2017; Carlos Guzman, Interview with author, Susques, Jujuy, 3 February 2017; Anaya, James, Report to the Human Rights Council on the Situation of Indigenous Peoples in Argentina, 4 July 2012, U.N. Doc. A/HRC/21/47/Add.2

876 Colcha K regional authority official, provincial delegate. Interview with author, Colcha K, 4 April 2017.

877 Colcha K regional authority official, head of productive development. Interview with author, Colcha K, 4 April 2017.

region, even among local officials.[878] This evidence poses the question: would the Bolivian communities pursue their rights to information, consultation and justice if they knew the potential impacts of the *encalado* method to be used? And how would this be received, given the Bolivian government's increasingly authoritarian control over mining dissent?

In Argentina, the 33 Communities lost their case in the Supreme Court, due to jurisdictional concerns,[879] and a "lack of the minimum of factual and evidential support that requires legal action of the required characteristics" (i.e. the right to consultation as indigenous peoples in advance of prospecting).[880] This suggests that there was not enough evidence provided to the court that the 2010 prospecting activity affected the rights of the communities *to the point* where they could demand consultation. It was the licensing of the activity (which did allegedly cause damage to the salt flat and local aquifers),[881] however, that required consultation under ILO169 Article 6. The Province of Jujuy claimed during the court hearing that they had no knowledge of the unlicensed prospecting activity, but did not make it clear if they fined the company for prospecting without a licence.

However, Argentinean mining and environment law together do provide for rights to public participation through public hearings following the dissemination of EIAs. These EIAs must be requested by the relevant enforcement authority, as they are the receivers of the environmental impact report, which must be submitted in advance of

878 Colcha K regional authority official, provincial delegate. Interview with author, Colcha K, 4 April 2017.
879 Ibid.
880 Supreme Court of Argentina, C.1196.XLVI "Comunidad Aborigen de Santuario Tres Pozos y otros c/ Jujuy, Provincia de y otros s/ amparo", Buenos Aires, 18 de diciembre de 2012.
881 Parallel information for the Committee of Economic, Social and Cultural Rights with respect to the Third Periodic Review for Argentina (UN DOC. E/C.12/ARG/3) under ICESCR, Prepared for the Mesa of the indigenous communities of the Basin of Salinas Grandes and Guayatayoc for the defence and management of the territory, Committee of Economic, Social and Cultural Rights, 47th session 14 November – 2 December 2011;

any activity – including prospecting. The provincial authorities eventually provided the EIAs, but they were incomprehensible to the communities and their lawyer, further showing their lack of compliance with indigenous rights law.

Clear information about what evidence was provided to the courts in this case is unavailable. However, evidence was provided to the UN Human Rights Committee in 2011 of the damage the drilling of 47 holes in the Salinas Grandes caused to both freshwater aquifers and the salt,[882] in the months before the Supreme Court heard the case in 2012. Why this was not considered within the case as sufficient evidence of impact is unclear. However, while the communities lost their case, all lithium mining activities have since ceased, indicating some success in raising the issue of the requirement for consultation with indigenous communities prior to administrative measures pertaining to mining at the national level.

The 33 Communities have exhausted domestic remedies – meaning the Inter-American regional system can hear the case their lawyers are preparing.[883] Furthermore, there is evidence that the process has contributed to the creation of the community protocol. This appears to have delayed mining until an agreement can be reached about consultation. This is a good outcome for the communities, as lithium mining on the Salinas Grandes without prior consultation is much less likely.

Despite there being no motive to seek environmental remedy so far in the southwest of Potosí around the Salar de Uyuni, legislation and government rhetoric is being used in Bolivia to suppress dissenting voices in regard to mining, reducing the right of access to information, participation and justice. Law No.367 criminalises social

882 Parallel information for the Committee of Economic, Social and Cultural Rights with respect to the Third Periodic Review for Argentina (UN DOC. E/C.12/ARG/3) under ICESCR, Prepared for the Mesa of the indigenous communities of the Basin of Salinas Grandes and Guayatayoc for the defence and management of the territory, Committee of Economic, Social and Cultural Rights, 47th session 14 November – 2 December 2011;
883 Lawyer for the 33 Communities. Interview with author, San Salvador de Jujuy, 3 February 2017.

protest against mining,[884] for example. But there are more subtle examples. According to Postero, cited in Revette, President Morales addressed the population of Uyuni following a minor protest regarding the installation of a (much-needed) new bus terminal in 2014 in a paternalistic manner, as if he were scolding ungrateful children. [885] Revette also points out that the passing of Law No.367 (criminalising protest) is ironic for a country like Bolivia, which, as the Economist wrote in 2011 in response to the TIPNIS conflict is "a country of powerful social movements, its politics played out as often on the street as in the legislature"[886], and the structure through which arguably the President himself rose to power (see Chapter 2).[887]

This section has reviewed the case of the 33 Communities attempting to access their rights to environmental participation through the courts. While communities in Argentina have had access to an Supreme Court hearing on their case, the loss of the case on the grounds of a "lack of evidence" that the prospecting activity affected them directly, when reports show that it had, limits their access to domestic remedy while also bolstering the chances for meaningful consultation. In Bolivia, the criminalisation of social protest and the attitude of the President towards the the needs of the local population of Uyuni show clearly that access to justice may be limited, should environmental damage trigger a future need for legal remedies.

884 Government of Bolivia, Addition to the Bolivian Penal Code Law No.367. This law states that, "Whoever occupies a mining area for any reason through violence, threats, deception or any other means, preventing the exercise of mining activities or divesting rights to the state and / or holders of mining rights that are in legal possession thereof, will be sanctioned with deprivation of freedom from four (4) to eight (8) years."
885 Nancy Postero " Even in Plurinational Bolivia: Indigeneity, Development, and Racism since Morales." in *Spaces of Danger*, H. Merrill and L. M. Hoffman (eds) (Georgia, AL: University of Georgia Press, 2015).
886 'Road Rage', *The Economist*, 1 October 2011, https://www.economist.com/the-americas/2011/10/01/road-rage.
887 Ibid.

7.3 Water stress and chemical contamination in a drought-stricken region

7.3.1 Environmental impacts of lithium mining

Observing and navigating the geography and extreme climate of the Andean high plains was one of the most interesting and challenging aspects of undertaking this study. After many hours of travel, up steep mountain roads, arriving in such a dry and mostly arid desert, it was quite clear that even slight changes in the availability of fresh water would have a huge impact on the natural environment, and therefore those who called it home.

Particularly memorable from the fieldwork therefore were the interviews and conversations that showed how difficult it would be for the local population if there was any kind of pressure put on water supplies, either on quantity or quality. This is in a region where the government is absent and abrogates some of its most basic duties. It is clear that where there is a lack of a relationship between a government and an indigenous community, numerous rights can be affected.

The head of the Colectivo Apacheta explained his understanding of the magnitude of the environmental and hydrological re-engineering that industrial scale lithium mining might bring to the area. He pointed out that it is not just the water leaving the region through evaporation from lithium ponds that is a concern to them – "*they say it uses 200 litres per second*" – but also where it goes: "*The quantity of water that evaporates here, it will fall somewhere else, it will fall somewhere else*".[888] He also spoke about his concerns that "*the contamination stays*" in the region: that what the companies bring in (lime, sulphuric acid) is absorbed into the soil – "*this lime, it disappears!*"; "*they bring 20-30 trucks of lime a*

[888] Representative from Colectivo Apacheta, Interview with author, Susques Region, Jujuy Province, 3 February 2017

day, I don't know."[889] Guzman's final "I don't know" shows his problem clearly: those who might one day have to deal with the consequences, severe or not, are not fully informed.

A similar concern is reflected in my interview with a truck driver for the lithium plant in Bolivia, who reported that they use "*so much lime*" in the plant. Here too it was interesting that a truck driver was most concerned with the amount of trucks that were already being used in the plant and surrounding regions. It is worth reiterating that this is only from the activities of the pilot plant – any impacts currently occurring will be scaled up once the industrial-scale plant is built. Furthermore, the truck driver's concerns about impacts on his home village serve as a reminder that even those working within an industry may not choose such work if other options were available.

Finally, in Bolivia, one of the most important interviews of this entire project was the interview with the anonymous *salero* in Colchani. He was very careful to read the consent documentation, insisted on remaining anonymous, and he refused to be recorded. He also took a few hours to decide whether he would participate – perhaps because he had to wait for the morning rush of tourists to pass, but also perhaps he needed to work out the level of risk to himself. This does indicate some fear around talking about the project in Bolivia: it might not be worth the risk to speak out. He made clear and repeated assertions that there had been no visit from the lithium company or government, and no participation since "*the time of Jaime Paz Zamora*" (the president in the 1990s who tried to negotiate the LITHCO-FMC contract).[890] When he told me about the impact on his traditional livelihood of the drought, he reminisced nostalgically over the quality of the salt thirty years ago – this was a key moment, as I realised how crucial it is for communities to have their informed consultation rights

[889] Ibid.
[890] Anonymous, Interview with author, Colchani, 16 March 2017; Revette, 'Extractive Dreams'.

respected and fulfilled.

7.3.2 Lithium mining's impacts on indigenous economic, social and cultural rights

While everyone possesses environmental rights, the prevalence of conflict between indigenous communities and the extractive industries around the world indicates how crucial indigenous environmental interests are for their very survival. As this thesis has demonstrated, the substantive environmental rights of Andean indigenous communities in these regions will most likely be affected in some way by lithium mining at scale in Argentina and Bolivia.

For many indigenous communities around the world, the fulfilment of immediate material needs (and thus economic rights) rely directly on the environment. The Saramaka of Suriname, for example, were found to have economic rights to logging, as they "rely on timber logging as part of their economic structure".[891] While a direct comparison cannot be drawn with the situation of the salt harvesters (as the state is not offering concessions to extract salt), there are certainly parallels. In the following observation of the Court in *Saramaka v Suriname*, "when a logging concession is granted, a variety of non-timber forest products, which are used by the members of the Saramaka people for subsistence and commercial purposes, are also affected."[892] This is precisely the dynamic on the salt flats, but it is actually even simpler. When a lithium concession is granted, salt, which is used by the members of the Atacama *salineros* or Quechuan Bolivian *saleros* for subsistence and commercial purposes, is also affected.

There have already been impacts on salt yields from the drought, according to my informants in both Salinas Grandes and Colchani. Does this mean that lithium mining companies should therefore be confident that their own operations will not be the key

[891] *Saramaka People v Suriname*, Preliminary objections, merits, reparations and costs, IACHR Series C no 172, IHRL 3046 (IACHR 2007), 28th November 2007
[892] Ibid.

reason for declines in indigenous salt cooperative incomes? Can the companies (and governments that support them) displace the blame for lower salt yields onto the "natural" processes of climate change? Either way, it is unsurprising that a salt miner in the community of Colchani in Bolivia, without adequate information suggesting otherwise, feels that "*they [the company] are absorbing all the water from the* salar".[893] Climate change will likely bring further unpredictable impacts to the region – and perhaps already has, in the form of the prolonged drought. Indeed, the great irony of the situation is that the region is generally dry, and that hot daytime temperatures and high winds are exactly what enable the more economically-viable lithium mining-by-evaporation to take place.

7.3.3 The Lithium Triangle as a "sacrifice zone" for the low-carbon energy transition

My conclusion is that there is little difference between the way lithium is being explored for and exploited, between Bolivia and Argentina, and not just in the local experience. State participation in the globalised trade in primary commodities favours elite actors only: corporations and governments, and the environment (and communities) are those that bear the cost.

In previous research into dam-building in the Brazilian Amazon,[894] and in this study, I have questioned indigenous rights fulfilment in projects that purport to have underlying "green" or "low-carbon" credentials. My conclusion on this point, reinforced by the examination of the nascent lithium industry, is that climate change action itself has become embedded in the global neoliberal model of extraction and infrastructure development. Could there be any way to reconcile the pursuit of technological advancement (in the service of tangible climate action) with the fulfilment

893 Anonymous, Interview with author, Colchani, 16 March 2017
894 Abelvik-Lawson, 'Sustainable Development for Whose Benefit?'

of the principles of environmental and indigenous peoples' human rights at the local level?

The mining industry has long relied on a global market, fed by shifting forms of extraction that nonetheless have had continued negative impacts on indigenous territories and communities. This has enabled capitalist expansion to reach the "frontiers" of the natural environment, such as the Brazilian Amazon or Canadian boreal forests, in service of a process increasingly "extreme" in its pursuit of sources of energy and commodities.[895] The threat of climate change has undoubtedly caused an upswing in international interest in electric vehicles and renewable energy storage technologies, which will require ever larger amounts of lithium. This has driven up the price, and consequently the desire for nations possessing reserves to begin a programme of exploitation. Climate change has arguably become the motivation for the ultimate form of disaster capitalism,[896] where elites with accumulated capital (such as Elon Musk, the billionaire owner of Tesla) have seen an opportunity in a crisis within which to create a new market (luxury electric cars), requiring an abundance of new minerals such as lithium and cobalt, both of which have demonstrable environmental and human rights impacts.

As indigenous peoples are commonly not consulted when developments affecting their lands and resources are proposed, it follows that the climate change threat has not succeeded in changing the model of development. If anything, the old models are perpetuated, their effects exacerbated as they lean on "green" credentials. The old model externalises environmental effects, promotes the use of the "spatial fix" (moving excess capital around the world in order to reinvest it) and enacts "accumulation by

[895] Damien Short, *Redefining Genocide: Settler Colonialism, Social Death and Ecocide* (London: Zed Books, 2016).
[896] Klein, *The Shock Doctrine*.

dispossession"[897] of indigenous peoples of their land in the context of a settler-colonial state. The idea that resources must necessarily be drawn into the global commodities markets from ever more remote and ecologically delicate environments again recalls Calla's memorable line concept of the Salar de Uyuni becoming a "sacrifice zone" for the energy transition for the capitalist centre countries.[898] Because the use of the *encalado* has been confirmed, there are grounds to believe that this environmental damage caused by its waste will indeed severely pollute the Salar de Uyuni and part of the coastal area in the southwest of Potosí. This must be made known to the communities through free and informed consultations.

In Argentina, the surge of global interest in lithium has meant that the government has, through tax breaks, invited foreign investment to fuel a lithium boom in the northern regions, managed within a classic neoliberal political economy of extractivism. The lack of awareness around indigenous rights to consultation has served to create an interesting situation where national and transnational advocacy networks have worked to develop a case for the 33 Communities, taking it to the Supreme Court, and culminating in the *Kachi Yupi* consultation protocol. The resistance has stayed mining on the Salinas Grandes, at least for now, bringing increasing international awareness to their case.

Meanwhile the Bolivian government, still in many ways as Morales lamented "a prisoner of the neoliberal laws", is pursuing lithium industrialisation within a *neo*-extractivist framework. It appears that the Bolivian socialist regime is determined to generate revenues from lithium (and any added-value products such as batteries and electric cars) for redistribution as part of his socialist and anti-colonial promise to end

897 Harvey, *The New Imperialism*.
898 Calla Ortega, Ricardo, "Impactos de la producción industrial del carbonato de litio y del cloruro de potasio en el salar de Uyuni", p.18

neoliberalism in Bolivia. This determination has led to a lack of transparency over what method will be used for lithium mining throughout the testing period (likely due to its concerning waste output), and thus increasingly closed-off to scrutiny from both local indigenous communities and foreign researchers. Further clues from my fieldwork did indeed show increased secrecy surrounding the project: my truck driver informant was clearly under instruction to not speak openly to anyone about his workplace – hence his initial hesitation and the choice to use a pseudonym. Furthermore, I was promised an introduction to the team who could have facilitated a visit to the plant to see for myself by the former head of state mining company COMIBOL – but he did not reply to my follow up messages, despite knowing I was on a tight schedule.

The reaction of ex-GNRE head Luis Alberto Echazú to the CEDLA report should perhaps be read in this context. The report suggests that the Bolivian government's "anti-colonial" lithium project could effectively turn a natural wonder of the world around which indigenous communities live into an industrial "sacrifice zone".[899] However, Echazú's accusations – that CEDLA are repeating an "antipatriotic" narrative that seeks to "discredit the project of industrialisation of evaporitic resources and generate distrust in the population about its viability"[900] – may even suggest there are doubts about the viability of the project itself. There is also perhaps a worry in government that details of the *encalado* waste will emerge, stoking local resistance and derailing the Bolivian lithium project.

7.4 Use of the notion of "development" to justify extraction

I argue in this final part that the legal determination of lithium as "strategic" is a feature of the interaction between natural resource law and geopolitics, and that these are used

[899] Juan Carlos Guzmán Salinas, 'Introducción. Elementos Para Encarar El Debate'. p.18
[900] Luis Alberto Echazú Alvarado, "El Litio y las calumnias del CEDLA", GNRE website blogpost, 2014, on file with author, accessed 22 September 2016, http://www.evaporiticos.gob.bo/?p=1622

to override community rights' claims and entitlements in each state. This aids the presentation of the finding that, in two of the three sites examined in this thesis, the promise of economic development based on extraction has dampened demand for consultation rights. This sits in contrast to the case of the 33 Communities, who have forced the state to acknowledge their consultation rights. In Bolivia and the Olaroz Communities, government rhetoric and corporate activity have served to convince communities that extraction will be well-managed, with minimal environmental impacts, and furthermore will provide opportunities for work and economic development hitherto unavailable in those regions.

7.4.1 Lithium in national law as a "strategic" mineral owned by the state

Article 309.1 of the Bolivian Constitution (2009) maintains that the state's role is "[t]o administer property rights over natural resources on behalf of the Bolivian people, and to exercise *strategic* control of the productive chain and industrialisation of these resources."[901] In Bolivia, lithium mining is one of its nine "strategic" projects, according to the 2025 "Patriotic Agenda",[902] showing a clear commitment to the industrialisation of lithium for the benefit of all Bolivians reflected in the 2009 Constitution.

While Argentina does not have an equivalent designation within its Constitution of 1853 or national law, there are numerous suggestions that lithium is considered important to the nation and worthy of federal investment. For example, there is a government programme of research into lithium funded through the national research agency CONICET. Furthermore, while it may not receive tax revenues from lithium due to the federal tax relief provided to mining, Jujuy Province, through the provincial state company JEMSE does hold stakes in the public–private joint venture lithium

[901] Bolivian Constitution, 2009. Emphasis added.
[902] Agenda Patriótica 2025 (Ministerio de Autonomía 2012, Bolivia). URL: http://extwprlegs1.fao.org/docs/pdf/bol141864.pdf cited in Fornillo, *Geopolítica del litio*.

companies operational in the province.[903] Perhaps as a result of these stakes held by JEMSE, in 2011 the Province of Jujuy issued a law that declared lithium "strategic". Law No. 5674 is the legislation "by which the mineral reserves that contain lithium are declared as a strategic natural resource that generates socio-economic development of the Province of Jujuy."[904]

While official definitions of "strategic" are difficult to find in each country, Argentinean lithium researcher Fornillo suggests that in Argentina,

> [f]or a natural resource to be strategic, it must respond to the following conditions related to its use value, by itself sufficient: a) to be key in the functioning of the capitalist production mode b) and/or to be key for the maintenance of regional and global hegemony and c) and/or be key to the deployment of a green or post-development economy.[905]

Alongside this definition, Slipak suggests the resource must be "scarce or relatively scarce", "irreplaceable or difficult to replace", or "unequally distributed".[906] What these definitions suggest is that "strategic" relates specifically to a minable natural resource that is economically productive for the country.

According to Fornillo, mining is prioritised in the Argentinean provinces which have natural resources as one of the only independent sources of income (the rest comes from federal redistribution).[907] This is now occurring in a context of deliberate re-neoliberalisation of the economy of Argentina by President Macri, who depends on the provinces facilitating investment from transnational companies.[908]

Again, the repeated assertion from the Argentinean provincial mining officials that

903 van der Veen, 'Can the "green" Economy Also Be "Fair"?'
904 Province Of Jujuy, *Ley Provincial No. 5674/2011*: Aprobacion Del Decreto Provincial Nº 7592/2011 Declaracion De Reservas Minerales Que Contengan Litio Como Recurso Mineral Estratégico De La Provincia De Jujuy.
905 Fornillo, *Geopolítica del litio*.
906 Ibid. It should be noted here that, certainly in the case of Chile, "strategic" also applies to lithium in a military sense, due to its use in the development of nuclear weapons. This was raised in conversations with the leader of the anti-lithium group Colectivo Apacheta as another reason to be against lithium mining.
907 Fornillo, *Geopolítica del litio*.
908 Fornillo. p.17

the "lithium belongs to the state" (and thus there is no right of the communities to consultation or participation in its benefits), shows the state control over definitions of legality.[909] In Bolivia it is the 2009 Constitution, compiled under a socialist government which has embedded its neo-extractivist development policies in the Constitution and the new national mining law, which demonstrates clearly how Bolivian economic development (and political power) depends on extractivism.

7.4.2 Extractivism of lithium in service of the global low-carbon economy

The introduction to this thesis emphasised that lithium is an essential element of the emerging global low-carbon economy. As Argentinean and Bolivian governments are (at least initially) pursuing extraction for export, their focus on the global market for lithium exports is key. Lithium mining in Bolivia and Argentina involve many proposals and partnerships from international governments and companies – for concessions, contracts, memoranda of understanding, and, in the case of Bolivia, a developing dependency on China.

However, the establishing of the new industry occurred in Bolivia has arguably occurred on a more geopolitically visible scale than in the northernwestern corner of Argentina. The eventual decision to develop the Bolivian industry as a 100 percent state-run project may have satisfied communities that might have otherwise opposed the plans, through assurances that the state had the communities' best interests in mind. In Argentina, where lithium is geographically dispersed across multiple salt flats and provinces, multinational corporate involvement is therefore also spread out, and largely hidden from public view. While transnational mining firms erect billboards in the desert, there are few clues from in the cities of Salta and San Salvador de Jujuy as to the extent of the lithium industry developing in the adjacent mountain range. With

[909] David Harvey, *A Brief History of Neoliberalism*, Reprinted (Oxford: Oxford Univ. Press, 2011).

companies already in possession of concessions, who are they advertising to? Communities is one answer, but also competitor lithium companies vying for a valuable slice of the *salares* of northern Argentina: the billboards mark Orocobre as the "first" to arrive (see Photographs A4 and A5).

In interviews with both officials and community members (with the exception of the 33 Communities' representative) it appeared innately "logical" that a provincial or municipal government, or community would want to permit and facilitate the extraction of a valuable resource. This is despite the very different ideological leanings of the two states' governments. As Gudnyas asserts, "the importance of the extractive industries persists as a key cornerstone of development policies".[910] I argue that this is the case in both Argentina and Bolivia, despite the different regimes and governing ideologies, which provide differing motives for extraction.

7.4.3 The promise of community development and the lack of demand for consultation

In analysing interviews with government officials in both states, there was a pro-lithium, pro-"development" thread running through the responses. However, this was also evident in communities in Bolivia, and some responses from the Argentinean Olaroz Communities. The language of human rights pertaining to development on indigenous peoples' territories, such as the term "consultation" or the concept of FPIC was not forthcoming in any material I gathered, apart from those in respect of the 33 Communities. The lack of information and awareness of the possession of rights to consultation in the Bolivian and Olaroz communities contrasts greatly with the 33 Communities, who were able, provoked by the activities of prospecting company South American Salar, to progress a legal case to the Supreme Court. This also precipitated the creation of a groundbreaking consultation protocol.

[910] Eduardo Gudnyas cited in Acosta, 'Extractivism and Neoextractivism'.

In Argentina, indigenous peoples' rights were not discussed in detail. However, mining officials and experts described numerous legal issues surrounding the mining of lithium across three Argentinean provinces – but these were primarily commercial concerns. They focused on how provinces and companies would share concessions, brines and profits, particularly where concessions and salt flats overlapped with company licenses and provincial borders. It was clear from this that lithium to them was an important big business opportunity for the region. As such, the Argentinean case reflects a more classic model of neoliberal development that ignores indigenous communities almost entirely and invites transnational corporations to convert natural resources into "investment opportunities".[911] In this classic model, benefits are supposed to "trickle down" to communities in the form of jobs and increased economic activity in the region. In Bolivia, the motivation for the industrialisation of the lithium is a similar stimulation of economic development, but to fulfil the socialist aim of the redistribution of revenues. The effects on communities, however, are the same: state/corporate control over the resources on the salt flats, no meaningful participation in decisions affecting the future livelihoods of quinoa or salt-gathering communities, and perhaps even deliberate obfuscation of the details of environmentally-damaging extraction.

Within the Bolivian case, there has been the assumption among researchers (myself included) that because FRUTCAS was instrumental in triggering the process that led to the start of the project, community support and communication with government is ongoing. For example, Fornillo writes (in a 2018 article comparing the two states' lithium industries) that in Bolivia "there is a fluid dialogue between the

[911] I was given quite a bit of material when visiting the Mining Ministries of Salta and Jujuy. The leaflets were very targeted towards encouraging international lithium "investors" to invest in Jujuy and Salta.

executive power and local communities",[912] and because of this, and the state's commitment to a 100 percent state-owned project, the Bolivian government's project cannot be conceptualised as extractivist.[913] My findings challenge this view, firstly because the "fluid dialogue" has patently broken down, evidenced by responses in numerous interviews I conducted. Fornillo's misinterpretation of these events may be attributed in part to his detailed research into the Argentinean communities, which have a very different relationship to their provincial and national governments. While there may be (or have been) a close political relationship between a local peasant union federation and the MAS government, this does not necessarily mean that the local organisation represents all of the communities in the region. In fact, a number of my respondents did not appear to be FRUTCAS members at all. Finally, even with some ongoing dialogue, the dynamics of extraction are the same.

In terms of the communities, I found that the promise of jobs and of an injection of funds for the region promoted pro-mining sentiment, even where mining damage to environment was acknowledged as inevitable. This is likely too because the Morales regime *has* delivered benefits for poor Bolivians across the country in the region: respondents such as the FRUTCAS president explicitly made clear the communities' right to development, and the presence of numerous, brand new, astroturfed football pitches in the villages on our route made the government's investment in them abundantly clear.

Crucially however, the lack of understanding about the environmental impacts might be skewing these pro-mining attitudes. In response to a question I asked across the region regarding what the communities need the most, all responses centred around jobs and funding for basic services such as roads, water and sanitation. Some

912 Fornillo, *Geopolítica del litio*.
913 Ibid.

community members responded that their communities wanted support to exploit minerals – an example from Bolivia being the San Agustín farmer who told me the community had been in talks with a Chinese company to mine copper. "Development" is desired, and where governments can take control of the national narrative by promising state-run projects guaranteed to deliver increased services, or even "*vivir bien*" in Bolivia, there is little opposition.

In Argentina, where indigenous communities have been historically marginalised geographically, politically and socioeconomically for centuries, it is no wonder that the promise of a salaried role with a mining company, providing funds for buying their own car, would seem like a positive move – if not for the community, at least for the individual. This is the scenario I encountered in the Olaroz Communities, but the distribution of these assets appears uneven, and it is obvious that this can lead to resentments. The reactions of the leaders and former leaders to my requests for interview indicate tensions within the communities, and perhaps in their relationships with the companies, following the publication of the Washington Post article, which indicated poor deals struck for the signing of the *servidumbres* by democratically-elected leaders.

In Olaroz Chico, which is closest to the operational mine and with the most community members employed by the company, it is easy to see how communities and their individual members would have accepted company arguments in favour of mining. Accepting vast sums of money for access to water, land, and passage would be a sound decision to make for the economic development of the community benefit – particularly if there is a lack of information of any environmental risks. The promise of jobs and the payments of *servidumbres* themselves also represent something of a conundrum regarding the sustainability of mining more generally. What happens when

the lithium company must necessarily cease operations?

It was difficult to get a definitive answer from company community relations staff about the projected duration of the Olaroz-Cauchari lithium operations. On the companies' part, attempting to set up projects that can self-sustain (such as a knitting or quinoa industry) are well-meaning and attuned to this goal – but they have had limited success.[914] As such, they fall into the CSR category of projects, designed partly with the goal of achieving a "social license to operate".[915] The Sales de Jujuy communications team described their CSR work using the term "Shared Value". Interestingly, the same company implemented a public relations project in the region they called "evangelization" – taking political and religious leaders, journalists and educators (but notably not community members, according to this account) "to the salt to know the project", naturally leading to the company being "very well positioned in Jujuy",[916] according to Fornillo.[917] The major problem with assuming indigenous support or acquiescence for such a project is that true levels of support can only be known if the communities were fully informed and consulted from the beginning of the process.

Conclusion

This study has found that indigenous communities in Argentina and Bolivia have had limited information about lithium mining or opportunities to participate as the industry develops in the territories they traditionally inhabit. Prior informed consultations do not appear to have taken place in either Argentina or Bolivia. This has led some

914 Community relations executives at lithium company. Interview with author, Salta, 15 May 2017. Community relations executive at lithium company. Interview with author, San Salvador de Jujuy, 20 February 2017.
915 Syn, 'The Social License'.
916 Ibid.
917 Interview with Jimena Barry of Sales de Jujuy, 2014 cited in Fornillo, *Geopolítica del litio*. I recognised her name as I had to speak with her to confirm with her the topics I wanted to discuss before I was allowed to speak with her community relations executives.

communities, startled by unannounced prospecting, to demand consultation rights or express concern over impacts.

In the Bolivian case, what is particularly interesting to note is that despite a panoply of new laws designed to protect indigenous communities, there is still no sign of a meaningful and ongoing consultation process occurring with communities in the Salar de Uyuni. And there is little sign of resistance from communities, who have been left uninformed about the potential for great damage to the Salar de Uyuni, if and when Bolivia begins to produce lithium at an industrial scale. To effect the industrialisation of lithium and other neo-extractivist projects in Bolivia, the socialist regime has reduced transparency in the lithium project and criminalised social protest against mining. Although the communities around the Salar de Uyuni still overwhelmingly support the MAS government as the best option following a long line of "neoliberal governments", there is evidence of increasing authoritarianism emerging across Bolivia. This includes the repression of dissent by indigenous communities in TIPNIS, and the criticism and threats directed at NGOs and research institutes examining mining and socioenvironmental damage. Politically, economically, and environmentally, extraction continues to reinforce a hierarchy that has been firmly in place across Latin America for hundreds of years.[918]

Meanwhile in Argentina, the marginalization of communities geographically and socially means that there are fewer avenues for them to learn about or access their rights. While this may not initially prove problematic, the lack of information about lithium mining at scale across multiple salt flats may result in depleted water supplies and a degraded local landscape. Although lithium extraction is less complex there than in Bolivia, which requires a method such as the *encalado* to remove magnesium, there is

[918] Galeano and Belfrage, *Open veins of Latin America*; Farthing and Fabricant, 'Open Veins Revisited'.

still a lack of information here about the effects of mining lithium at scale. The probability that the mines will become depleted and close soon after communities come to rely on jobs and cash payments from companies is also a risk in both countries.

The experience of the 33 Communities of the Salinas Grandes and Guayatayoc, however, is particularly interesting for several of reasons. First, it shows how a transnational mobilization can aid indigenous communities in securing their rights to information, participation and consultation. This is particularly useful when such rights were unlikely to have been fulfilled by state and corporate actors acting without adequate national or regional indigenous peoples' rights procedures – which is sadly common in indigenous peoples' experiences worldwide. Second, the launch of a legal battle for consultation as indigenous communities may encourage state and provincial governments to create institutions through which such issues can be handled. This occurred in Jujuy with the creation of the role of Secretary of Indigenous Affairs. Thirdly, the development of an innovative consultation protocol, the *Kachi Yupi* document, shows that international indigenous human rights law *can* be leveraged to force a participatory dialogue with mining companies, and the governments that grant them concessions. The indigenous understanding of their own human rights to information and consultation has created a situation where the 33 Communities of the Salinas Grandes demonstrate to the government *how* clear information about the impacts of lithium mining can be developed and presented in an environment of mutual respect. Finally, these activities have halted progress on lithium mining on the Salinas Grandes. Whether the case reaches the Inter-American Court, the 33 Communities have established their rights to consultation and protected their traditional territories and made it clear that any mining activity is subject to their free, prior and informed consultation.

CHAPTER 8: CONCLUSION

8.1 Overview of thesis

This thesis posed the central research question: "*To what extent have communities had opportunities to participate in decision-making over the lithium industry in Argentina and Bolivia?*" While the answer is of course complex and multifaceted, here I conclude that in both states, participation is generally weak, and communities are poorly informed about prospective lithium mining. After a general overview of the thesis, I will conclude by presenting a number of associated findings and recommendations for governments and lithium companies, and some recommended avenues for future research.

In the Introduction (Chapter 1), I gave an overview of the study, including detailing of the importance of lithium for the emerging global low-carbon economy. I also introduced country-cases and sites and the unusual process of mining lithium from brine, including potential (and still not well known) environmental impacts mining lithium in this way in the Lithium Triangle. Chapter 2 provided the social, political and historical background and context to lithium mining in Argentina and Bolivia, including a detailed account of the lithium industries developing in each country. Here, differences between Argentina and Bolivia in terms of their historical political economies, relationships between indigenous peoples and the state, and the geography and geology of their respective lithium regions, were introduced and analysed. This found divergent development trajectories within which lithium extraction is or would be situated, particularly highlighting the determination of the Bolivian state to industrialise the resource under a neo-extractivist, socialist model for the purposes of redistribution of revenues. Chapter 3 presented my interdisciplinary approach,

extensive documentary research, my fieldwork methods of interviewing and observations, the ethical considerations and the challenges of conducting the research leading to limitations to the study. A substantive analysis of international human rights law pertaining to environmental and indigenous peoples' rights law was then presented in Chapter 4. These included analysing the role of land and natural resource rights provided for indigenous peoples, before a detailed examination of general and indigenous-specific participation rights. Using the three pillars of rights to information, participation in decision-making and access to justice, triangulated with indigenous rights to free, prior and informed consultation or free, prior and informed consent (FPIC), I presented a robust regime in place for indigenous communities facing mining on the territories they inhabit, particularly those with traditions that make use of natural resources such as salt. Chapter 5 found a dearth of indigenous rights legislation in Argentina, and a lack of compliance with informed consultation rights in Jujuy despite a strong mining and environmental protection regime. It also showed how the 33 Communities were able to access these rights through a transnational network, successfully developing a consultation protocol based on indigenous peoples rights serving to halt mining on the Salinas Grandes, which some use for the traditional practice of salt gathering. Here, I also showed how the Colectivo Apacheta leader emphasised the importance of environmental integrity as it relates to water, an important resource for survival based on ancestral livelihoods. The Olaroz Communities' case highlighted how the quality and source of mining information provided is important, particular to avoid incentivising agreement based on monetary gain through jobs and *servidumbres*. In Chapter 6, I examined the historical and geological peculiarities of Bolivian lithium, followed by an analysis of Bolivian law pertaining to natural resources, mining, the environment and indigenous peoples' rights. An analysis of responses from communities around the south of the Salar de

Uyuni found socialisations has been conducted instead of prior, informed consultations, and no information at all had been provided to the salt-gathering village of Colchani about the lithium pilot plant, triggering concerns that lithium mining was affecting water during a severe drought. Given the likely use of the damaging *encalado* method, increasing restrictions on information about the project and an increasing authoritarianism in Bolivian resource politics, this is particularly concerning. Chapter 7 presented a discussion of the findings, ranging from an analysis of non-compliance with domestic and international law in both countries. It also compared the two countries' developing lithium industries, particular in respect of fulfilment of the rights of indigenous peoples to informed consultation, finding similar lithium extraction models with differing motivations based on historical, political and economic factors. This concluding chapter will explore the key findings of the study, propose recommendations for the governments of Bolivia and Argentina and lithium-brine mining companies, and determine some areas for future research.

8.2 Key findings

My conclusion regarding the situation of indigenous communities living near lithium mining in Argentina is summarised as follows. There is a "deficit of legislation" for Argentina's indigenous peoples, and they struggle to have their land rights and (as a result) environmental rights and rights as indigenous peoples respected and realised by the state. This is despite a strong environmental rights regime and strong legal institutions. Discrimination against the small minority of indigenous communities is pervasive in Argentinean society. Despite this, the 33 Communities have been reiterating their demands for consultation over lithium mining in accordance with Argentina's obligations under international law. The inability for the government to adhere to these consultation procedures has meant lithium mining has been unable to

progress in the Salinas Grandes basin.[919] The development of a national and transnational network helped to further the demands of the 33 Communities' in the Supreme Court (and perhaps soon it will progress to the Inter-American system), develop an innovative consultation protocol, and perhaps the case will now reach the Inter-American system.

In Bolivia, the reconfiguring of national law by the MAS Government to thoroughly cover indigenous peoples' rights, the framework of Mother Earth and *vivir bien*, is considered a radical reframing of the relationship with environment and development. Bolivia (along with Ecuador) is known at the international level for facilitating and enabling global climate action and indigenous rights movements to reimagine the concept of development away from its colonial and neoliberal economic foundations. It is not only Bolivia that is struggling to operationalise the rights of nature and Mother Earth in the face of competition from valuable oil extraction projects: in 2007 Ecuador's leftist President Rafael Correa pledged to "leave the oil in the ground" under the biodiverse Yasuni National Park in exchange for compensation from the international community. The scheme was scrapped when less than 10 percent of the desired amount had been raised.[920]

Weak participation in environmental decision-making for indigenous communities occurs for a number of reasons, many of which relate to the way government authorities and legal, political and business elites perpetuate an economic model structured around primary commodity extraction. This is borne out of the commercial–

[919] Jujuy Al Momento, 'Comunidades ratificaron su postura contra el litio', *Jujuy Al Momento*, 26 March 2019, http://www.jujuyalmomento.com/post/98744/comunidades-ratificaron-su-postura-contra-el-litio.html.
[920] Jonathan Watts, 'New Round of Oil Drilling Goes Deeper into Ecuador's Yasuní National Park', *The Guardian*, 10 January 2018, sec. Environment, https://www.theguardian.com/environment/2018/jan/10/new-round-of-oil-drilling-goes-deeper-into-ecuadors-yasuni-national-park.

political pursuit of profit, growth and economic "development".

Owing to its explicitly neoliberal resource governance, and a lack of indigenous rights law, the Argentinean cases represent the most common outcome in resource conflicts involving indigenous communities. In Bolivia, there are many more indigenous rights laws codified into national law than most nations (including the 2007 United Nations Declaration on Indigenous Peoples' Rights). As a result, I had anticipated a more structured approach to consultations with communities living around the Salar de Uyuni. Instead, in the context of the increasing value of lithium as a global commodity, and Bolivia's possession of the world's largest reserves, lithium extraction is being pursued by a secretive state company, ultimately overseen by an increasingly authoritarian regime.

Bolivia continues to be wracked with political–ecological struggles. It is a state that will likely continue as a primary commodity exporter in the same subordinate role it has had in the global capitalist economy since the 1500s. The country's first indigenous President Evo Morales is currently clinging on to power, even as the electorate (narrowly) voted against a constitutional amendment to allow him to run for a third consecutive term. The conclusion for Bolivia is that the "lithium dreams"[921] of the earlier years of the Morales government may well turn towards an ecological nightmare if the predictions of the impacts of the *encalado* method come to pass at the full severity anticipated by Calla.

In both countries, indigenous communities are lacking in ways to access information about lithium mining due to geographical and political exclusion from those in charge of decision-making. I argue that this is not only an effect of the low socioeconomic and political status of indigenous communities living in remote areas of

[921] Revette, 'Extractive Dreams'; Wright, 'Lithium Dreams'.

both Argentina and Bolivia, but a deliberate strategy pursued by successive Argentinean, and the increasingly authoritarian Bolivian MAS Government (despite its rhetoric), to prioritise economic development based on extraction of this valuable natural resource.

As detailed in Chapter 2, the justification of the extraction of natural resources for economic development is known as extractivism, or in a left-leaning political economy, neoextractivism. This thesis provides a better understanding of what two Latin American governments, on different sides of the political spectrum, seek to achieve in an era of both environmental crisis and economic opportunity.

That lithium will bring prosperity to the countries that possess reserves is a narrative propagated by international climate change mitigation finance circles. This narrative, comfortably adopted by business and political elites, suggests that lithium mining is "clean" because it is for the most part extracted using solar and wind power through evaporation, and because it will contribute to the rapid growth of a low-carbon economy. This is a convenient narrative for those managing projects in Argentina and Bolivia. It frames lithium as a "strategic" asset for the future – one which will continue to gain value and that could perhaps one day be as important as oil to global society.

Of course, some community-members represented in this thesis had a positive view of mining generally, as a source of jobs and economic development in a region that suffers from a lack of secure employment and basic services. However, the destruction of the productive local economies currently providing the communities' livelihoods, such as quinoa farming, salt gathering, and (in Bolivia) tourism, are here not being taken into account. This is why environmental participation and the rights of indigenous peoples to consultation is an important factor in this situation.

The extraction of lithium has potentially much broader implications for the wider

global economy and environment than many other primary commodities. Operationalising the use of lithium in the service of the global neoliberal "climate industrial complex" would simply reinforce the same economic model that justifies natural resource extraction in perpetuity. It is also worth remembering that lithium is not the only element used in lithium-ion batteries. There are numerous types of batteries that require numerous types of materials, including manganese, nickel, phosphorus, iron, and cobalt. The cobalt industry in the Democratic Republic of Congo is currently drawing the most concern from the human rights community due to a reliance on child labour for mining.[922]

This conclusion seeks to answer a final question, which is: *What can be done to increase the fulfilment of indigenous peoples' environmental participatory rights within fledgling lithium extractive projects in the Lithium Triangle?* The crucial starting point for environmental human rights is the right to information, which is severely lacking in the lithium industry. In terms of lithium mining information, to suggest that the information on environmental impacts was unavailable or unforeseeable at the time the lithium extractive projects were first proposed is perhaps correct, but this does not override the right to information. The fulfilment of the right to information would require that updates or changes, such as the decision to use the *encalado* method, would be communicated to those likely to be affected.

8.3 Recommendations

To conclude, I would like to propose some recommendations. These relate specifically to the provision of informed consultation for communities in mining in Argentina and Bolivia, and in the final section, recommendations for further research. Notably,

[922] Amnesty International, '"This Is What We Die For": Human Rights Abuses in The Democratic Republic of Congo Power the Global Trade in Cobalt'.

representing the importance of environmental information for the fulfilment of environmental human rights, these are interrelated.

8.3.1 Analysis of socioenvironmental risks to communities

Firstly, in both Argentina and Bolivia assessing the risk to the water supplies of the region as a whole should be of paramount importance. The assessment should account for the projections of lithium mining across the whole region, as well as around individual salt flat basins. This recommendation is supported by other researchers into socioenvironmental impacts of lithium mining who have identified it as a problem.

In Bolivia, the full parameters of both the *encalado* and *sulfato* methods (which will be used for 60 percent and 40 percent of production respectively), and the proposed mitigation strategies, should be made clear to all the communities living around the salt flat. The implications for quinoa agriculture and the salt-gathering cooperatives should be made especially clear, with an indication of predicted impacts of lithium mining on the tourism industry made available in Uyuni town (as it also relies on use of the salt flat and surrounding areas).

As well as environmental damage, the consultations will have to realistically assess the requirements for work for local Bolivians in the lithium mining plant, in order that resentments do not build if the technical expertise can only be brought in from abroad. In the case where there must be an influx of foreign workers to Uyuni, this should be carefully planned and managed for the same reasons.

8.3.2 Compliance with national and international environmental and indigenous rights law

Both states should take care to analyse compliance of their lithium mining projects with national and international law. In Argentina, this will mean furthering the development

of new regulations pertaining to indigenous peoples based on their constitutional rights to a healthy environment and participatory rights.

Both governments should facilitate free, prior, and informed consultations, in accordance with applicable the applicable international, national and provincial laws. The Bolivian government should follow the processes are already stipulated in the Constitution and the national law comprising UNDRIP. As the lithium project is still in its pilot stage, there is still time for an EIA and consultation process to be implemented in Bolivia.

The Jujuy and Argentinean governments should regularise land rights for the 33 Communities, and develop procedures that account for indigenous consultation rights, as well as environmental participation rights, and implement them according to their obligations under ILO169. *Kachi Yupi* could be used as a template to assist communities across the lithium provinces with structuring the consultations.

Salt gathering communities must be given information about proposed lithium mining in a format they can understand, and existing rights to areas of the salt flats used for salt gathering should be protected in the event that mining is approved by mutual agreement following the correct implementation of the consultation procedures.

8.3.3 Legal training on indigenous peoples' rights

To avoid violations of rights, provincial government officials in the lithium provinces should receive training on environmental rights generally and indigenous peoples' rights particularly, and (in Argentina) should make efforts to disincentivise non-compliance with domestic law by lithium companies at all stages of establishing a mine.

Transnational mining companies should ensure best practice principles of informing communities at the earlier stages, even before prospecting. The developing

international field of business and human rights, which has not been analysed here due to space restrictions, may be useful for companies wishing to understand their potential human rights impacts at the early stages of a project.

8.4 Future research agenda

There are a variety of avenues researchers could pursue as the lithium industry develops. In 2018 Agusdinata et al published a socio-environmental research agenda "to address the knowledge gaps in terms of specific research topics, methodologies, and broader system perspectives",[923] making clear the value of interdisciplinary research into lithium mining. It also highlighted a lack of research into the impacts of lithium mining on indigenous peoples, which this thesis hopes to begin remedying.

I propose an interdisciplinary research and dissemination agenda to help communities understand the risks of lithium mining in these drought-prone regions, and develop strategies to mitigate water stress should it arrive as a result of either lithium mining or drought. The provincial government should ensure that companies in operation are ready and willing to cease mining should mining-induced water stress cause impacts on communities in the region. The government must also set up processes that would allow communities to monitor, report and receive compensation for damages as a result of the company's activities. These responsibilities should be shared between the companies.

More broadly, given the global demand for and potential supply of lithium, China's developing relationship with Bolivia and other Latin American (and African) nations in which it is investing to secure a supply of primary commodities is also an

[923] Datu Buyung Agusdinata et al., 'Socio-Environmental Impacts of Lithium Mineral Extraction: Towards a Research Agenda', *Environmental Research Letters*, 2018, https://doi.org/10.1088/1748-9326/aae9b1.

important emerging topic of resource geopolitics. Chinese resource governance in the lithium mining regions of Qinghai-Tibet would also be an interesting area to explore: understanding damage to the environment or mobilisation of communities in the Himalayas, where salt flats similar to the Andean *salares* are located, would perhaps aid an understanding of potential environmental impacts of mining lithium from brine as a whole. Although on a much larger and more complex contemporary (and very explicitly neo-colonial) scale,[924] the distances and political centralisation in a corporatist/clientelist communist government might make it comparable with the Bolivian situation. Lithium mining sites in Mexico and Nevada would also be interesting to visit to understand socio-environmental impacts, and even impacts on indigenous locals.

As a final concluding point, I believe as a result of this study that the lack of information about the mining of lithium at scale should therefore be a concern at all levels of society, from the independent geological researcher to the end-consumer of electric cars. Even more broadly, the lack of information about the environmental impacts of *any* such environmental situation at scale should be a central concern for us all. The reason why there is such a high demand for lithium (and the labour of children in Congolese's cobalt mines) is because governments and corporations have left environmental participation considerations on the sidelines for too long. Participation on what to do to mitigate the impacts of climate change should be central to political procedure in parliaments, town halls, and rural community association meetings the world over, so the promise of participatory democracy in the service of environmental human rights can be effected.

[924] Lafitte, *Spoiling Tibet*.

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