

Can the 'green' economy also be 'fair'?

Environmental justice and corporate accountability in the process of lithium extraction in Jujuy, Argentina



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Picture on the front

Woman holding a sign that says '*Nosotros no comemos batería. Se llevan el agua, se va la vida*' ('We don't eat batteries. They take away the water, life disappears'), during a protest against lithium extraction in the province of Jujuy. Source: Prensa Libre de Pueblos Originarios, March 28, 2012. <http://prensalibrepueblosoriginarios.blogspot.nl/2012/03/oro-gris-explotacion-de-litio-en.html>



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Abstract

The transition towards a 'green economy' led to increasing demand in raw materials like lithium. Lithium is known as 'the white gold of the twenty-first century' because it is an essential element in the batteries that power electric cars. Most of the world's lithium reserves are found in the 'lithium triangle' at the border between Chile, Bolivia and Argentina. Latin American countries are increasingly choosing a development path based on 'neo-extractivism', where states actively attract foreign direct investment in mining and justify these investments by distributing revenues to social and economic development programs. New resource frontiers are created in the areas where lithium is found and this affected the access, control and use of natural resources and triggered socio-ecological conflicts. While a lot is written on the 'green economy', issues of power and justice are often neglected in this debate.

Multinational corporations became important actors in the extraction of natural resources. As a result, companies are increasingly involved in claims of justice and fairness. Due to pressure from civil society organizations, mining companies created Corporate Social Responsibility (CSR) policies to be socially and economically responsible to those who are affected by their operations. Previous research identified a gap between CSR practices of companies on the one hand and justice and accountability on the other hand. Critical scholars argue that in current policies there is a lack of 'downward accountability'. The social and environmental impact of a company is assessed against general indicators that are based on technical assessments such as Environmental Impact Assessments (EIA). These assessments often do not represent how the effects of mining are experienced and lack legitimacy in the eyes of those affected by it. In order to achieve downward accountability, the perspectives, concerns and strategies of those directly affected by mining operations should be on the forefront of the debate. This leads to the main question of this thesis: *How can local communities advance bottom-up strategies to achieve downward accountability?*

The main question is answered based on field research in the province of Jujuy, Argentina, one of the three provinces in the country where lithium is found and where mining activity triggered socio-ecological conflicts. Current practices to achieve corporate accountability in the context of lithium extraction in Jujuy are analyzed from a perspective of environmental justice, based on three dimensions; distributive, procedural and recognition. The case study shows that most of the residents who oppose mining operations do not oppose mining entirely. The problem is a lack of inclusion and a lack of recognition, which results in distrust and resistance. Local communities developed bottom-up strategies to achieve downward accountability, which have been partially

successful. The provincial government and civil society organizations can play an important role to advance bottom-up strategies of local communities.

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(Source: viator.com)

All pictures included in this thesis are made by the author, except for the picture on the front page and the picture on page 52.

List of abbreviations

CO ₂	Carbon Dioxide
CSO	Civil Society Organization
CSR	Corporate Social Responsibility
EIA	Environmental Impact Assessment
FARN	Fundación Ambiente y Recursos Naturales
FDI	Foreign Direct Investment
FPIC	Free, Prior and Informed Consent
ICMM	International Council on Mining and Metals
ILO	International Labor Organization
JEMSE	Jujuy Energía y Minería del Estado
MNC	Multinational Corporation
NGO	Non-governmental organization
SQM	Soceidad Química y Minera
UAC	Unión de Asambleas Autoconvocados
UGAMP	Unidad de Gestion Medio Ambiental Minera
UN	United Nations
UNEP	United Nations Environmental Program

1. Introduction



Lithium is known as the 'white gold of the twenty-first-century' because of its application in the batteries that are used to power modern devices. The demand for lithium is expected to rise rapidly in the near future due to the increasing production of electric cars. Electric cars are perceived as more sustainable alternatives to conventional cars because of lower CO₂ emissions. They are an element of the 'green economy', which is based on the idea that economic growth can be maintained while at the same time, the environment can be protected. The extraction of lithium is, however, not less destructive than the extraction of other natural resources. In Argentina, local indigenous communities are struggling for years against the exploration and extraction of lithium in their territories, which affects the scarce water resources in the area and threaten their way of living.

1.1 Societal background

Argentina is the third largest lithium producer in the world. Its key lithium sites are located in the so-called 'lithium-triangle', at the border with Bolivia and Chile. Many Multinational Corporations (MNCs) have expressed interest in expanding or starting operations at the salt flats in the Northwest of Argentina. It is estimated that the country will become the world's largest lithium producer by 2020 (Perotti and Coviello, 2015). While the environmental benefits of electric cars have been widely documented, possible (local) social, environmental, and economic burdens that are related to the production of the batteries used for electric cars received less attention (Villanueva Cortés, 2015).

Due to increasing demand and high commodity prices, progressive governments throughout Latin America have increased their dependence on the extraction of raw materials. Latin American states actively attracted foreign direct investments in mining and the amount of large-scale mining projects has been expanding in the past three decades. States legitimize this form of *neo-extractivism* by emphasizing the key role of mining revenues in economic and social development (Siegel, 2016). Natural resource extraction is, however, not beneficial for everyone. Natural resources are often found in territories that are inhabited by indigenous communities and the rise in large-scale mining projects in Latin America has been accompanied by social mobilization and conflict. Natural resource extraction often creates negative impact on the environment, (scarce) water resources and livelihoods of communities that live in the areas where mining operations take place (Bebbington, 2008). Often, poorer and marginalized groups are disproportionately affected by the adverse impact of mining. Under pressure of various societal actors, Corporate Social Responsibility (CSR) policies and Codes of Conduct are developed to control the negative impact of mining operations. Additionally, international conventions and agreements are designed in order to strengthen the control of indigenous peoples on their territories. Despite such efforts, conflicts related to natural resource extraction persist (Helwege, 2014). Transparent, accountable and participatory governance of natural resources is an important policy challenge (Khoday and Perch, 2012). In order for mining operations to be 'fair' for local communities, companies must be accountable to those who are directly affected by their operations.

1.2 Academic background

Previous research on CSR in relation to natural resource extraction has shown that there is a gap between CSR activities of mining corporations on the one hand and accountability and justice on the other hand (Hamann and Kapelus, 2004). According to Sosa and Zwartveen (2014), current attempts to control the adverse impact of mining lack 'downward accountability': "*existing norms and standards lack legitimacy in the eyes of many, most notably of those who directly experience the impact of mining operations.*" (Sosa and Zwartveen, 2014: 22). While in many cases, poorer groups

are disproportionately affected by mining operations, the policies that are designed to mitigate the negative impact of mining often neglect issues of poverty, inequality and exclusion (Newell, 2005).

Recent strategies that are developed to strengthen corporate accountability of mining companies, both by companies and civil society organizations, have put much emphasis on 'stakeholder participation' and community consultation processes (Otsuki et al., 2017). This trend is also represented in the literature on Environmental Justice. Environmental Justice research addresses disproportionate environmental burdens associated with social inequalities and aims at ensuring equity (Bose, 2004). In the Environmental Justice literature, three dimensions of justice are identified: distributive, procedural and recognition justice. These dimensions are interrelated, and it is assumed that a fair procedure, where affected communities participate in decision-making, leads to increased recognition and a fair distribution of burdens and benefits (Walter and Urkidi, 2011). More critical scholars argue that this assumption might be problematic. They argue that the notion of community consultation obscures the unequal power relations between local communities, corporations and governments (Newell, 2005). Moreover, after consent is given, it becomes harder for local communities to express concerns and grievances and consent is used to further legitimize mining operations (Otsuki et al., 2017; Sosa and Zwartveen, 2014). Therefore, more critical research is needed that considers the limitations of the Environmental Justice framework (Velicu and Kaika, 2015). Little is known about how the consultation process is experienced by host communities and how effective it is in achieving downward accountability. According to Newell (2005), local communities should be on the forefront of the debate on corporate responsibility and accountability (Newell, 2005).

1.3 Main question

This thesis aims to contribute to the policy and academic debate on neo-extractivism, environmental justice and corporate accountability, with an emphasis on the experiences and strategies of local communities in relation to this debate. The main question of this thesis is: *How can local communities advance bottom-up strategies to achieve downward accountability?*

The main question will be answered on the basis of qualitative field research that is carried out in the period of July and August 2017, in the province of Jujuy. Jujuy is one of the three provinces in Argentina where lithium is found. The province of Jujuy is chosen because its government declared lithium a 'strategic mineral' for the economic and social development of the province. The focus of this field research is on two lithium projects in the province of Jujuy, Salar de Olaroz-Cauchari and Salinas Grandes. The projects are in different stages of development. In Salar de Olaroz-Cauchari lithium is extracted since 2014 while in Salinas Grandes the lithium project is in the phase of exploration. Both projects triggered socio-ecological conflicts between local communities, the (provincial) government and mining corporations. The field research includes the perspectives of different actors involved in the process of lithium extraction in Jujuy, with a specific emphasis on the experiences of affected communities. Based on the case study on lithium extraction in Jujuy, I argue that in order to achieve 'downward accountability' to local communities, local communities themselves must be included in the debate on corporate responsibility and accountability. Bottom-up strategies to achieve downward accountability are created by local communities and civil society organizations in Jujuy and this thesis concludes with recommendations to different stakeholders on to advance these strategies.

1.4 Outline

In the following chapter first, the theoretical framework of this thesis will be elaborated. The concepts of neo-extractivism, environmental justice and corporate accountability will be explained and connected to the research questions of this thesis. Second, the context of the case study in Jujuy, Argentina, will be given. Then, the methodological approach of this research will be explained. The following three chapters present the results of the case study. In chapter five, the results on distributive justice will be presented. Chapter six describes the results on procedural justice and the struggle for recognition. In chapter seven, the bottom-up strategies on how to achieve downward accountability are presented, including recommendations for different stakeholders. In chapter eight, the conclusions of the case study are connected to the literature and recommendations for further research will be given.

2. Theoretical framework



2.1 Neo-extractivism

Green economy

Latin America has experienced a primary commodities boom in the first decade of the new millennium. Due to increasing demand and high global commodity prices, Latin American countries have focused on the export of raw materials with little added value (Siegel, 2016). The export of natural resources is not new for Latin America; it dates back to colonial times. However, the current natural resource boom has distinctive characteristics and has been described by sociologist Gudynas as 'neo-extractivism' (Burchardt and Dietz, 2014).

The current surge for raw materials like lithium can be explained by rising demand for natural resources, particularly by emerging economies such as China. Moreover, the transition towards a 'green economy' is still based on the extraction of raw materials (Burchardt and Dietz, 2014). Due to growing concerns for climate change and increasing levels of Carbon Dioxide (CO₂) emissions, many governments and organizations have supported the transition towards a 'green economy' as a solution to these sustainability challenges (Villanueva Cortés, 2015). The United Nations Environmental Program (UNEP) defines the 'green economy' as a "*low-carbon, resource efficient and socially inclusive economy. In a green economy, growth in income and employment are driven by public and private investments that reduce carbon emissions and pollutions, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services.*" (UNEP, 2011: 16). The 'green economy' harmonizes economic growth, poverty reduction and environmental concerns. The transition towards a 'green economy' depends on technological innovation and a strong emphasis is put on alternative energy (Raza, 2016). Technologies such as wind mills, solar panels and electric cars are perceived as alternative and more sustainable energy sources. However, to build up a 'green economy', raw materials like lithium must be extracted. This is not less destructive than the extraction of other natural resources and it changes the access, use and control of natural resources in the areas where these are found (Villanueva Cortés, 2015). While a lot has been written about the 'green economy', issues of power and justice are often neglected in this debate (Anlauf, 2016).

New resource frontiers

Neoliberal policies of privatization and liberalization have opened Latin American economies for globalization in the 1980s and 1990s. Mining regulation was liberalized to enable the activities and investments of multinational corporations. This changed the pattern of access to and use of resources fundamentally (Coy et al., 2017). New 'resource frontiers' were created. A 'frontier' can be described as "*relational zones of economy, nature and society. Spaces of capitalist transition where new forms of property relations and systems of legality are rapidly established in response to market imperatives.*" (Barney, 2009: 146). Through favorable tax conditions and institutional and legal reforms, states created attractive investment conditions for foreign companies and foreign direct investment (FDI) in natural resources increased significantly (Sosa and Zwarteveen, 2014). Large scale mining projects are set up in areas that were not exploited yet. The rise in FDI means that the ownership of natural resources is increasingly in the hands of private actors. This process has been described as 'resource grabbing': "*the transfer of ownership, use rights and control over resources that were once publicly or privately owned, or not even the subject of ownership, from the poor into the hands of the powerful.*" (Fairhead et al., 2012: 238).

At the same time as the commodities boom in the beginning of the new millennium, many Latin American governments made a political shift to the left. This shift is characterized by an increasing role of the state in social and economic policies. This does not, however, mean a break

from resource extraction dominated by transnational capital (Coy et al., 2017). Because of the rising demand for natural resources, Latin American countries are increasingly choosing a resource dependent development path. States justify intense resource exploitation by using the revenues to fund economic and social development programs (Siegel, 2016). This strategy is described as 'neo-extractivism': *"the dependence on raw material exports as the engine of economic growth."* (North and Grinspun, 2016: 1483). Latin American governments allow integration into world markets, but at the same time, increase their role in the allocation of revenues from natural resources.

Neo-extractivism in Latin America is new in the sense that large-scale mining projects are justified with a discourse on national development, sustainability and their contribution towards a 'green economy' (Brand, 2012). It is old in the sense that it triggers or intensifies conflict. Processes of resource extraction often lead to ecological destruction and (new) forms of social exclusion. The creation of new resource frontiers in Latin America, such as lithium mining projects in the Northwest of Argentina, has been accompanied by socio-ecological conflicts and resistance from local communities and civil society organizations.

2.2 Environmental justice

Socio-ecological conflict

Neo-extractivism in Latin America has caused and intensified socio-ecological conflicts. Burchardt and Dietz (2014) argue that nature is not external to society, but politicized and contested. Processes of resource extraction involve questions of access, control and use of nature and transform social relations and reinforce inequalities (Burchardt and Dietz, 2014). There is increasing inequality between those who profit from natural resource extraction and the communities that host them (Khoday and Perch, 2012).

Questions of inequality and justice in relation to environmental burdens are often studied using an Environmental Justice framework. Social movements and communities who oppose mining operations in their territories are increasingly framing their struggles in terms of Environmental Justice (Urkidi and Walter, 2011). Environmental Justice incorporates environmental issues into broader frameworks of human rights and democratic accountability. It recognizes that marginalized groups and communities are disproportionately affected by environmental burdens and aims at ensuring equity (Bose, 2004). The Environmental Justice movement started with the mobilization of African Americans against a landfill of toxic waste in their neighborhood and was based on the observation that not everyone experiences equal treatment in the environments where they live (Schroeder et al., 2008). Since then, the scope and purpose of Environmental Justice research and movements expanded beyond race and socio-economic status, and now includes many dimensions and geographies (Urkidi and Walter, 2011).

Distributive, procedural and recognition justice

Early researchers within the Environmental Justice framework focused mainly on distributive justice, with an emphasis on the equitable allocation of burdens and benefits. More recent scholars argue that questions of Environmental Justice cannot be reduced to the distributive dimension only. They argue that theories of distributive justice do not thoroughly examine the 'social, cultural, symbolic and institutional conditions' that underlie poor distributions (Schlosberg, 2004). Influenced by political ecology, two political dimensions are added to the Environmental Justice framework; procedural and recognition justice.

Procedural justice refers to a fair and equitable process. It is argued that contestation over resource governance often lies in the dissatisfaction in relation to decision-making practices in resource governance. In many cases, citizens and civil society organizations that protest against mining operations do not advocate a complete stop to all resource exploitation. Rather, they demand participation in the decisions around the location and extent of a project and a fair distribution of the burdens and benefits of intensive resource exploitation (Siegel, 2016). Participation can be defined as "*the involvement of individuals and groups that are positively or negatively affected by or interested in a proposed intervention*" (Enserink et al., 2007, in Schmitt, 2016: 79). Free, Prior and Informed Consent (FPIC), public participation activities and stakeholder engagement are examples of strategies to achieve procedural justice.

Recognition refers to the recognition of personal dignity and is especially relevant in the context of indigenous peoples. International conventions and agreements are developed to protect the rights of indigenous peoples and to consult them on issues that affect their welfare, like Convention 169 of the International Labor Organization (ILO) and the 2007 UN Declaration on the Rights of Indigenous People. These conventions are designed to strengthen the control of indigenous peoples over their territories. Most Latin American countries ratified these declarations (Helwege, 2014). Whyte (2011), argues that the recognition dimension of environmental justice does not only involve official recognition of indigenous peoples. It is also about respecting and recognizing local values and perceptions of justice. An important aspect of recognition justice is respecting other forms of knowledge and languages to perceive all stakeholders as peers (Schmitt, 2016).

The three dimensions of Environmental Justice are interrelated, and it is assumed that participation and community consultation processes lead to a (more) fair distribution of benefits and burdens. More critical scholars argue that this assumption might also be problematic. They argue that community consultation processes often take place in highly unequal power relations between local communities, corporations and governments (Newell, 2005). Other scholars argue that it becomes harder for local communities to express concerns and grievances after consent is given and community consent is used to further legitimize mining operations (Otsuki et al., 2017; Sosa ad Zwarteveen, 2014). Therefore, more critical research is needed that considers the limitations of the Environmental Justice framework. This thesis will use a framework of environmental justice based on the perspective of political ecology, with increased emphasis on underlying power relations. Power in this context is understood as "*the ability of an actor to control the access to nature and natural resources as well as the access of other actors to these resources.*" (Bryant and Bailey, 1997: 39). A focus on socio-ecological conflict is a useful starting point to understand resource politics and power relations associated with these politics (Pichler et al., 2016). The actors involved in resource extraction have changed in the past few decades and private (multinational) companies became more important. This has implications for the responsibilities in dealing with claims of justice.

2.3 Corporate accountability

Corporate Social Responsibility

Neoliberal policies in Latin America marked a shift in governance from the state to market actors and multinational corporations continue to play an important role in natural resource extraction. This shift implies that claims of fairness and justice moved away from state institutions to direct negotiations between companies and communities in multi-stakeholder processes (Pichler et al., 2016). Civil society organizations pressured corporations to be socially and environmentally responsible and especially mining companies are under scrutiny due to the destructive nature of mining activities. As a response, extractive industries were among the first companies to create

Corporate Social Responsibility (CSR) policies and adopt voluntary Codes of Conduct (Mutti et al., 2012).

CSR refers to the practices that reflect the responsibilities of a corporation beyond generating profit to their shareholders (Marshall and McDonald, 2011). CSR policies are designed to share the benefits of the mining operations, typically through infrastructure projects, investments in education and healthcare, and local employment opportunities (Mutti et al., 2012). Moreover, within the mining sector, the notion of a 'social license' has become embedded within mining discourse. A social license is an informal, intangible license that is based on public consent and serves to legitimize mining operations. A social license is linked to the perceptions of local communities that are affected by the operations about the company's activities and the impact on their livelihoods (Kelman, 2016). Public consultation processes and stakeholder engagement have become common practices to obtain such a social license.

Downward accountability

CSR and corporate accountability are often perceived as synonymous. CSR is however distinctive from corporate accountability in the sense that it is voluntary in nature. Corporate accountability is a more confrontational or enforceable strategy of influencing corporate behavior (Marshall and McDonald, 2011). Companies are increasingly aware that they should not only be accountable towards their shareholders, but also to other stakeholders like their employees and affected communities (Jenkins and Yakovleva, 2004). In this thesis, accountability is defined as: *"the obligation of power-holders to take responsibility for their actions. It describes the rights and responsibilities that exist between people and the institutions that have an impact on their lives."* (UNDP, 2010). Critical scholars argue that in current strategies of mining companies, there is a distinction between 'upward' and 'downward' forms of accountability. According to Sosa and Zwartveen (2014), existing forms of controlling the impacts of mining operations rely on 'upward forms of accountability'.

In current policies, the social and environmental impact of a company is assessed against general indicators that are based on technical assessments such as Environmental Impact Assessments (EIA) (Sosa and Zwartveen, 2014). These 'authorized assessments', however, often do not represent how the effects of mining are experienced by those affected by it. Mining companies can comply with all (international) regulations but at the same time cause disagreements and conflicts. Sosa and Zwartveen (2014) argue that there is a lack of 'downward accountability'. Current norms and standards lack legitimacy in the eyes of the people who experience the impact of mining operations. While in many cases, poorer groups are disproportionately affected by mining operations, CSR policies and corporate accountability strategies often neglect issues of poverty, inequality and exclusion (Newell, 2005). Public consultation processes are becoming common practice in the mining industry, but natural resource extraction still causes or intensifies local conflicts. In order to achieve downward accountability, the perspectives, concerns and strategies of those directly affected by mining operations should be on the forefront of the debate.

2.4 Knowledge gap

The transition towards a 'green economy' led to an increasing demand in natural resources such as lithium and new resource frontiers are created. Latin American countries renewed their interest in a natural resource-based development path and states actively attracted foreign direct investment. Neo-extractivism in Latin America caused and reinforced socio-ecological conflicts and often, poorer and marginalized groups are disproportionately affected by the adverse impact of mining. Despite international agreements and international conventions designed to strengthen the control of

indigenous peoples on their territories and an increase in CSR policies and Codes of Conducts of mining companies, conflicts related to natural resource extraction persist. Transparent, accountable and participatory governance of natural resources remains an important academic and policy challenge (Khoday and Perch, 2012). For the 'green economy' not only to be 'green' but also 'fair', companies must be accountable to those who are directly affected by their operations

Previous research on natural resource extraction showed that there is a gap between the CSR practices of mining companies on the one hand and accountability and justice on the other hand (Hamann and Kapelus, 2004). Often, policies that are designed to mitigate the adverse impact of mining lack legitimacy in the eyes of those who are directly affected by the mining operations. They lack 'downward accountability'. Recent strategies that are developed to strengthen corporate accountability of mining companies, both by companies and civil society organizations, put a lot of emphasis on 'stakeholder participation' and community consultation processes (Otsuki et al., 2017). However, little is known about how the consultation process is experienced by host communities and how effective it is in achieving downward accountability. Moreover, little attention is paid to bottom-up strategies that communities themselves construct to demand corporate accountability (Newell, 2005). This thesis contributes to this academic and policy debate with a qualitative case study on environmental justice and downward accountability in the context of lithium extraction in the province of Jujuy, Argentina.

Research aim

This thesis aims to contribute to the academic and policy debate on neo-extractivism, environmental justice and corporate accountability. Based on the research findings, recommendations for different stakeholders are formulated on how bottom-up strategies of local communities can be advanced to achieve 'downward accountability' in relation to lithium extraction in the province of Jujuy, Argentina.

Research questions

The main question of this thesis is: *How can local communities advance bottom-up strategies to achieve downward accountability?*

The main question is divided in three sub-questions:

1. *How is Corporate Social Responsibility practiced by lithium mining companies in the province of Jujuy, Argentina?*
2. *To what extent do host communities participate in deciding on cost-and benefit-sharing of the lithium mining operations?*
3. *What are the bottom-up strategies of local communities and civil society organizations to achieve downward accountability and what are the limits to these strategies?*

Operationalization

The conceptual framework of this research is based on the environmental justice framework. Current strategies to achieve accountability in the context of lithium extraction in Jujuy will be analyzed based on the three dimensions of environmental justice to identify underlying structures and relations, to understand how lithium mining and CSR practices are experienced by local communities who are affected by mining operations. The three dimensions of environmental justice are defined as:

- Distributive justice: the distribution of benefits and burdens among different stakeholders involved. These include both short- and long-term burdens and benefits.
- Procedural justice: fair and equitable process where all individuals and groups that are positively or negatively affected by or interested in a proposed intervention can participate in the decision-making around this intervention.
- Recognition justice: the recognition of personal dignity and local values, forms of knowledges and languages.

Then, bottom-up strategies of local communities and civil society organizations to achieve downward accountability are investigated. In this thesis, accountability is defined as *“the obligation of power-holders to take responsibility for their actions. It describes the rights and responsibilities that exist between people and the institutions that have an impact on their lives.”* UNDP, 2010). Downward accountability is achieved when the norms and standards that are designed to achieve accountability are legitimate according to the people who experience the impact of mining operations.

The main question will be answered on the basis on a case study on two lithium projects in the province of Jujuy, Argentina. The context of this case study will be elaborated in the following chapter.

3. Context



3.1 Neo-extractivism in Argentina

Resource extraction in Argentina

Argentina is a relatively new mining country. Until the 1990s, when the Mining Code was amended, the mining sector in Argentina consisted mainly of small- and medium-scale metal mining, financed by the state and national private capital. While the country possesses rich reserves of mineral resources, large areas are not well explored. Most of the mineral resources, such as gold, copper, zinc, nickel and cobalt are found along the Andes mountain range, which extends into Chile and Bolivia (Mutti et al., 2012). In comparison to the Andean states, Argentina has a more diversified economy and the extractive industry is relatively small. However, the extractive industry has become more important and will continue to expand in the coming years. The country re-embraced a resource-dependent development path. Revenues from raw materials are used for social purposes and national development (Burchardt and Dietz, 2014). Around 70 percent of the mineral production in Argentina is exported, mainly to Asia, Europe and Brazil (Mutti et al., 2012).

The legal framework that regulates natural resources is based on the Mining Code which originates from 1886. The Mining Code is national, but mining concessions are given to each provincial government. The provinces have the original right over the mineral resources on their territory and the provincial government is responsible for the implementation of the Mining Code. In the 1990s, the Mining Code has been adapted and new laws, decrees and resolutions are passed to attract more FDI in mining. These amendments included: 'a) import duty benefit for importing mining equipment; b) 30-years tax stability; c) income tax benefits for companies dedicated to the mining industry, including a royalty payment of three percent at the start of the operation; and d) guarantee of a stable and transparent legal environment' (Código de Minería de la República Argentina y Leyes Complementarias, 1993, as cited by Mutti et al., 2012: 215). At the same time, the government introduced new laws and regulations to improve environmental and participatory rights. For a mining project to be approved, an Environmental Impact Assessment (EIA) must be conducted before each phase of the project; prospection, exploration and extraction. Public information and participation are part of the EIA process (Urkidi and Walter, 2011).

Since the amendment of the Mining Code in the 1990s, FDI and the number of mining projects increased significantly in Argentina. In 2003, Néstor Kirchner was elected president and the presidencies of Kirchner and his wife are seen as part of a wider Latin-American phenomenon of 'post-neoliberal' governments. They rejected neoliberal economic and political programs and claimed to increase the share of export revenues for social redistribution (Ciseneros and Christel, 2014). The extractivist model of exporting raw materials was, however, not questioned. In 2004, Néstor Kirchner presented the National Mining Plan with the aim to consolidate the process of mining investment and development. Mining was declared a high priority (Anlauf, 2016). In the period between 2003 and 2006, the number of mining projects increased with 800 percent and the investments rose with 490 percent (Ferradás Abalo, 2016). In 2014, the mining industry accounted for 3,2 percent of Argentina's GDP (Deloitte, 2016). The current center-right government, led by president Mauricio Macri who is in office since 2015, signed a new mining deal to harmonize taxes and regulations in 20 provinces with the aim of attracting mining investment (Reuters, 2017). Macri removed currency and capital controls and reversed taxes that were introduced by the former presidents. After signing the new mining deal, approximately 40 foreign companies showed interest in Argentina's mining industry. More than half of those companies are interested in lithium (Bloomberg, 2017).

Lithium extraction in Argentina

Over 70 percent of the global lithium reserve base is found in South America, in the so-called 'lithium triangle'. Together with Bolivia, Argentina possesses the world's largest lithium reserve in the world and is currently the third-biggest lithium producer (Economist, 2017). Lithium is a light metal that can be found in two sources, hard-rock lithium deposits and brine lakes or salt flats. Most of the lithium is extracted from the latter source, because it is easier and less expensive to extract (Tahil, 2007). Lithium has many applications, such as ceramics, glass, pharmaceutical products and aluminum production. Furthermore, it is an essential metal in modern technologies like energy storage, cordless devices and electromobility. It is predicted that the increasing production of and demand for electric cars will be a major driver for future lithium demand (Martin et al., 2017). The rising demand of the mineral has created a 'lithium boom', where the interest for and prices of lithium increased significantly. The figure below shows the various applications of lithium and predictions for future demand.

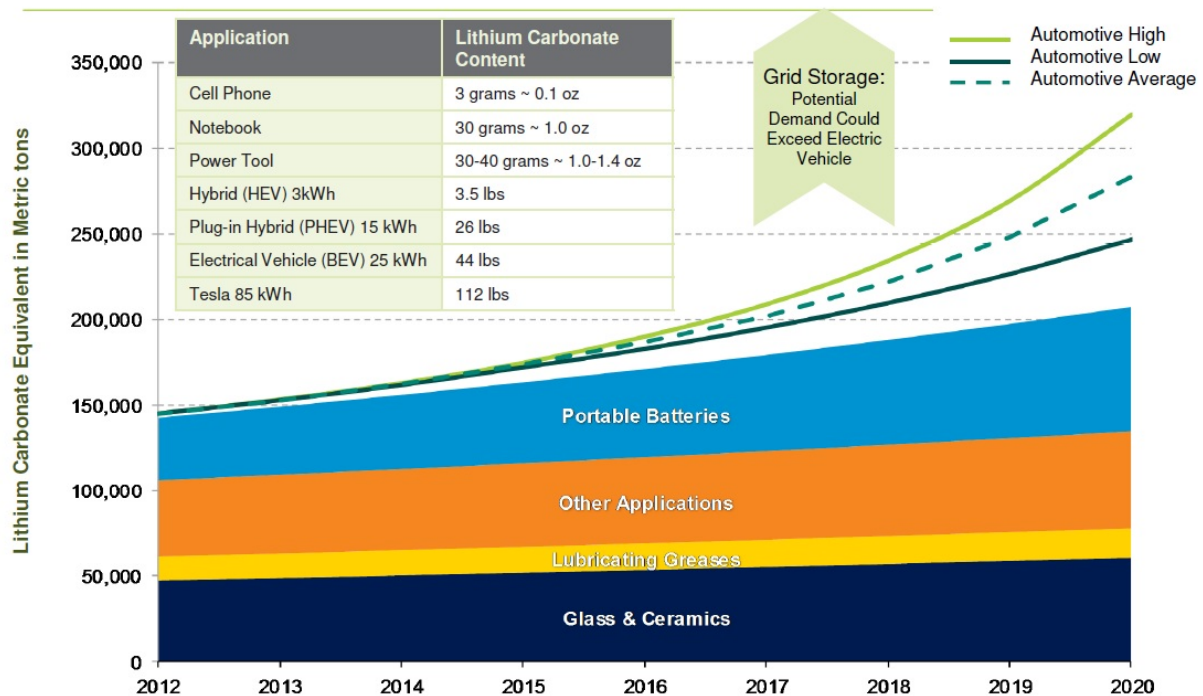


Figure 1. Predictions of future lithium demand (Rockwood Lithium, 2013),

The key lithium sites of Argentina are located in the Puna region, in the Northwest of the country. Lithium resources are found in various salt flats in the provinces of Jujuy, Salta and Catamarca (Perotti and Coviello, 2015). This thesis focuses on two lithium projects in the province of Jujuy; Salar de Olaroz-Cauchari and Salinas Grandes. In 2011, the province of Jujuy declared lithium a strategic mineral. It is strategic for the economic and social development of the province of Jujuy, but also because of its key role in green technologies. During that same year, the state enterprise Jujuy Energía y Minería del Estado (JEMSE) was created with the purpose of increasing mining revenues for the provincial government. JEMSE owns an 8,5% stake in the lithium mining operations in the province of Jujuy (Göbel, 2013). The two lithium projects that are included in this thesis are in different stages of development. In Salar de Olaroz-Cauchari, one project is already in the extraction

phase and one project will start extracting in the coming year. The project in Salinas Grandes is in the exploration phase. Salinas Grandes is located about 70 kilometers Southeast from Salar de Olaroz-Cauchari and covers the provinces of Jujuy and Salta. Both salt flats are located at high altitudes between 3500 and 3900 meters above sea level (Orocobre, 2010).

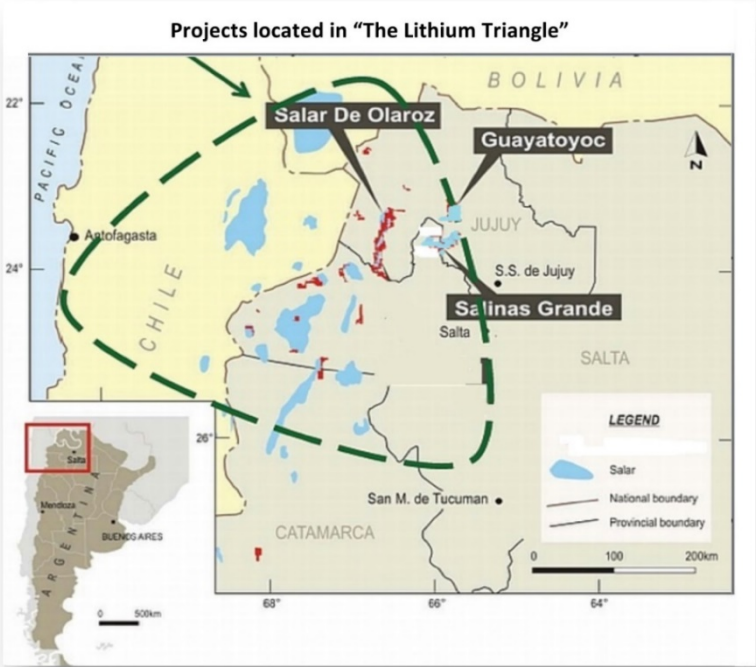


Figure 2. Location of Salar de Olaroz-Cauchari and Salinas Grandes (A.I.S. Resources, 2017)

Local villages are located within 50 kilometers from the production sites. These villages are inhabited mainly by indigenous communities. Argentina is characterized by high rates of inequality, especially between urban and rural areas. The Northwest of Argentina is one of the poorest regions of the country, which is expressed by high rates of substandard living conditions, illiteracy and unemployment (Weinberg, 2016). Around 3500 people live within the area of influence of Salar de Olaroz-Cauchari, in the department of Susques. The main town of the department, Susques, is inhabited by around 2500 people. The other nine villages are inhabited by 100 to 200 people. Around Salinas Grandes and Laguna Guayatayoc, approximately 7000 people live in 33 villages, divided in the province of Jujuy and the province of Salta. People deploy flexible income strategies such as (temporary) wage work, handicraft work, pastoral farming of lama’s, goat and sheep, agriculture and the ‘harvest of salt’. They live in close interaction with nature (Anlauf, 2016). The Puna region has a dry, arid landscape, where water resources are scarce. Precipitation is concentrated in the summer months and the area receives less than 150 mm per year. It is therefore a semi-desert area (Ferradás Abalo, 2016).

3.2 Socio-ecological conflicts

The salt flats where lithium reserves are found are located in territories that are inhabited by indigenous communities. In 1994, Argentina changed its constitution to acknowledge the rights of indigenous peoples. Communities received legal recognition as indigenous communities based on the

ILO 169 convention, which Argentina ratified (Anlauf, 2016). The lithium mining activities have triggered socio-ecological conflicts with local communities in the two cases included in this thesis.

Salar de Olaroz-Cauchari

While the mining companies received formal approval for the development of lithium exploration and extraction in Salar de Olaroz-Cauchari in 2012, local communities, and especially a group of peasants organized in 'Colectivo Apacheta', claim that the company did not integrate the concerns of the local population into the project development. They state that the company pressured them into approving the project and that in some villages, only 20 people or less were consulted, while according to official regulations, more than 50 percent of the local population must approve the project. Moreover, they are concerned about the use of water and the impact of the mining activities on their livelihoods and their particular way of living (Anlauf, 2016).

Salinas Grandes

When in 2010 lithium resources were discovered in the Salinas Grandes, a conflict started between the local communities who live in the territory, the mining companies and the government. The communities received information about the presence of lithium in their territories from the media, not from official government sources or company consultations. 33 communities are organized in 'La Mesa de Pueblos Originarios de la Cuenca de Salinas Grandes y Laguna de Guayatocot' (in the rest of this thesis referred to as 'La Mesa'). Residents are especially concerned about water shortages and pollution caused by the mining operations. They went to the National Supreme Court of Justice and the Inter-American Commission of Human Rights based on violations of their rights to 'Free, Prior and Informed Consent' in 2010. The case is still pending. The 33 communities demand immediate cease of all lithium projects and permits issued around Salinas Grandes and Laguna Guayatocot (Amnesty, 2016). Despite opposition of local communities, mining concessions are being sold and lithium production is expected to grow significantly in the coming decade. It is even estimated that Argentina will become the biggest lithium producer by 2020 (Perotti and Coviello, 2015).

3.3 Lithium mining companies

Most of the lithium concessions in Jujuy are owned by private companies. These are multinational or foreign companies, often with Argentinean subsidiaries or national companies that own a stake (Göbel, 2013). In a fast pace, many projects have been developed or are under development in the province of Jujuy. Mining companies want to take advantage of the current 'lithium boom' characterized by high demand and high market prices.

Orocobre – Toyota Tsusho

The Australian mining company Orocobre holds most of the stakes in the Salar de Olaroz (66,5%) in a joint venture with Toyota Japanese company Toyota Tsusho (25%). The project is operated through Orocobre's Argentine subsidiary Sales de Jujuy S.A. The remaining 8,5% stake is owned by the state enterprise JEMSE (Orocobre, 2017). By the involvement of the state enterprise JEMSE, the government can increase its revenues from the mining operations. By law, provinces can only receive a maximum royalty rate of 3% (Anlauf, 2016). The Olaroz project developed rapidly. In 2012, the company received approval for the project and started producing lithium carbonate in 2014. The company proposes to produce 17.500 ton of Battery Grade lithium carbonate, with a quality of >99,5% and 17.500 ton Industrial Grade lithium with an average quality of 99% annually. The operation consists of 63.000 hectares (Orocobre, 2017).

Lithium Americas – SQM

Other mining concessions in Salar de Olaroz-Cauchari are held by a joint venture between the Canadian Lithium Americas and the Chilean Sociedad Química y Minera (SQM), who own approximately 70.000 hectares. JEMSE participates with an 8,5% stake. Operations are carried out by the Argentine subsidiary Minera Exar. This project finished the exploration phase and will start extracting lithium in the coming year (Lithium Americas, 2017). Expected production is 50.000 ton of Battery Grade lithium (>99,5%) per year (Minera Exar, 2017). Mitsubishi and Magna International are shareholders of Lithium Americas, both companies operating in the automotive industry (Bloomberg, 2017).

LSC Lithium

Orocobre also owned concessions in Salinas Grandes. The concessions were sold to the Canadian LSC Lithium in 2016. LSC Lithium owns 179.000 hectares of tenements and application for tenements in Salinas Grandes and the neighboring Laguna Guayatayoc. The operations are not in production yet (LSC Lithium, 2017).

Dajin Resources

The Canadian company Dajin Resources owns concessions in Salinas Grandes, totaling 93.000 hectares. In 2016, Dajin signed an agreement with the lithium exploration company Lithium S, which is granted a 51% interest in Dajin's lithium properties in Argentina (Dajin Resources, 2017). Operations in Salinas Grandes and the Guayatayoc Basin are currently in the exploration phase.

Corporate Social Responsibility

All lithium mining companies in Jujuy have CSR policies aiming at distributing benefits of the mining operations through 'Shared Value' programs. Moreover, companies built relations with local communities to receive a 'social license' through public consultation programs. Despite these efforts, conflict with local community members have emerged.

In this thesis, the conflict around lithium extraction in the province of Jujuy is chosen as a case study to answer the main question. The focus on socio-ecological conflict is useful in understanding the resource politics and power relations associated in these politics (Pichler et al., 2016). The case study involves the perspectives of different actors involved and focuses on the different experiences and worldviews to identify gaps between policies and experiences on the ground. In the next chapter, the methodology will be further elaborated.

4. Methodology



4.1 Methods

Qualitative research

In this thesis, a qualitative approach is chosen to answer the main question. This research includes different actors with conflicting interests and worldviews. In order to understand how these differences, play out, qualitative research methods are most appropriate because they focus on human experiences, perceptions and social relations. According to Boeije (2010), *“the purpose of qualitative research is to describe and understand social phenomena in terms of the meaning people bring to them.”* (Boeije, 2010: 11). Answers to questions of *how* and *why* are answered and in-depth information is gathered which could not be obtained by standardized social science methods like surveys (Scheyvens, 2014).

Data collection

Data is collected during field research in a period of eight weeks in July and August 2017 in the province of Jujuy, Argentina. The starting point of this field research was in the capital of the province Jujuy, San Salvador de Jujuy. The salt flats Salar de Olaroz-Cauchari and Salinas Grandes are located at 200 km and 130 km away from the capital. The first two weeks were used to establish contacts with key informants and to collect general information on lithium extraction and stakeholders involved. The following weeks were used to carry out semi-structured and informal interviews, field visits and participant observation in relevant meetings. Several methods are used to triangulate the data. The methods are further explained in the following paragraphs.

Secondary sources

Various secondary sources are used to answer the research question. These sources include policy documents on resource governance in the province of Jujuy, CSR policies of the companies involved, the Environmental Impact Assessments that have been carried out, other reports and literature about the environmental impact of lithium extraction and local media sources.

Stakeholder analysis

For a better understanding of the relationship between the various actors involved in lithium extraction in the province of Jujuy, a stakeholder analysis is carried out. In socio-ecological conflicts, the underlying structures of power and interests are revealed. A focus on the actors involved in a relevant entry point to study these underlying structures (Anlauf, 2016). The purpose of a stakeholder analysis is to identify the interests of the different actors involved in a project or process to be able to anticipate better on the reaction of others. In this thesis, stakeholders are defined as *“the individuals and constituencies that contribute, either voluntarily or involuntarily to firms' wealth-creating capacity and activities that are therefore its potential beneficiaries and/or risk bearer”* (Mutti et al., 2012).

First, actors were identified using informal conversations and expert interviews. Second, the interests and positions of the stakeholders in the conflict were identified based on interviews. Last, the relationships between the different stakeholders were investigated (Reed et al., 2009). The following stakeholders were identified. This stakeholder analysis formed the basis of the interviews that were carried out in a later stage of the research. A short description of the stakeholders involved will be provided below, including their role and position towards lithium extraction in Jujuy:

National government

The national government oversees compliance with the Mining Code. According to the Mining Code, the national government must define and coordinate the development of a mining policy within democratic and federal frameworks (Mutti et al., 2012).

The current 'lithium boom' in Argentina can be placed in a wider expansion of the mining sector in the country. Large-scale extractive projects oriented towards exportation are encouraged, but with a larger role of the state in the redistribution of revenues. The state acts as producer and regulator and operates in close interaction with multinational capital (Svampa, 2015). The current center-right government signed a new mining deal to attract FDI (Reuters, 2017).

Provincial government

Argentina is a federal country, consisting of 24 provinces. Each of these provinces has its own constitution. The province has the original right over the mineral resources on its territory. The provincial government is responsible for the implementation of the Mining Code and for the environmental regulation and control of the mining operations (Mutti et al., 2012).

The appropriation of natural resources is very important for the economy of the province of Jujuy. In 2016, 78% of Jujuy's exports were primary products and the mining sector makes up for more than half of the exports (Anlauf, 2016). In Jujuy, lithium is a strategic mineral and the state owns an 8,5% stake in the lithium mining operations through the state enterprise JEMSE. Environmental regulation and control of mining operations is organized through the institute 'Unidad de Gestión Medio Ambiental Minera' (UGAMP), which assesses and approves the EIA's of mining companies.

Local government

Municipal authorities have executive and legislative capacity delegated by the provincial governments. Local authorities receive a share of the royalties paid by mining companies to the provinces, but do not have the authority to decide on the amount of royalties to be paid (Mutti et al., 2012). The role of municipal authorities in relation to the mining operations is limited.

In Jujuy, the system of municipal commissions exists alongside autonomous community administration. Communities in Jujuy received legal recognition as indigenous communities with juridical personality in the early 2000s (Göbel, 2013). Local communities are organized in local *asambleas*, where they elect the *comunero*, community leader, who is the most important local authority.

Mining companies

Extractivism in Argentina is not new, but the large scale of the mining operations and the type of players involved differ from previous mining operations. In Jujuy, small- and medium-scale mining existed, but since the amendment of the Mining Code in the 1990s, large-scale, capital intensive mining projects have been developed, financed and operated by multinational companies.

Mining companies want to take advantage of the current 'lithium boom' and in a fast pace, lithium mining projects have been developed in the past decade. These are mainly multinational companies operating through Argentine subsidiaries. Argentine subsidiaries oversee national regulations, environmental regulations and community relations. Mining companies have implemented programs to communicate and legitimize their operations. In 2001, the International Council on Mining and Metals (ICMM) was created to promote the sustainable development of mining operations. Lithium mining companies in Jujuy adhere to these standards.

Local communities

Within 50 kilometers from the production sites of Salar de Olaroz-Cauchari and Salinas Grandes, local villages are located. Many families own a house in the local village and a house on the country side, where they take care of the lama's, sheep and goats. Families deploy flexible income strategies,

some work for the municipality, the local school or for the maintenance of infrastructure. Next to these activities, they depend on pastoralism and the cultivation of crops that are possible to grow in the very difficult climate of the Puna. The wool of the animals is used to make clothes and the meat for own consumption. What is left, is being sold or traded. Communities located nearby Salinas Grandes also 'harvest' the salt from the salt flat in an ancestral and communitarian way.

Communities around Salar de Olaroz-Cauchari received communitarian property rights between 2003 and 2008. From the communities around Salinas Grandes, only one third received communitarian property rights (Göbel, 2013). Every community is organized in an *asamblea*, a community meeting space. Every month, community members come together to discuss communitarian issues and developments, but it is also a space for reflection and spirituality. Every community elects a *comunero*, a community representative, who is also the first contact person for the mining companies.

Reactions to the mining activities in the territories around the salt flats are diverse. There is a tendency and a risk to portray local communities as homogeneous. In reality, the communities are very diverse and so are their reactions to the mining activities. While some actively oppose mining and reject all mining in general, others demand more participation in decision-making and another group welcomes mining activities due to employment opportunities.

Civil society organizations

Civil society organizations related to lithium mining in Jujuy environmental non-profit organizations, indigenous activists and grassroots movements. At the grassroots level, community concerns about mining activities are voiced through groups called *autoconvocados* (self-summoned neighbors).

In Jujuy, the group 'Comunidades Libres de Jujuy', consists of indigenous activists from different communities in the province. They meet every month to discuss current developments and plan joint actions such as marches, protests and campaigns. They also publish a local newspaper called *Mink'a*. They are mainly concerned about the defense of their territories. At a national level, the 'Unión de Asambleas Autoconvocados' (UAC) unites different grassroots groups of the country and meets several times a year.

At a community level, residents who oppose the mining operations are organized in Colectivo Apacheta in the area around Salar de Olaroz-Cauchari, and in 'La Mesa', in the area around Salinas Grandes. With the help of lawyers, they are planning legal actions against mining activities in their territories.

The environmental NGO 'Fundación Ambiente y Recursos Naturales (FARN), located in Buenos Aires, assists Colectivo Apacheta and 'La Mesa' with legal advice and financial resources in their struggle against mining activities in their territories.

Stakeholder	Level of involvement	Position towards lithium mining	Role of the stakeholder
National government	High	In favor	<ul style="list-style-type: none"> - Oversight compliance of Mining Code - Define and coordinate mining policy - Collection of taxes
Provincial government	High	In favor	<ul style="list-style-type: none"> - Responsible for implementation of the Mining Code - Provision of mining concessions - Responsible for environmental regulation - Responsible for controlling mining operations - Collection of taxes
Local government	Medium	Divided	<ul style="list-style-type: none"> - Distribution of share of royalty payment - Limited authority
Mining companies	High	In favor	<ul style="list-style-type: none"> - Carry out EIA - Generate (local) employment - Comply with national and provincial regulations
Local communities	High	Divided	<ul style="list-style-type: none"> - Communitarian property rights of the territory above the natural resources - Use of land and water for pastoralism to sustain their livelihoods - Use of salt from the salt flat for 'harvest of salt' - Spiritual connection with the salt flats and the territory
Civil Society organizations	High	Opposing	<ul style="list-style-type: none"> - Informing local communities on their rights - Organize protests - Assist in local communities in legal actions

Table1. Summary stakeholder analysis

Interviews

After identifying the main stakeholders, informants were selected to conduct interviews. A total of 22 semi-structured interviews and several additional informal interviews are carried out with different actors involved in the process of lithium exploration and extraction in the province of Jujuy. Semi-structured interviews are chosen because they generate information on people's experiences, motivations and perspectives. Rather than relying on a fixed set of questions, a topic list was prepared, and the interviews consisted of open questions. This way, all the main topics I wanted to address were discussed but there was also room for the input of the interviewee. In addition, informal interviews were held especially in the beginning phase of the research to increase understanding of the context and to build up relations of trust. The informal interviews were used as a basis for the topic lists of the semi-structured interviews.

The semi-structured interviews were recorded, after receiving consent of the informant, with a recording device. All interviews are carried out by the researcher herself in the Spanish language. The interviews were transcribed as soon as possible after the interview and translated in English. The table below provides an overview of the interviews that are conducted:

General information on mining conflicts and lithium extraction in Argentina:

Position	Type	Gender	Place	Date
Activist in anti-mining movement	Informal	female	Buenos Aires	07-07-2017
Researcher on political ecology of lithium in Argentina and Chile	Informal	female	Salta	10-07-2017
Anthropologist and activist, expert on (lithium) mining and indigenous communities	1 Semi-structured + several informal	male	San Salvador de Jujuy	13-07-2017 13-07-2017 – 26-08-2017

Salar de Olaroz-Cauchari:

Position	Type	Gender	Place	Date
Lawyer of Colectivo Apacheta	2 semi-structured	male	San Salvador de Jujuy	24-07-2017 + 14-08-2017
5 members of Colectivo Apacheta	5 semi-structured	2 female/3 male	Susques	03-08-2017
2 comuneros Susques	2 semi-structured	1 female/1 male	Susques	03-08-2017
Hotel owner Susques	Several informal	male	Susques	01-08-2017 – 04-08-2017

Salinas Grandes:

Position	Type	Gender	Place	Date
Representative of 'La Mesa'	1 semi-structured + several informal	male	San Salvador de Jujuy + El Moreno	19-07-2017 19-07-2017 – 20-08-2017
Salinero (salt harvesting), member of 'La Mesa', Agua Blanca	1 semi-structured	male	San Salvador de Jujuy	19-07-2017
Comunero, member of 'La Mesa', Abrolaite	1 semi-structured	male	San Salvador de Jujuy	09-08-2017
Employee municipality, El Moreno	1 semi-structured	male	El Moreno	19-08-2017
Handicraft worker, member of 'La Mesa', El Moreno	1 semi-structured	female	El Moreno	19-08-2017
Activist + researcher, member of 'La Mesa'	1 semi-structured + several informal	male	Tilcara	23-08-2017
Ex-comunero, member of 'La Mesa', Tres Pozos	1 semi-structured	female	San Salvador de Jujuy	24-08-2017

Government:

Position	Type	Gender	Place	Date
Head of ministry of mining, province Jujuy	2 semi-structured	male	San Salvador de Jujuy	08-08-2017 + 17-08-2017
Mayor of Susques	1 semi-structured	male	San Salvador de Jujuy	16-08-2017

Companies:

Position	Type	Gender	Place	Date
Head of community relations and 'shared value', Sales de Jujuy	1 semi-structured	female	Susques	03-08-2017
Head of community relations, Minera Exar	1 semi-structured	female	San Salvador de Jujuy	22-08-2017

Table 2. Overview interview respondents*Participant observation*

Participant observation is a method to collect data in a natural setting and can be used to provide context for interviews and other methods (De Walt and De Walt, 2002). To get familiar with the context of lithium extraction in Jujuy, the relationships between the different actors involved and the more intangible information, I participated in the following reunions/gatherings:

Type	Place	Date
Anti-mining demonstration	Salta	14-07-2017
Reunion of UAC	Salta	14-07-2017 – 15-07-2017
Discussion of Environmental Impact Assessment of Minera Aguilar between the company, government representatives and local communities	San Salvador de Jujuy	08-08-2017
Reunion of the 'La Mesa'	Saladilla	20-08-2017
Ceremony of honoring Pachamama (mother earth)	Saladilla	20-08-2017
Family stay	El Moreno	19-08-2017 – 20-08-2017
Reunion of 'Comunidades libres', civil society organizations of several indigenous communities in the province of Jujuy, to discuss current issues, developments and actions	San Salvador de Jujuy	26-08-2017

Table 3. Overview participant observation

The data I collected from participant observation enabled me to understand the contentious context of lithium mining in Jujuy, and to understand how different actors act, speak and relate to each other. The observations also gave me the opportunity to enrich my interview questions and build up relationships of trust.

Snowball sampling

Snowball sampling was used in order to select interview respondents. Snowball sampling is a type of a non-probability sampling technique, a technique that is based on the judgement of the researcher. The researcher begins with a small population of known individuals and expands the sample by asking the initial participants to identify others that should participate in the study (Tansey, 2007). In this research, initial participants were identified during the stakeholder analysis. Key informants of each stakeholder group were asked to provide contacts within the same group. This sampling method is not statistically representative, but it is a useful tactic for qualitative research. It is especially useful when a population is difficult to locate or identify, which was the case in this fieldwork research.

In this fieldwork research, snowball sampling was the only appropriate sampling method because of the sensitivity of the research topic and the importance of building relations of trust. For participants to agree to identify other members, the researcher first needs to build rapport and establish a reputation of trustworthiness (Tansey, 2007). A random sample would not have worked in the context of this research. Although this sampling method was a useful strategy, it also poses some limitation to the research findings, which will be discussed further on.

4.2 Data analysis

The qualitative research methods created a lot of descriptive data in the form of interview transcripts, field notes and secondary data that needed to be interpreted. The analysis of qualitative research data aims to describe phenomena and the meaning of them, in order to understand the bigger picture and contribute to theoretical knowledge and practical use (Boeije, 2010). The analysis of the collected data was carried out on two levels:

1. A basic level: a descriptive account of the data, without interpretation of why and how
2. Higher level: more interpretative analysis concerned with the responses and an interpretation of the meaning of these responses

The data was analyzed by using coding and classifying. Open coding was used to break down, examine, compare and categorize the research data. Then, axial coding was used to make connections between the categories that were identified during open coding (Boeije, 2010). No software program was used at this process.

4.3 Limitations

Several limitations in the data collection are identified, which will be discussed in the following paragraph.

Fieldwork took place in a period of eight weeks; this posed some limitations to this research. It was important to first establish relationships of trust with informants, before I was able to participate in reunions and conduct interviews. This took more time than initially planned. Especially in the beginning, due to lack of trust, I was not always welcomed in meetings or people were not open for interviews. This changed during the eight weeks, but a longer fieldwork period would have provided more opportunities for more in-depth interviews. The limited number of interviews that are carried out limits the possibilities to generalize the research findings to a larger population.

Some local villages were very difficult to reach since I had to rely on public transport or on the possibilities of riding along with informants. Therefore, in the area around Salar de Olaroz-

Cauchari, only the main town Susques was visited and only two villages around Salinas Grandes, El Moreno and la Saladilla were visited. Local community members visited the capital of Jujuy in several occasions; this provided me with the opportunity to interview residents of other villages as well.

Snowball sampling was used to select informants. This type of sampling relies on the judgement of the researcher and this challenge the representativeness of the sample. By identifying different stakeholder groups, I tried to solve this limitation. However, a sample bias might have occurred. Therefore, the research findings cannot be generalized to a larger population.

Another limitation was posed by the difficulty of obtaining clear data from mining companies and the (provincial) government about actual water use, environmental impact and specific data about the process of lithium extraction. It was also not allowed to visit the mining sites. As a result, I had to rely on the statements of the people interviewed and published reports. Moreover, at the provincial government, I was only able to interview the secretary of mining. It was not possible to arrange interviews with the ministry of environment and the ministry of indigenous communities.

4.4 Ethical considerations

Any researcher must ensure that the research will be carried out in an ethical manner. This is especially relevant for fieldwork in a development context. Scheyvens (2014) states that research is ethical when: *“it ensures the participants dignity, privacy and safety.”* Research on socio-ecological conflict raises a series of ethical questions as it is a sensitive topic and involves actors with different interests and different positions of power. The researcher should be aware of the power relations between the different actors involved. In order to protect the informants involved, the anonymity of the informants is guaranteed by using pseudonyms. Only the informants with a public position or representatives of the mining companies and community organizations are described by their own name, with their consent, due to the nature of their position. Informed consent is ensured by explaining the purpose of this research, how the information people provided will be used and by making sure they had the right not to participate in this research. Informed consent is arranged verbally, in order to safeguard anonymity. My identity as a researcher was always clear.

4.5 Positionality and reflexivity

“Why did you come here? What are you going to do with your information? How do we know you don’t work for a mining company and pass on all information we discuss here? We would like to continue this meeting in the privacy of our own, internal group. So, would you be so kind and leave?” I am sitting on a campsite near the city of Salta, in a circle of around 30 activists and members of environmental organizations from the Northern provinces of Argentina. They meet several times a year to discuss current problems, learn from each other and plan joint actions. It is the first week of my fieldwork research and I am invited to this meeting by an anthropologist based in San Salvador de Jujuy who has been working on the issue of mining for over ten years. It is a good opportunity to learn more about the various conflicts and problems around mining in Argentina and also to establish new contacts. When I introduce myself at the beginning of the meeting, it becomes clear that my presence is not appreciated at all. The atmosphere is quite hostile, and I am asked to leave.

At first, I was very surprised and felt bad about the way I was dismissed. But eventually, I realized this was a good experience as well. It forced me to really think about my own position as a researcher and about the sensitivity of my research topic.

In qualitative fieldwork research, the researcher herself is the most important research instrument. Reflexivity and positionality are believed to increase the accuracy of qualitative research. Positionality recognizes that a researcher is part of the social world they are researching (Cohen et al., 2011). Reflexivity refers to sensitivity to the researchers' cultural, political and social context and to reflect on the ways this context could influence the research findings (Bryman, 2012). The ethnic background, gender, education level and ideologies of the researcher all might influence the research. In this particular case, my position as an outsider and as a researcher prevented me from participating in this reunion, due to a lack of trust. After this experience, the same thing happened again when I was invited for the first time to a meeting of 'La Mesa' from Salinas Grandes. While some people welcomed me, others approached me with more hostility and distrust. Again, I was asked to leave.

These experiences made me realize the importance of building relations of trust but also of reciprocity. One of the main arguments to dismiss me was their previous experience with students and researchers coming to their meetings, to their villages, their homes, only taking information but never contributing something back. Through informal conversations with different community members and activists, and by participating in meetings and activities, I was able to eventually gain trust. During these informal conversations, we discussed the importance of sharing information. Because of my academic background, knowledge of the English language and my position as outsider, I am able to obtain different sources of information than they do. An extensive summary of the main findings of this thesis will be written in Spanish and sent to all informants included in this thesis. Moreover, in order to increase the visibility of the local struggles in relation to lithium extraction, I will write a journalistic article for a Dutch newspaper or magazine.

RESULTS

The following three chapters the results on the three sub-questions of this thesis are presented. In chapter five - Distributive justice - the distribution of burdens and benefits of lithium extraction among the different stakeholders involved will be described. A special emphasis is on the CSR practices of lithium mining companies and how these are experienced by local communities. Moreover, the environmental burdens and the impact on local livelihoods are described.

Chapter six – Procedural justice – elaborates on the decision-making process around lithium extracting in the province of Jujuy from the perspectives of the provincial government, two mining companies and local residents who live in the area of influence. The chapter describes who is included in this process, who determines the content and conditions, and on what type of information this process is based.

Chapter seven – Downward accountability – answers the third sub-question of this thesis by describing the strategies local communities themselves created in order to hold lithium corporations to account. The achievements and limitations of these strategies are given and finally, recommendations to several actors are provided on how to advance these bottom-up strategies.

5. Distributive justice



"They take away our resources and our water, and where does the money go? They take it with them, to the United States, to China. And what stays here? Destruction and pollution."

Gabriela, member of Colectivo Apacheta¹ -

Lithium extraction is presented by the national and provincial government as an opportunity for social and economic development for the province of Jujuy and for the national economy. It is, however, uncertain whether the mining sector under current conditions is beneficial for Argentina. While it is an economically profitable sector, there are strong fears about long-term environmental effects and impacts on human health (Mutti et al., 2012). Distributive justice entails the allocation of burdens and benefits related to a project or activity. Often, the producers of the environmental impact are different actors than those who suffer from it. In terms of environmental impact, lithium extraction does not differ much from other resource extraction. This chapter will elaborate on the distribution of burdens and benefits related to lithium extraction among different stakeholders involved and the specific CSR practices related to sharing benefits.

5.1 Distribution of benefits

Shared value

"Look at this area", Miguel Soler, head of the secretary of mining of Jujuy, says while he is standing in front of a map of the Puna region. *"It is an enormous area, it has a very rough, dry climate and not a lot of people live there. There are not many economic opportunities, but the region is very rich in natural resources. Mining is the best opportunity for development, if it is carried out in a responsible way."* (Miguel Soler, head of secretary of mining Jujuy).² The export of raw materials is an important economic activity in the province of Jujuy. In 2016, 78% of Jujuy's total exports were primary products and the mining sector contributes to half of these exports (Anlauf, 2016). The provincial government of Jujuy presents the current lithium boom as an opportunity for economic and social development. In 2011, the government of Jujuy declared lithium a strategic mineral. It is strategic in the key role of lithium in green technologies, but also for the economic and social development of the province. In that same year, the state enterprise JEMSE was created in order to increase the revenues from mining operations for the provincial government. JEMSE owns an 8,5% stake in the lithium mining operations. While this increases the revenues for the provincial government, the majority of the mining revenues flow to the national government.

Additionally, mining companies in Jujuy pay a royalty payment of 3%, called *regalía*, which is directly paid to the provincial government. 10% of this *regalía* is distributed to the communities in the area of influence around the mine, 35% is directed to communities that do not have any mining projects in their territory, and 55% is for the province of Jujuy.³ Local municipalities receive this *regalía* and can decide on how they will spend this money. The department of Susques, for example, received an amount of 150.000 Argentine pesos (+/- 8600 dollar) last year⁴, from the lithium mining operations of Sales de Jujuy, in Salar de Olaroz. While this amount will increase in the coming year

¹ Interview Gabriela, member of Colectivo Apacheta, 03-08-2017

² Interview Miguel Soler, head of secretary of mining, Jujuy, 16-08-2017

³ Based on interview with Miguel Soler, head of secretary of mining Jujuy, 08-08-2017

⁴ Interview Orlando Cruz, mayor Susques, 16-08-2017

due to doubling of production, it is a relatively small amount that is distributed to the local communities in the area of influence.

Not only the provincial government of Jujuy presents lithium mining as a development opportunity, also mining companies are increasingly aware of their responsibility to contribute to the development of local communities in which they operate. Both Sales de Jujuy who already operate in Salar de Olaroz-Cauchari and Miner Exar, who will start with their operations this year, have CSR policies directed towards sharing benefits of their operations with local communities that live in the area of influence. Sales de Jujuy has a program around five pillars: education, health, production, transparency and empowerment. Silvia Rodriguez is responsible for the relations with the local communities in the area of influence of Sales de Jujuy. She explains: *"It is a very poor region and not all basic services are provided. There are villages that do not have light or electricity. We try to help a little bit. We know the region really well and we know what the people need. But we try not to be paternalistic. We do not just give money, we give opportunities. Through our training programs and microcredit projects, we offer local residents and entrepreneurs the chance to develop their skills and start their own business, so they can provide services to our company."* (Silvia Rodriguez, Sales de Jujuy).⁵

Sales de Jujuy and Minera Exar both have a fund, destined for infrastructure, education and healthcare investments. The internet in the primary and secondary school in Susques is financed by Sales de Jujuy and the company donated an ambulance to the local hospital. Minera Exar built a primary school in Huancar and a community center in Pastos Chico, two of the communities they work with. These investments are welcomed by some, but criticized by others. A local hotel owner in Susques explains what has changed since the companies started lithium operations in the nearby salt flat: *"I see some change in the village since the companies started extracting here. More people come here, make use of the hotels and 'comedores', restaurants. I also see more people with fancy pick-up trucks. They work for the company. The company also funded the internet here in the school, so they help out here and there. I think that is good."* (Mauricio, hotel owner Susques).⁶ The current comunero of Susques, Louisa, does not see that much difference: *"They said that they would invest a lot in schools and infrastructure, but to be honest, we don't see a lot of benefits. Actually, there hasn't been a lot of change in the village, not negatively and not positively."* (Louisa, comunero Susques).⁷ According to Jorge Iglesias, lawyer of Colectivo Apacheta, there is no positive change at all: *"Have you been to Susques, have you seen the village? It doesn't look good and I don't see any change compared to five years ago. They said the whole village would benefit from mining, but nothing has changed."* (Jorge Iglesias, lawyer of Colectivo Apacheta).⁸

According to Göbel (2013), 67% of the villages in the Puna region lack basic necessities and government support is absent. With their shared value programs, mining companies attempt to fill this void and support services the government should provide. Clemente Flores, representative of 'La Mesa' explains: *"We don't want the companies to invest in our schools or hospitals. Things like education and healthcare are services the government should provide, not the companies"* (Clemente Flores, representative of 'La Mesa').⁹

Besides infrastructure, education and healthcare, money is destined for local festivities, such as local patronage parties or *Pachamama* ceremonies. Communities can ask for money for such

⁵ Interview Silvia Rodriguez, head of community relations Sales de Jujuy, 03-08-2017

⁶ Informal conversation Mauricio, hotel owner Susques, 01-08-2017

⁷ Interview Louisa, comunero Susques, 03-08-2017

⁸ Interview Jorge Iglesias, lawyer of Colectivo Apacheta, 14-08-2017

⁹ Interview Clemente Flores, representative of 'La Mesa', 19-07-2017

events. Monica Echenique, head of community relations of Minera Exar, states that she is in constant contact with the local communities, mostly through WhatsApp. When a community needs money to buy for example drinks and food for such a festivity, they present a note to the company and they will provide (part of) the money that is necessary. The mayor of Susques states: *"They respect our culture, the Pachamama and our local customs. Sales de Jujuy organized a ceremony of honoring Pachamama on the 1st of August on the production site. It was very beautiful."* (Orlando Cruz, mayor of Susques).¹⁰ Others view these events as 'buying' communities, as a way to convince local residents and *comuneros* to approve the mining activities. Gabriela, member of Colectivo Apacheta explains: *"A music group came from Jujuy to play here in the village. They do all sorts of things to convince us to sign. I don't think it is necessary, we don't need it. If we want such a concert, we can pay it ourselves."* (Gabriela, Colectivo Apacheta).¹¹

Local employment

An important reason for *comuneros* in the department of Susques to approve the mining operations was the employment opportunity for local residents. With the approval of the lithium projects of Sales de Jujuy and Minera Exar in 2012, agreements were made between the *comuneros*, municipalities and the mining companies to prioritize local hiring. Currently, within the department of Susques, 123 people are directly working for Sales de Jujuy and 136 local entrepreneurs are indirectly working for the company by providing services such as transport, catering and cleaning.¹² Sales de Jujuy created a system of microcredit in order to support local entrepreneurs to provide services for the company.

Minera Exar employs 78 people from six communities in the department of Susques. They also have an education program where currently 63 young residents participate in.¹³ A resident from Susques explains: *"When companies come and offer employment, it is done. Then, people want to approve it. But this is only for the benefit of a few. Only 50-100 people from the department of Susques work for the mining companies. They write in the newspapers that the mining companies create a lot of jobs, but that is not true. They don't have that many jobs to offer."* (Gonzalo, Colectivo Apacheta).¹⁴

Svampa (2013), states that large scale mining projects can hardly fulfill the expectations of local development. Large scale mining projects are capital intensive, not labor intensive. For every million dollars invested, only 0,5 to 2 direct jobs are created. The more capital intensive, the fewer employment opportunities it will create. The lithium operations in the department of Susques are large-scale, capital intensive and especially skilled jobs are requested. Training programs are developed by both Sales de Jujuy and Minera Exar to educate young residents, but the mining operations have also attracted employees from other regions and countries.

While the actual number of people working directly for the mining companies is relatively low, for some people, and especially young residents, lithium mining offers employment opportunities. The mayor of Susques is positive about the employment opportunities that are created by the mining companies. He says: *"Not only people work directly for the company, at the mining sites, but they also hire a lot of people who can provide for services like catering, cleaning, transport. So that is really good."* (Orlando Cruz, mayor of Susques).¹⁵ An employee at the

¹⁰ Interview Orlando Cruz, mayor of Susques, 16-08-2017

¹¹ Interview Gabriela, member of Colectivo Apacheta, 03-08-2017

¹² Interview Silvia Rodriguez, head of community relations Sales de Jujuy, 03-08-2017

¹³ Interview Monica Echenique, head of community relations Minera Exar, 22-08-2017

¹⁴ Interview Gonzalo, member of Colectivo Apacheta, resident of Susques, 03-08-2017

¹⁵ Interview Orlando Cruz, mayor of Susques, 16-08-2017

municipality of El Moreno, in the area around Salinas Grandes, also sees the possibilities the mining companies can bring, he states: *"I do not oppose the lithium mining entirely. Then, I would deny a lot of young residents the opportunity for employment. No, it is more about the process, how the consultation went. They should include us in their plans. But for me, it is not a definite no. It is also an opportunity."* (Marcelo, employee municipality El Moreno).¹⁶

The mining operations offer opportunities for local employment and development in the region, especially due to the education programs organized by the companies. Meetings between the company representatives and community leaders are especially focused on ensuring local employment and education possibilities for local residents. Not only direct jobs are created, but also indirect jobs. There are, however, concerns about the sustainability of these jobs. Sales de Jujuy and Minera Exar signed an agreement in 2012 that they will extract lithium for a period of 40 years. Local residents do not believe that the companies will be there for such a long period. Other mines in the region have closed down earlier than originally planned because there were no minerals left or the operation was no longer economically profitable. There are fears that when the companies will leave, many residents will become unemployed and the environment will be polluted. While lithium mining can offer employment opportunities for some, it also threatens the livelihoods of others due to the environmental burdens.

5.2 Distribution of burdens

Environmental burdens

The main concern of local communities and civil society organizations in relation to the lithium mining activities is the use of water resources in an area that is very dry and precipitation rates are low. Information on the environmental impact of lithium extraction, and the amount of water used in the process of lithium extraction, varies widely. According to the Environmental Impact studies of Sales de Jujuy and Minera Exar, the extraction of lithium is a very 'friendly process'. Silvia Rodriguez states: *"We don't extract water; we use 'salmuera', salt brine, which is very salt water full of minerals such as lithium, sodium and magnesium. This is not drinking water."* (Silvia Rodriguez, Sales de Jujuy).¹⁷ According to the secretary of mining Jujuy, around 700.000 liters water is used to produce a ton of lithium carbonate, but no official data was presented. According to more critical studies, more than two million liters of water are used to produce a ton of lithium carbonate. This high amount of water is used because of the evaporation method to extract lithium.

Salt brines are found under the crust of the salt flat. These salt brines are deep basins that have been developing for over thousands of years. In order to extract lithium, holes are drilled in the salt flat to reach the salt brines. The brine is then pumped to the surface and put in large water basins, where it is left to evaporate. Because of the high altitude and strong sun, the conditions for evaporation in the Puna region are ideal. Due to the method of evaporation, thousands of liters of water and salt brine are evaporated daily. After evaporation, the lithium is treated with several chemicals, including calcium oxide, in order to separate lithium carbonate from other minerals such as magnesium and sodium. Lithium carbonate is washed with the help of fresh water in order to achieve the required purity of 99,5%.¹⁸

¹⁶ Interview Marcelo, employee municipality El Moreno, 19-08-2017

¹⁷ Interview Silvia Rodriguez, head of community relations Sales de Jujuy, 03-08-2017

¹⁸ Interview Nestor Ruiz, anthropologist, 19-07-2017

El proceso de la extracción de SQM en el Salar de Atacama

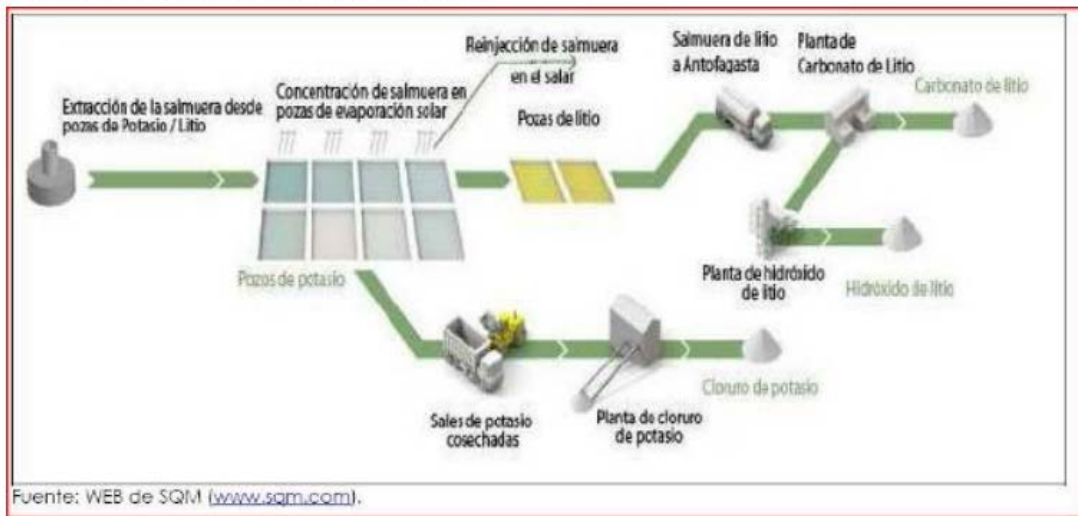


Figure 3. Process of lithium extraction (SQM, 2016)

In order to extract lithium, the level of subterranean water decreases and this, as a consequence, affects the water level of nearby water sources. At the margins of the salt flat, the brine is in contact with a layer of fresh water. Because fresh water discharges towards the surface, extracting large amounts of brine poses the risk of lowering ground water levels (Anlauf, 2016). This will affect the ecosystem, flora and fauna and local populations in the territory around the salt flats (Gallardo, 2011). A big part of this subterranean water sources is considered fossil water, which is renewed extremely slowly. Although Environmental Impact Studies have been carried out, it remains uncertain what the environmental impact will be on the long term. Mining geologist Diana Mutti states that *“no one knows how much fossil water the companies are extracting, and no one knows how it will affect the hydrological system of fossil water in the Puna.”* (Mutti as cited in Anlauf, 2016: 172). Because the Puna region is an extreme arid and dry area, the use of water for the extraction and production of lithium is a risk for the sustainability of the area.

Impact on local livelihoods

The livelihoods of the local communities are threatened by the lithium extraction in the nearby salt flat. While the direct land use change of lithium extraction is relatively small, lithium extraction will influence a greater territory because it disrupts the equilibrium of an extremely arid ecosystem. Pastoralism is dependent on this equilibrium and of the availability of water resources (Anlauf, 2016). Local residents claim that the past year has been a very dry year, with less rainfall than ever. Several animals have died due to drought. It is not certain what the cause is for this drought.¹⁹ Louisa, comunero of Susques, says: *“Water is our biggest concern. We are suffering from drought and this is especially tough for the peasants here. But we don’t know if this is due to the mining or other causes. We want to have more information about that.”* (Louisa, comunero Susques)²⁰ A nearby lake (about 100 km away from Salar de Olaroz-Cauchari), Laguna de Pozuelos, has dried out in the past year. Anthropologist Néstor Ruiz states: *“The university of Jujuy says this is a natural process. I am with both legs on both sides. I believe in science, I am a scientist, but I also believe in the indigenous knowledge of my ancestors. They say this never happened before. The problem is that when the lake*

¹⁹ Interview data from local residents

²⁰ Interview Louisa, comunero of Susques, 03-08-2017

dries out, all shellfish are dying and when the shellfish are dying, the flamencos are dying. A similar process is happening in an important lake in Bolivia, lago Poópo. Of course, there is a natural cause to this, but I believe that lithium extraction, and mining in general, is contributing to this problem." (Néstor Ruiz, anthropologist)²¹

The 33 communities that live around Salinas Grandes and Laguna Guayatayoc also live in close harmony with their territory and with the nearby salt flat. Local residents depend on diverse livelihood strategies such as agriculture, pastoralism and wage labor. The communities that live closer to Salinas Grandes, also depend on the 'harvest of salt'. The harvest of salt is an activity that the indigenous communities deploy since ancestral times. The harvest of salt happens in two ways, through a local cooperative and through private companies. The harvest of salt is carried out by local community members in a sustainable, small scale way and salt is perceived as a 'living being'. It is believed that every year, the salt 'grows'. During the summer time, when it rains, a small layer of water covers the salt flat. Then, because of evaporation, new salt is created. The salt is harvested in the winter, during the dry season. In August, at the end of the harvest period and the beginning of a new season, mother earth is asked for a good and productive year and the process starts over again. This process of salt harvesting is disrupted by lithium mining activities. When the mining companies made perforations in the phase of exploration at the Salinas Grandes salt flat, subsurface water spread across the whole salt flat and impacted the process of salt harvesting. A former *comunero* of Tres Pozos, a village nearby Salinas Grandes, explains: *"In 2010, the company Orocobre made holes in the salt flat and the whole salina filled with water. They are destroying the salt flat."* (Veronica, former *comunero* of Tres Pozos).²²

Pastoralism and the harvest of salt are important sources of livelihood. Local communities are not only concerned about a loss of income or employment, but also about a loss of a way of living. Nature and the salt flats do not only have an economic relevance, it has cultural and spiritual meaning. Claudia, a member of Colectivo Apacheta, explains: *"They are not only polluting us, people, but also the rest. I can go to the governor and say I don't agree with it. But the rest? The plants, the birds, our animals? We are so scared that there will be no water left, no future. What kind of future will that be?"* (Claudia, Colectivo Apacheta).²³

5.3 Conclusion

While lithium mining is presented as a major opportunity for local development in the Puna region in Jujuy, the distribution of actual benefits remains uneven. Only a small share of the tax revenues and royalty payments are distributed to local communities that live nearby the mining operations and experience the direct impacts of these operations. The CSR programs that are designed to share the benefits of mining among local communities do offer opportunities, especially around employment and education. In the Puna area, employment opportunities are scarce and although the actual number local residents who are directly employed at the mining companies is relatively low, the companies have designed programs to prioritize local hiring and provide opportunities for local entrepreneurs to provide services to the companies. Other investments in for example community buildings, public services and events are welcomed by some residents and criticized by others, as these are services that should be provided by the government. The CSR policies created division within local communities where people who are participating in these programs are viewed as being 'bought' by the companies, while opposing residents are accused of denying employment

²¹ Interview Nestor Ruiz, anthropologist, 13-07-2017

²² Interview Veronica, former *comunero* of Tres Pozos, member of 'La Mesa', 24-08-2017

²³ Interview Claudia, member of Colectivo Apacheta, resident of Susques, 01-08-2017

opportunities for others. The shared value programs are mainly focused on short-term benefits, while local residents are especially concerned about the long-term environmental impact and the possible effects on their livelihoods. While environmental impact studies have been carried out, a lot of uncertainty remains about the long-term impact of lithium mining in the area.

6. Procedural justice



“During the past year we began to silently, and with much concern, witness a new activity in the region. Nobody informed us, in spite of the rights that require consulting us. We learned from rumors and media reports that they discovered lithium in the subsoil of the salt flats of the Puna in Salta and Jujuy. All announcements of the government highlighted the importance of this new mining activity for the national and international economy. Nevertheless, nobody told us anything about how this new exploitation might affect our communities and our territory, the salt flats, the watersheds, the pastures, our livestock, la Pacha²⁴, our customs and beliefs. In synthesis: our whole life.”

Statement of ‘La Mesa’²⁵ -

Participation in decision-making around natural resource extraction by all stakeholders involved is expected to lead to a more equitable distribution of burdens and benefits (Urkidi and Walter, 2011). In Argentina, the consultation process of mining projects is related to the obligatory Environmental Impact Assessment that needs to be carried out and approved before each phase of the mining project; prospection, exploration, extraction. The Environmental Impact Assessment needs to be presented to local communities that live in the area of influence of the project. Local communities then have 30 days to study it and are then able to approve or reject it. This chapter describes the consultation process in Salar de Olaroz-Cauchari and Salinas Grandes from the perspectives of the provincial government, mining companies and local communities involved.

6.1 Procedure

Role of the government

In Argentina, the ‘Ley General del Ambiente’ (LGA), General Environmental Law, establishes the principle guidelines and institutions of national environmental politics. It is a framework for the other national laws on the environment. According to the LGA, it is obligatory for companies to carry out an Environmental Impact Assessment before each phase of a project or activity that might produce impact on the environment or affect the quality of living of the population. An essential part of this EIA is the public consultation process. Companies must present the EIA to local communities that are located in the area of influence and should receive approval of their plans. After this process, the provincial government approves the project or demands companies to make changes to their plans. The public consultation is however not binding. Miguel Soler, head of secretary of mining explains what will happen when local residents oppose the plans: *“Then, officially, they do not have the right to stop it. Our intention is to reach a consensus, but in Argentina, natural resources at the subsurface do not belong to those who own the land above them. When they don’t agree with the plans, we [the provincial government] have the authority to keep on talking. Local communities can have an opinion, and we will listen to them, but in the end, we have the authority to approve a mining project or not.”* (Miguel Soler, head of secretary of mining Jujuy).²⁶

The secretary of mining of the province of Jujuy emphasizes the importance of informing local communities about the mining activities in the area and the possible impact of these activities. According to Miguel Soler, *“it is really about informing people. Informing, informing, informing, so*

²⁴ Refers to Pachamama (Mother Earth), Mama Kocho (Mother Water), Tata Waira (Father Wind), and Tata Inti (Father Sun), the four elements of the Andean Cosmo vision

²⁵ Statement of ‘La Mesa’ in Kachi Yupi, 2015: 12

²⁶ Interview Miguel Soler, head of secretary of mining Jujuy, 08-08-2017

there won't be any technical problems in carrying out the mining operations."²⁷ The provincial government has great interest to approve mining operations, also due to the importance of the sector for the provincial economy. LSC Lithium, the company who bought mining concessions in Salinas Grandes, wrote in their technical report: *"It is expected that the current administration of the province will work towards the harmonization of all stakeholders' interests including the mining sector as one of the most productive sector in the province."* (Technical report LSC Lithium, 2016).

CSR practices

Lithium mining companies that are active in the province of Jujuy recognize the need to establish relations with local communities. LSC Lithium states in their technical report that acquiring approval of the environmental reports and consultation process of stakeholders involved a 'major area of concern'. Large-scale mining companies employ, besides geologists, a team of anthropologists, sociologists and social workers charged with the task of building community relations. Silvia Rodriguez is responsible for the community relations at Sales de Jujuy. She explains: *"We don't have community consent; we have a social license, which is much more important. We have an ongoing relationship with the local communities"*. (Silvia Rodriguez, Sales de Jujuy).²⁸

Sales de Jujuy started reaching out to local communities in 2004, when they explained in the local *asambleas* who they were and what they were planning to do. The first presentation was held in Olaroz Chico, the village located close to the salt flat. After that, nine other villages were selected in the area of influence of the company. Silvia Rodriguez: *"We spent a lot of time building trust. Since 2012, it is obligatory to inform communities and ask for consent, but we did this long before it was mandatory. We are going beyond the norms of CSR."* (Silvia Rodriguez, Sales de Jujuy).²⁹

Minera Exar also invested a lot of time and effort in building community relations and gaining public consent for their plans. Monica Echenique, head of community relations of Minera Exar, explains: *"Our main task is informing local communities. With every step we take, we inform the local communities. We know when they have their monthly meeting, so we ask permission and then come with a team of experts who can explain at what stage the project is in, how the process of exploration and exploitation works etc."* (Monica Echenique, Minera Exar).³⁰ CSR personnel built up key strategic relations with specific community actors, such as *comuneros*. Both Sales de Jujuy and Minera Exar meet every two months with the *comuneros* of the communities in their area of influence to explain their plans and to ask if there are problems or other needs. They make sure the *comuneros* understand their plans and are able to explain this to the rest of the community.

6.2 Experiences of the consultation process

Consultation process in Salar de Olaroz-Cauchari

While both Sales de Jujuy and Minera Exar claim to have good relationships with the local communities in the area of influence of their operations, this is not experienced the same way by all local residents. Jorge Iglesias, the lawyer of Colectivo Apacheta explains how he experienced the consultation process: *"The companies say that they have a good relationship with the communities and that they have a 'social license to operate', as they call it. But in reality, they only come to give information, very specified, technical information that no one understands. They leave the EIA behind, say look, here you have to sign, and then they leave. Then, the comuneros sign it. That is the whole*

²⁷ Interview Miguel Soler, head of secretary of mining Jujuy, 08-08-2017

²⁸ Interview Silvia Rodriguez, head of community relations Sales de Jujuy, 03-08-2017

²⁹ Interview Silvia Rodriguez, head of community relations Sales de Jujuy, 03-08-2017

³⁰ Interview Monica Echenique, head of community relations Minera Exar, 22-08-2017

participation process. Well no, there is more. They also offer things to the community, I think they built a community center somewhere. So that is what the participation process is about." (Jorge Iglesias, lawyer colectivo Apacheta).³¹

The *comunero* of Susques in 2005, when the mining companies approached the communities for the first time explains: "When the lithium mining companies first presented themselves in the communities, I was *comunero* of Susques. They came with a report that I had to sign. They offered me a pick-up truck and some money. But I didn't sign because I didn't see any benefit for the community. A few years later, I was not *comunero* anymore but someone else. He signed. Now, he works for the company." (Gonzalo, Colectivo Apacheta).³²

In 2012, the mining projects in Salar de Olaroz and Cauchari were approved and all *comuneros* of the ten communities in the area signed the EIA. But, according to the current *comunero*, they were not aware of their rights to 'Free, Prior and Informed Consent' (FPIC) and the possibility to oppose the plans. He explains: "When the companies came here for the first time, I think it was in 2007, we didn't know about the existence of the Free, Prior and Informed Consent. So, the *comuneros* at that time and members of the community accepted some things. Now, we have more information about this right and we try to pressure the government and the companies to carry out this process, this right protects us, so we can participate in the decision-making about a project in our territory. Now, the secretary of mining calls us to say they want to present and evaluate the EIA. But this is something they only do since last year." (Antonio, *comunero* Susques).³³

Consultation process in Salinas Grandes

In Salinas Grandes, the consultation process was also not experienced as fair because exploration already took place at the salt flat of Salinas Grandes before all communities were consulted. The former *comunero* of Tres Pozos, one of the villages that is located right next to the salt flat and where many residents are active in the 'harvest of salt', explains how she found out about the mining activities: "It was 2009, I think, and I was *comunero* of Tres Pozos. At that time, the mining company came to our village, I believe it was Orocobre. They asked if I could provide for accommodation and prepare food for them, so I did. I didn't know who they were or what they did. I saw them with bottles of water and salt brine and one day, I asked them what they were doing here. They told me they got permission to take some samples from the water near a mountain and at the salt flat. I was surprised, because they didn't have authorization of the communities. One day, because I was curious, I went to the salt flat to see what they were doing. Then, I saw how they were destroying Mamita Salina. I took some pictures and I called on community members from neighboring villages to discuss this. I found out it was all about a mineral called lithium. I never heard of it, so I started searching for information. We didn't agree with it because they didn't consult us first." (Veronica, former *comunero* Tres Pozos).³⁴

The inhabitants of the Salinas Grandes Basin and Laguna Guayatayoc were in a vulnerable position when in 2010, mining companies entered their territories to start exploring lithium. Although they requested communitarian land titles, the majority of the 33 communities within the basin did not receive this. Before 2010, the 33 communities were not organized politically, they only knew each other from social events. They started organizing themselves in 2010, after they found out about the lithium mining activities. In the consultation process, only a few communities were

³¹ Interview Jorge Iglesias, lawyer of Colectivo Apacheta, 14-08-2017

³² Interview Gonzalo, member of Colectivo Apacheta, Susques, 03-08-2017

³³ Interview Antonio, *comunero* of Susques, 03-08-2017

³⁴ Interview Veronica, former *comunero* of Tres Pozos, member of 'La Mesa', 24-08-2017

consulted and some already approved the plans. These were communities that did not live that close to the salt flat and did not depend on the salt flat for their livelihoods. But due to collective action, the 33 communities were able to stop this. Louis, *comunero* of one of the 33 communities explains: *"They did inform the comuneros, but this was mainly to 'buy' them, so they would sign. This happened without consent of the whole community. That is not 'prior consultation'. That is also what we said in the Supreme Court of Justice. They did not respect the constitution and the law."* (Louis, *comunero* Abralaite).³⁵

Concerned residents started organizing and searching for information. With the help of NGOs and lawyers, they started to find out more about what lithium is exactly, what it is used for, what the possible environmental impacts are and what their rights are to oppose the mining activities. A resident from Abralaite, one of the 33 communities, who participates actively in 'La Mesa' says: *"In Susques, they accepted the mining operations, also because they did not know what lithium was and that it will pollute the environment. This did not happen here because we do have this information. Moreover, we are with 33 communities, they are with only ten. For the companies, it is more difficult to 'buy' the comunero, because they have to do that in all 33 communities. Some brothers did accept it, but they cannot start with the mining operations as long as other communities oppose."* (Daniel, member of 'La Mesa').³⁶

In order for a community consultation process to be fair, it is important that all participants have access to reliable information and an equal say during the negotiations. Now, communities in the area around Salar de Olaroz-Cauchari have more information about their rights, but it is very difficult to challenge the mining operations because the operations are already approved.

6.3 Role of information

According to the secretary of mining in Jujuy, local communities should trust the environmental impact studies carried out by the companies and approved by the government. *"A community won't hire a geologist, biologist, sociologist and archeologist to carry out an environmental impact study,"* Miguel Soler argues³⁷. But this is exactly the problem. Local community members do not trust or do not understand the EIA carried out by the companies. Louisa, *comunero* of Susques, explains: *"A while ago, a geologist of the secretary of water resources came here to assess the impact of the mining operations on our water supply. And according to him, everything was fine. That is something that worries me. That according to the government, everything is fine. We are still looking for an independent geologist that can assess the possible environmental impact of the mining operations, so he can tell us if it is true what the companies and the government are telling us. Because the government and the companies work together, so maybe they are not that objective."* (Louisa, *comunero* Susques).³⁸

Equal access to reliable information is necessary for the establishment of a robust accountability framework. The access to reliable information depends on the availability of information and the capacity of recipients to understand the content and identify its implications (Owen and Kemp, 2012). From statements of local community members and *comuneros*, it becomes clear that the information provided by the companies and the government is difficult to understand and therefore, it is difficult to make an informed decision. Clemente Flores, representative of 'La

³⁵ Interview Louis, *comunero* Abralaite, member of La Mesa, 09-08-2017

³⁶ Interview Daniel, member of 'La Mesa', inhabitant of Abralaite, 09-08-2017

³⁷ Interview Miguel Soler, head of secretary of mining Jujuy, 08-08-2017

³⁸ Interview Louisa, *comunero* of Susques, 03-08-2017

Mesa', states: "They come with their reports of over 800 pages full of information I don't understand. You can only understand it when you have studied engineering or something. Moreover, these professionals work for the mining companies, so how can I know it is true what is written in these reports?" (Clemente Flores, representative 'La Mesa').³⁹

6.4 Struggle for recognition

Different worldviews

In the debate around lithium mining and during the consultation process, scientific studies and expert knowledge have become dominant and technical and scientific knowledge seems to be a precondition for full participation. Arguments that do not fit in this type of thinking are regarded as 'uninformed' or 'unreasonable'. This is shown in the reaction of the head of the secretary of mining Jujuy to local residents who oppose the mining activities: "*It is important to explain to them that it is possible to carry out mining operations in a good way, a sustainable way. It is important that they clearly explain why they oppose the mining operations, so we can have a good discussion, with concrete data. [...] So far, I haven't heard any good argument to be against it. Mining is the best option for development.*" (Miguel Soler, head of secretary of mining Jujuy).⁴⁰

The conflict around lithium mining reveals a conflict about different worldviews and different knowledges. Gonzalo, a member of Colectivo Apacheta explains: "*They always say that we don't want progress, that we don't want development. For them, development is building roads, destructing nature, making money. For us, that is not development. It is not sustainable. Our grandparents, their grandparents and so on, have always taken care of Pachamama, of nature, their lama's, their sheep. We want to do the same. We use their wool to make our own clothes, we use their meat for our own consumption and what is left, we sell, or we trade. I want to transmit my animals to my children, so they can do the same. That is sustainable. But what will happen to us when there is no water left?*" (Gonzalo, Colectivo Apacheta).⁴¹

The Andean cosmovision does not distinguish between man and nature, solid, liquid or gas, the sun, the moon or the light. It is all part of *Pachamama*, Mother Earth. Everything deserves the right to exist and lead a good life, *buen vivir*.⁴² Local communities in the Puna region have been living in close interaction with nature for centuries and the equilibrium between man and nature is very important. Development is only possible in harmony with *Pachamama*. This is a very different worldview than the idea that mining can bring about development. This distinction becomes clear during a discussion around the EIA of Minera Aguilar with the company, representatives of the government and local communities. Minera Aguilar is a large multinational company that is active in the region for over 30 years. They presented their plans to expand their operations to a larger area. During the discussion, they outlined their plans and participants could give their opinion. One resident from an affected community says: "*You speak from reason. We speak from a whole different idea, from Pachamama. For you, the mountain is an economic resource, an opportunity to earn money. For us, it is a living being.*"⁴³ Daniel, member of 'La Mesa', has a similar vision and explains: "*For us, it is spiritual. Spirituality is more important than materiality. When they drain our lake,*

³⁹ Interview Clemente Flores, representative of 'La Mesa', 19-07-2017

⁴⁰ Interview Miguel Soler, head of ministry of mining Jujuy, 08-08-2017

⁴¹ Interview Gonzalo, member of Colectivo Apacheta, resident of Susques, 03-08-2017

⁴² Interview Nestor Ruiz, anthropologist and activist, 13-07-2017

⁴³ Field notes from the discussion from the EIA of Minera Aguilar, San Salvador de Jujuy, 08-08-2017

Laguna Guayatayoc, for us this is the same as killing Mama Cocha.⁴⁴ For us, she is holy. But they don't understand us, our way of living. They have different values." (Daniel, 'La Mesa').⁴⁵

Communitarian property rights

The conflict around lithium mining can also be placed in a wider conflict around indigenous land tenure. During the 1990s, indigenous peoples in Argentina struggled for and received official recognition and communitarian rights. In 1994, the national constitution was amended and created new indigenous rights, including communitarian property rights. In 2000, Argentina ratified the ILO Convention 169 that should guarantee 'Free, Prior and Informed Consent' on developments that take place in the territories that indigenous communities traditionally inhabit. The constitutional reforms of the 1990s created a form of civic integration, but it was not enough to achieve social inclusion (Weinberg, 2016). The free indigenous press in Jujuy, Mink'a, writes: "*All the good intentions of the State are accompanied by bad intentions in its application. States attempt to resolve a problem that is actually socio-cultural, with laws. The problem is that these laws are not put in practice, or at least not fully, which is actually the same.*" (Mink'a, 2017).

Many communities that live around Salinas Grandes and Laguna Guayatayoc applied for communitarian rights, but up to date, only one third of them received these rights. While indigenous land titles are promised by the national government, they are undermined by the provincial government and are delayed by bureaucratic issues. As a consequence, the indigenous communities without communitarian property rights do not exist in the administration of mineral exploration and extraction files and therefore, not consulted about the decisions that are made about their territories and the natural resources in these territories (Chalabe, 2011).

6.5 Conclusion

While the community consultation about the EIA is intended to guarantee environmental and social accountability, the content of the EIA and the consultation process are defined by mining companies. Not all residents were aware of their rights to be consulted or to challenge the mining plans. Most residents only received partial information provided by the companies, or the information that was provided was difficult to understand due to technical and scientific language. As a result, residents felt excluded from the decision-making process. Moreover, by building relationships with community leaders and by offering services and other benefits, companies created division within the communities.

The struggle against lithium mining operations is a struggle for recognition. While by some, the mining operations are welcomed due to employment opportunities, by others it is perceived as 'intrusion' and as a continuation of colonialism. There is a lot of distrust towards the mining companies but also towards the government, who are thought to be favoring the interests of mining companies over the interests of local communities. Moreover, scientific and technical knowledge are a precondition for full participation, while other types of knowledges are undermined. Finally, not all indigenous communities in the territory received communitarian property rights, while they are entitled to them. This also prevented them to fully participate in the decision-making around resource extraction in the territories they ancestrally inhabit.

⁴⁴ Mama Cocha is Quechua for mother water

⁴⁵ Interview Daniel, member of 'La Mesa', inhabitant of Abrolaite, 09-08-2017

7. Downward accountability



“During the court hearing, we were arguing that the consultation process did not happen, or at least not in the way we wanted to. So, they asked us, how do you want to be consulted? That it is when we started thinking about it. We started writing our own protocol, Kachi Yupi.”

Clemente Flores, representative ‘La Mesa’⁴⁶ -

In the debate on corporate accountability, critical scholars argue that the social and environmental impact of a company is assessed against general indicators, a form of ‘upward accountability’. Current norms and standards lack legitimacy in the eyes of the people who experience the impact of mining (Sosa and Zwarteveen, 2014). The previous chapters showed how the practices of lithium mining companies to achieve corporate accountability are experienced by local communities from an environmental justice perspective. A gap is identified between existing CSR practices and official consultation processes on the one hand, and the experiences and perspectives of local community members on the other. In order to achieve downward accountability, the perspectives and concerns of those directly affected by mining operations should be on the forefront of the debate. This chapter describes the bottom-up strategies of local communities and civil society organizations to achieve downward accountability in the context of lithium extraction in Jujuy.

7.1 Bottom-up strategies

In this thesis, accountability is defined as *“the obligation of power-holders to take responsibility for their actions. It describes the rights and responsibilities that exist between people and the institutions that have an impact on their lives.”* (UNDP, 2010). In the context of lithium mining, companies increasingly recognize the need to not only be accountable towards their shareholders, but also towards their stakeholders, such as affected communities. Mining corporations put a lot of effort in creating relations with local communities through CSR and shared value programs and the government strengthened regulation for environmental protection. Despite these developments, lithium extraction in the province of Jujuy has created environmental injustices, in the sense that local environmental burdens threaten local livelihoods, the consultation process was not experienced as fair and local communities struggle for recognition of their rights, knowledge and way of living.

Social and environmental accountability in the current situation is dependent on the Environmental Impact Assessment and accompanied public consultation. In this method, companies themselves determine the terms and conditions in which this consultation process is carried out, which things are discussed during the negotiations and technical knowledge is a precondition for full participation. A gap is identified between the CSR practices and experiences on the ground, by those affected by the mining operations.

As a reaction, lithium mining activities in the region triggered opposition and resistance in the area where the mining activities are carried out or planned. As stated before, the local communities that inhabit the territories surrounding the mines are not homogeneous and different people react in different ways to the mining plans. While some welcome the mining companies due to employment opportunities or other benefits provided to the communities, other people actively oppose it. As became clear from the previous chapter, a large driver for the resistance is a feeling of exclusion from decision-making process and a lack of recognition. As a response, local communities

⁴⁶ Interview Clemente Flores, representative of ‘La Mesa, 19-07-2017

have formed two groups who actively oppose lithium mining in their territories; Colectivo Apacheta in the area around Salar de Olaroz-Cauchari and 'La Mesa' around Salinas Grandes and Laguna Guayatayoc.

Colectivo Apacheta

When in 2012, the mining projects of Sales de Jujuy and Minera Exar to extract lithium from the Salar de Olaroz and Cauchari salt flat were approved, a group of several concerned families from Susques and surroundings formed 'Colectivo Apacheta'. The main reason to start this collective was the distrust in the *comunero* at that time, who approved the EIA of Sales de Jujuy and Minera Exar, and who is now employed at one of the mining companies. They did not feel represented in the community *asamblea* and chose to form a separate group. Together with their lawyer, Jorge Iglesias, they prepared a court case against the lithium operations, based on the failure of 'free, prior and informed consent', but this case was rejected. They are now in the process of becoming a legal entity and plan to start other legal actions. Gabriela, member of Colectivo Apacheta states: "*When we have a legal status, they have to listen to us. Now, they do not care for our opinion, they think we are a small group of crazy ones. Until now, we do not have any concrete results.*" (Gabriela, member of Colectivo Apacheta).⁴⁷

Carlos Guzman, resident of Susques, is one of the initiators of Colectivo Apacheta and explains the meaning of the group: "*An Apacheta is a pile of stones, placed on strategic locations, for example at the beginning of a road. An Apacheta grows, very slowly, but with a lot of meaning. When I start a journey and I see an Apacheta next to the road, I stop, place a stone on it, and wish that I will arrive safely at my destination. Everyone who will pass by will do the same. That is the same idea as our group. That is the meaning of our name. We start with just a couple of people, but we will grow. Very slowly, but with a lot of meaning.*" (Carlos Guzman, representative Colectivo Apacheta).⁴⁸

'La Mesa'

In 2010, the 33 communities that live around Salinas Grandes and Laguna Guayatayoc, started organizing themselves in 'La Mesa', when they found out about the lithium mining activities in the nearby salt flat. With help from students, researchers and NGO's, they collected information about lithium mining and also about their rights to resist mining activities in the territories they ancestrally inhabit. During a process of two years, the 33 communities developed their own protocol, called 'Kachi Yupi', where they themselves create the terms and conditions in which they want to be consulted about developments that will affect the territory they inhabit. This protocol is based on international indigenous rights, ratified by the Argentine state, and based on their own conceptions and knowledge.

The protocol states: "*Kachi Yupi, 'Huellas de Sal', means pathways of salt. A 'huella' represents a pathway to follow, a guide to persons and animals that need to pass over. This document is intended to serve as a guide, a pathway. The document is rooted in the depths of our identity, in the heritage of our ancestors, on the traces of their knowledge, in the deep and lasting impressions of their culture.*" (Kachi Yupi, 2015). 'Kachi Yupi' is developed by the practice of Minka. Minka is shared work where everyone contributes their effort to the benefit of the community. This document is also developed in this communitarian way. During a process of two years, the 33 communities came together to discuss what consultation means to them and how they want the consultation process to look like.

⁴⁷ Interview Gabriela, member of Colectivo Apacheta, Susques, 03-08-2017

⁴⁸ Interview Carlos Guzman, representative Colectivo Apacheta, Susques, 03-08-2017

Strategies

Both Colectivo Apacheta and 'La Mesa' developed several strategies to achieve downward accountability from lithium mining companies in Jujuy. Bottom-up strategies can be defined as activities of local communities to resist the external control on their territories and hold corporations accountable for their actions. According to Garvey and Newell (2005), community actions can play an important role in pressuring state agencies to improve their monitoring and enforcement of environmental regulations.

Increase visibility

Demonstrations, marches and road blocks are carried out by local communities who oppose the lithium mining operations. The purpose of these actions is to draw attention to their struggle and to make visible that they do not agree with the mining activities and the procedures that led to the approval of the activities. Increased (media) attention to the injustices that are experienced by local communities could increase pressure on companies and state actors to respond. Colectivo Apacheta and 'La Mesa' frame their struggle on the protection of nature, *Pachamama*, their particular way of living and the right to water. A slogan used by opposing communities is '*nosotros no comemos batería. Se lleva el agua, se va la vida*', which means 'we don't eat batteries, they take away the water, life disappears.' This is a powerful statement that expresses the fear of losing their livelihoods as a result of lithium mining. It also highlights the fact that economic benefits cannot substitute for this loss. Gabriela, member of Colectivo Apacheta, says: "*We want a guarantee of the government. We want them to guarantee our access to water.*" (Gabriela, Colectivo Apacheta)⁴⁹

Build alliances

Colectivo Apacheta and 'La Mesa' reached out to NGOs and international platforms for support in their struggle. They presented their cases at the UN rapporteur for Indigenous Rights and the UN committee of Economic, Social and Cultural Rights⁵⁰. The NGO Fundación Ambiente y Recursos Naturales (FARN) from Buenos Aires, backed both groups with legal advice and funds to support their actions. Seeking alliances with other actors and movements is a useful strategy because these actors often have more resources and are in a better position to influence the behavior of a company.

Collect independent information

Because there is a lot of distrust among opposing communities of the information that is provided by the companies and the government about the possible environmental impact of lithium mining, Colectivo Apacheta and 'La Mesa' started collecting information about the impact of lithium mining themselves. Colectivo Apacheta hired a biologist who carried out a baseline study in the region around Salar de Olaroz-Cauchari and who will monitor the environmental impact of the lithium mining operations. This is done in order to expose the links between the company's activities and the impact experienced by local residents. Jorge Iglesias, lawyer of Colectivo Apacheta, states: "*The goal of Colectivo Apacheta is to show that the mining companies use a lot of water, that this has impact on the people who live in the area, and on the animals and plants, the whole Pachamama. We want to show that the mining companies do have impact on the communities. This is something the companies*

⁴⁹ Interview Gabriela, member of Colectivo Apacheta, Susques, 03-08-2017

⁵⁰ Kachi Yupi protocol

deny.” (Jorge Iglesias, lawyer Colectivo Apacheta).⁵¹ ‘La Mesa’ also received information from students, researchers and NGO’s. On the basis of this information, they decided not to sign the EIA’s of the mining companies and start organizing.

Legal action

Both Colectivo Apacheta and La Mesa use strategies based on their rights and both went to court. International rights such as ‘Free, Prior, and Informed Consent’ and the ILO 169 Convention are used as a tool by local indigenous communities. This right is not self-evident, it needs to be defended and actively struggled for. The case of Colectivo Apacheta was denied because they are not a legal entity. The case of ‘La Mesa’ is now pending at the Inter-American Court of Justice and until there is a court ruling, mining companies are not allowed to proceed.

Create own protocol

The previous chapter showed that the consultation process between company representatives and local communities in the area of influence of lithium mining companies took place in unequal power relations. The terms and conditions, and the content of the negotiations were determined by mining companies. Moreover, the use of expert knowledge was a precondition for full participation and other forms of knowledges and languages were undermined. As a reaction, ‘La Mesa’ wrote their own protocol, ‘Kachi Yupi’, written in their own words, created in a way that is based on their cultural habits and based on indigenous rights. In this protocol, concrete expectations are outlined regarding the role of the provincial government, who should initiate the consultation, the timeframe in which local communities should be advised about the consultation process and the time they should have to consider the implications of the proposed development. Only when residents understand these implications fully, the next step can be taken in the process. Moreover, it is outlined that consultation is a continuous process, throughout the whole lifespan of the mining project. With this protocol, the 33 communities of ‘La Mesa’ show that recognition of their values and knowledge, and the right to consultation on the processes that affect their territory, is not something they can ‘receive’, but it is something they are entitled to and can actively shape. The ‘Kachi Yupi’ protocol is a bottom-up initiative that can serve as an example in achieving downward accountability.

7.2 Achievements and limitations

Achievements

Local communities in Jujuy struggle since 2010 against lithium extraction in their territories and some achievements are made. Colectivo Apacheta and ‘La Mesa’ received media attention, not only in Argentina but also internationally. This increased their visibility. Moreover, because the case of ‘La Mesa’ is now pending at the Inter-American Court of Justice, no mining activities can take place in Salinas Grandes until there is a court ruling.

Another achievement is the consolidation of local organization, especially among the 33 communities in the area around Salinas Grandes. Before 2010, the communities were not organized politically. They only interacted with each other during festivities or social events such as soccer competitions. Since 2010, they are meeting regularly and built a strong organization. During the

⁵¹ Interview Jorge Iglesias, lawyer Colectivo Apacheta, 14-08-2017

monthly meetings, they are not only discussing developments around lithium mining, but also other issues within the communities. Together, they discuss projects they want to develop and meet with the provincial government to negotiate.

The 'Kachi Yupi' protocol received attention from provincial government. The governor of Jujuy stated he recognizes the protocol and he even said it could serve as an example for other mining struggles and consultation processes in the province. The protocol is not recognized officially, and the provincial government is looking for ways to implement it.

Limitations

While the bottom-up strategies of local communities in Jujuy resulted in some achievements, there are also limits to their strategies.

First of all, local communities are not homogeneous. Within the local communities, there are differences of values, opinions and experiences. While some residents oppose the mining projects, other residents are dependent on the mining companies for employment and are willing to cooperate with them. This allows companies to work with those residents who are in favor of their operations. This is what happened in Susques, where local residents who work for the company eventually approved the mining operations, while other residents, mainly peasants, felt excluded from this process.

Second, in order for local communities to play an active role in shaping and managing the consultation process and demand corporate accountability, they have to be well organized and must have the resources and capacities to do so. This is not always the case. Assistance from civil society organizations and NGO's can help to strengthen local organizations.

Third, bottom-up strategies are not enough to achieve downward accountability. They should be accompanied by stronger, formal regulations to hold corporations accountable for the social and environmental impact of their activities.

Fourth, an important strategy employed by both Colectivo Apacheta and 'La Mesa' is legal action to defend their territories and the right to 'Free, Prior and Informed Consent'. Newell (2005) argues that lawsuits can bring attention to environmental justice struggles, which can help pressure corporations and government actors to respond, but they often do not address the real underlying problem, which is political and structural. Moreover, large (multinational) corporations often have more financial resources to defend their position than opposing local communities.

7.3 Recommendations

In order for bottom-up strategies of local communities to achieve downward accountability and overcome these limitations, several actors can play a role. These roles and recommendations are outlined below.

Role of the provincial government

Opposition to the mining activities seems to be a conflict between local communities and mining companies, but in reality, the government plays an important role. Neoliberal policies shifted the roles and responsibilities of states and private actors in the context of natural resource extraction. On the one hand, private companies play an increasingly important role in the extraction of natural resources and states have 'rolled' back. On the other hand, states actively attract foreign investments in mining and justify these investments by emphasizing the importance of mining

revenues for economic and social development. Mining in the province of Jujuy is one of the most productive sectors and the provincial government has great interest in the development of mining projects in the region. It is also the task of the government to protect the interests of its citizens and monitor environmental impact. It is this ambiguous role of the government that creates conflict. Local communities and civil society organizations that oppose the mining projects direct their actions towards the government because they do not feel that their interests are represented by the government.

Especially the provincial government can play a role in advancing bottom-up strategies of local communities. In Argentina, mining concessions are owned by the provincial government and the province is responsible for the implementation of the Mining Code and monitoring of environmental impact. According to Newell (2005), states can create a positive enabling environment where local communities can claim and secure their rights. Because of this regulatory role of the provincial government, they can influence the requirements for 'downward accountability' for companies. The provincial government can strengthen the position of indigenous communities by granting communitarian property rights, which communities already requested and are entitled to. This is an important step in the recognition of local communities in the area around Salinas Grandes and in strengthening their position in relation to mining corporations. The 'Kachi Yupi' protocol can be used by the provincial government as an example of how to include local communities in the design and implementation of consultation processes based on local values and worldviews. Moreover, another major reason for local communities to resist lithium mining operations in their territories is the uncertainty and lack of transparency about the environmental impact and the use of water. When local residents are included in monitoring this impact, transparency and trust can be increased.

Role of civil society organizations and researchers

Other actors that can play an important role in supporting local communities in their struggles are civil society organizations (CSO's), including NGO's, advocacy groups and independent researchers. First of all, CSO's can provide resources, in the form of financial support but also information and legal assistance. The NGO FARN is involved in the struggle of Colectivo Apacheta and 'La Mesa'. The NGO provides legal advice, supported the process of creating Kachi Yupi, collects funds and increases the visibility of the struggle around lithium mining. CSO's can support local communities with exposing the links between a company's activities and the local environmental and social impact. Independent researchers can play a role in increasing transparency about the actual and long-term impact of mining operations, in a clear and understandable language. While the provincial government and mining companies claim that the relation with the local communities are good, the case study in this thesis shows that this is experienced differently by local residents. This highlights the importance of considering local perceptions and to let local communities themselves define how this relationship should be. The creation of the protocol 'Kachi Yupi' is an example of how this can be achieved.

The space for contestation and resistance is limited, but with successful organizations, also with help from CSO's and lawyers, local communities are able to expand this space and demand a say in the decision-making. CSO's can also use their influence to pressure the provincial government to take the steps that are described above.

7.4 Conclusion

In the current situation, social and environmental accountability is dependent on the Environmental Impact Assessment and accompanied consultation processes. These processes lack, however, legitimacy in the eyes of local communities located in the area of influence of the mining companies. This is mainly due to a lack of trust, lack of understandable and independent information and unequal power positions among actors involved in the consultation process. As a reaction, local communities organized themselves to resist these practices and created bottom-up strategies to hold corporations to account and demand an equal say in the decisions that are made in their territory. These strategies include highlighting injustices by demonstrations and marches, seeking help from (international) NGO's and other platforms, collect independent information, take legal actions and create their own protocol on the way they want to be consulted, based on their own experiences, knowledge and values, 'Kachi Yupi'.

These strategies resulted in some successes, especially in Salinas Grandes where mining activities are halted, but there are also some limitations. Especially the provincial government and civil society organizations can play an important role in advancing bottom-up strategies of local communities. Communitarian property rights can strengthen the position of local communities and the 'Kachi Yupi' protocol can serve as an example for the provincial government on how to include local communities in the decision-making process in a more equal way. Moreover, civil society organizations can support local communities with resources, information and pressuring the government. This chapter also shows that most residents do not oppose mining activities entirely. The struggle around lithium mining is not just a struggle about uneven distribution of environmental burdens, and most residents do not oppose mining operations entirely. In fact, mining operations can contribute to relevant development and employment opportunities. The conflict is mainly about recognition and inclusion in the decision-making process, in a more equitable way. In order to achieve this, local communities should, instead of being recipient of consultation, be provided with more space to define the terms and conditions on which this consultation process is based.

8. Conclusion and discussion



In this last chapter, the conclusions from the case study on lithium extraction in Jujuy will be connected to the theoretical framework of this thesis. The answers to the sub-questions and main question will be given and finally, several recommendations are given to advance bottom-up strategies and further research.

Main question

The transition towards a 'green economy' led to increasing demand in natural resources such as lithium, because a strong emphasis is put on technological innovation and alternative energy (Raza, 2016). To build up such an economy, natural resources like lithium are demanded since it is a key element in the batteries used for electric vehicles and energy storage. This rising demand for lithium created new resource frontiers and Latin American countries increasingly chose a resource-dependent development path, called 'neo-extractivism'. States actively attracted foreign direct investments in mining projects and private and multinational companies became important actors in resource extraction. This affected the access, control and use of natural and triggered socio-ecological conflicts in the region. It also means that companies are increasingly involved in claims of justice and fairness through direct negotiations with communities in multi-stakeholder processes (Pichler et al., 2016). Due to pressure from civil society organizations, mining companies created CSR policies to be socially and economically accountable to those who are affected by their operations.

While a lot is written on the 'green economy', issues of power and justice are often neglected in this debate (Anlauf, 2016). Moreover, a gap is identified between CSR policies and practices of companies on the one hand and justice and accountability on the other hand (Hamann and Kapelus, 2004). Transparent, accountable and participatory governance of natural resources remains an important academic and policy challenge. In order for the 'green economy' not only to be 'green' but also 'fair', companies must be accountable to those who are directly affected by their operations.

In the academic debate on corporate accountability, Sosa and Zwarteveen (2014) argue that current attempts to achieve social and environmental accountability are based on 'upward' forms of accountability. They state that they are based on general indicators and technical assessments, determined by actors that are located far from the location where the mining activities take place. According to them, in many cases, these general assessments do not represent the ways in which the impact of mining operations is experienced by those affected by it. According to Sosa and Zwarteveen, there is a lack of 'downward accountability', in the sense that current standards and norms lack legitimacy in the eyes of directly affected people (Sosa and Zwarteveen, 2014). Newell (2005), states that local communities should be on the forefront of the debate on corporate accountability and CSR. He highlights the importance of focusing on the strategies communities themselves can develop to achieve downward accountability. Therefore, in this thesis, the experiences, perspectives and strategies of affected communities are emphasized. This thesis focused on a case study on the socio-ecological conflict around lithium extraction in the province of Jujuy, Argentina. The main question of this thesis was: *How can local communities advance bottom-up strategies to achieve downward accountability?*

To answer the main question, current practices to achieve corporate accountability in the context of lithium extraction in Jujuy were analyzed from a perspective of environmental justice, based on the three dimensions of distributive, procedural and recognition justice. Thereafter, bottom-up strategies of local communities and civil society organizations were studied, and recommendations were given to state and civil society actors on how to advance these strategies. In accordance with this conceptual framework, the main question is divided in three sub-questions:

1. *How is Corporate Social Responsibility practiced by lithium mining companies in the province of Jujuy, Argentina?*
2. *To what extent do host communities participate in deciding on cost-and benefit-sharing of the lithium mining operations?*
3. *What are the bottom-up strategies of local communities and civil society organizations to achieve downward accountability and what are the limits to these strategies?*

The following paragraph will discuss the results and conclusions from the case study and the sub-questions and main question will be answered. Finally, recommendations for further research will be given.

Conclusions from the case study

The empirical case study showed that while lithium mining is presented by the government as a major opportunity for social and economic development for the province of Jujuy, the distribution of benefits remains uneven. Only a small share of the tax revenues and royalty payments are distributed to the local communities where mining operations take place. Mining companies designed CSR policies that are based on 'shared value'. These programs are especially based on generating local employment opportunities through direct and indirect jobs and education programs. Moreover, companies invested in buildings, schools and equipment for the local hospital. These practices are welcomed by some, but criticized by others and divisions are created within the communities. While the mining operations, and accompanying employment opportunities, are benefitting some, they threaten the livelihoods of others. There are concerns about the long-term environmental impact, especially because of the use of water, which will threaten local livelihoods that are based on pastoralism and the 'harvest of salt'. Moreover, nature and the salt flats have a special cultural and spiritual meaning for local residents in the Puna region and residents do not only fear losing their income, but also their way of living. While Environmental Impact Assessments are carried out, a lot of uncertainty about the long-term impact remains.

Both in the literature on CSR and on environmental justice, a lot of emphasis is put on community consultation and stakeholder engagement as a strategy to strengthen corporate accountability. It is assumed that a fair procedure, where all stakeholders can participate in the decision-making process, will lead to a fairer distribution of benefits and burdens. This assumption is, however, questioned by more critical researchers, who argue that this assumption might be problematic due to uneven power relations between stakeholders involved. CSR personnel of lithium mining companies in Jujuy put a lot of effort in building relationships with local communities and state that they have a 'social license' to operate. The consultation processes in Salar de Olaroz-Cauchari and Salinas Grandes are, however, not perceived as fair by local residents of communities that are located in the area of influence. This is mainly due to a lack of (understandable) information and unequal bargaining positions. In this thesis, I showed that the conflict around lithium extraction in both territories is actually a struggle for recognition. The conflict can be placed in a wider struggle for communitarian property rights, but also for recognition of local values and knowledges.

In the current situation, social and environmental accountability is based on the process of the Environmental Impact Assessment, which is based on scientific and technical knowledge and language. Other forms of knowledge are perceived as 'unreasonable' and 'uninformed'. The consultation processes lack legitimacy in the eyes of local communities, especially because mining corporations themselves are leading the consultation processes and determine the agenda. As a response, opposing residents in the area around Salar de Olaroz-Cauchari and Salinas Grandes formed two groups, who actively resist the mining operations and the procedures that led to the

approval of these operations. They developed several strategies to hold the mining companies accountable for their actions. First of all, by organizing marches, demonstrations and actions such as road blocks, they attempt to highlight the injustices they experience and in this way, exert pressure on the provincial government to act and respond to their concerns. Second, they built alliances with NGO's and international platforms, which have more resources and leverage to influence governments and corporations. Third, because local residents did not trust or understand the information provided by the companies, they started collecting information on lithium mining and the environmental impact themselves, with the help of students, researchers and NGO's. Moreover, Colectivo Apacheta hired a biologist who carried out a baseline study and who will monitor the environmental impact study in order to expose the link between the company's activities and the impact felt by local communities. A fourth strategy is legal action and starting court cases. This has been unsuccessful in the case of Colectivo Apacheta; the case of 'La Mesa' is still pending. It did result in creating more visibility for their struggle and attracted a lot of media attention and in Salinas Grandes; no mining activities can take place until there is a court ruling. Fifth, a powerful strategy by the 33 communities who are organized in 'La Mesa' is the protocol they wrote that describes how they want to be consulted about developments in their territory, based on their own experiences, knowledge and values.

Recommendations to advance bottom-up strategies

While these strategies resulted in some successes, especially in Salinas Grandes where mining activities are halted, there are also some limitations. Especially the provincial government and civil society organizations can play an important role in advancing bottom-up strategies of local communities.

While opposition to mining activities may appear to be a conflict between local communities and mining companies, the government, and especially the provincial government, plays an important role. The provincial government has the ambiguous role of creating an attractive investment environment and at the same time protecting the rights of its residents and monitor and regulate environmental impact. This ambiguous role created conflict and local communities and civil society organizations that oppose the mining projects direct their actions towards the government, and especially the provincial government, because they do not feel that their interests are represented by the government. Especially the provincial government can play a role in advancing bottom-up strategies of local communities. The provincial government can influence the requirements for companies to achieve downward accountability. The provincial government can strengthen the position of indigenous communities by granting communitarian property rights. Moreover, the 'Kachi Yupi' protocol can be used by the provincial government as an example of how to include local communities in the design and implementation of consultation processes based on local values and worldviews and local residents can be included in the monitoring of environmental impact.

Other actors that can play an important role in supporting local communities in their struggles are civil society organizations (CSO's), including NGO's, advocacy groups and independent researchers. CSO's can especially support local communities with resources, including financial resources but also information and legal advice. They can also help local communities with exposing the links between the activities of mining companies and the impact on the environment and local livelihoods. This is especially relevant because according to the government and the mining companies, the relation with local communities is good and the environmental impact is limited. The case study in Jujuy showed that this is experienced differently by local communities themselves. This shows the importance of considering local perceptions and to let local communities themselves

define how this relationship should be. The creation of the protocol 'Kachi Yupi' is an example of how this can be achieved.

Most of the residents who oppose mining operations do not oppose mining entirely. The problem is a lack of inclusion and a lack of recognition, which results in distrust and resistance. When local communities are included in a more equal way, by granting them space to define their own terms and conditions such as the 'Kachi Yupi' protocol, community consultations could take place in a more equitable way and mining operations could even provide opportunities to local communities.

Future research

Researchers, like me, can also play a role in advancing bottom-up strategies of local communities. In this thesis, I showed that to achieve meaningful consultation processes and accountability mechanisms that are legitimate in the eyes of affected communities, local communities themselves must be able to define how this consultation process should look like. Social scientists can play a role in investigating experiences of local communities and identifying gaps between current practices and experiences on the ground.

A relevant method to use in future research is participatory action research. The aim of participatory action research is to *“develop practical as well as conceptual contributions by doing research with, rather than on people. Participatory action research seeks to empower research subjects to influence decision making for their own aspirations.”*(Bradbury and Reason, 2003: 156). Through participatory action research, local values, conceptions and knowledges can be translated to a protocol on how meaningful participation could look like in the local context, such as happened in the process of writing 'Kachi Yupi'.

Moreover, researchers can play a role in making local struggles more visible, but also by searching for ways to resolve them. More research on bottom-up strategies of local communities in other contexts can help to identify success factors and limitations of such strategies. CSR and corporate accountability mechanisms such as the Environmental Impact Assessments could be opportunities to improve the situation of affected communities in the context of mining, but they can only be successful when they are legitimate in the eyes of those affected by the mining operations.

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