

**Spatial Injustices in Resource Extraction Industries:**  
**A Study of Ecuador and Canada**

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## **Abstract**

This thesis explores the spatial injustices in resource extraction industries. The author frames this through asking the question: How does resource extraction vary in rhetoric and reality? It delves into the varying stakeholder rhetoric and compares that rhetoric to the realities faced by individuals and communities in both extraction and headquarter sites. The author supports this exploration through the analysis of several key terms and theories including: wastelanding, slow violence, neoliberalism, underdevelopment theory, land-grabbing, and vulnerability. It uses the contexts of the Dynasty Goldfield Mine in Zaruma, Ecuador and the Mount Polley Mine in Likely, British Columbia, Canada to seek to understand how the representation of resource extraction can create a cyclical pattern of spatial injustice. The author's research rests on participant observation, content analysis, economic analysis, spatial analysis, and informal legal analysis to understand the complexities of the mining industry. This thesis seeks to answer the question: How do labor and land regulations vary in legislation and enforcement between Vancouver-headquartered mines in Likely, BC and Zaruma, Ecuador? It ultimately suggests that systems of oppression can only be addressed through the uprooting of their roots and the amplification of the truths of marginalized voices.

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## **Introduction**

In the Fall of 2012, I became aware of a proposed mining operation that would threaten the quality of the water in the Boundary Waters Canoe Area Wilderness in the Northern region of my home state, Minnesota. I felt nervous about how it might impact the intrinsic value of the area. I wanted to stop it from happening. However, as I read about the operation in a variety of sources and talked to people whose opinions I valued immensely, I realized the complexity of the proposed operation. I learned that it is important to consider the variety of stakeholders who might be affected, and the consider compromises which involve the improvement of the livelihoods of all those involved. This perspective has sparked my interest in environmental conflicts in the mining industry, especially examining the discrepancies and interconnections between the truths of stakeholders in these conflicts. Ultimately, this has led me to explore a thesis which questions these truths.

How does resource extraction vary in rhetoric and reality? Throughout the past two years, I have been skirting around this fundamental question, trying to figure out how to understand the complexities of the relationships between the mining industry and its stakeholders. The portrayal of resource extraction in mainstream media has so often conflicted with the realities told by stakeholders. I will work to address this complexity, and its ultimate impact on the future of resource extraction, through a combination of generalized and situated research. This thesis is rooted in my research on mining in Ecuador and its relation to the Canadian mining industry. I will use my research in these two countries and supporting methodologies to explore the intertwined themes of environmental justice, corporate social responsibility, and spatial inequities.

I will first provide a theoretical background to contextualize my research in Ecuador and Canada. In this theoretical background, I will highlight the theories of slow violence, wastelands, neoliberalism, and spatial injustice. Then, I will apply and interact with this theory using examples from Zaruma, Ecuador and Likely, British Columbia. Next, I will provide my methods and results which I used to further understand the contexts of these theories. I will summarize and broaden these specific ideas to apply them to a larger world context. Finally, I will suggest further research and potential ways to address resource extraction conflicts in the future.

The resource extraction industry is experiencing an era of exploitation, spatial injustice, and corruption. This corruption is influenced by the presence of multiple truths and the variance of rhetoric and reality within the resource extraction industry. I will exemplify how corporations disproportionately exploit areas that society has deemed “pollutable,” and how this injustice is often left out of the rhetoric surrounding resource extraction. Ultimately, I will argue that the voices of marginalized peoples who are impacted by resource extraction must be amplified in order to address issues of spatial injustice. In the cases of Ecuador and Canada, soft law must be enforced as hard law, so that the rhetoric used to represent corporations matches the realities experienced by all stakeholders.

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## 1. Background

### 1.1 Resources

Global population growth has created an increased demand for resources around the world. As this growth occurs, the interconnectedness of the world increases. This is because countries become dependent on trade to meet the resource needs of their populations. This change has caused a larger systemic change in the way humans use, produce, and exchange resources. The foundation of resource trade is shifting increasingly to embody neoliberal ideals. By this, I mean that resource trade is reiterating a system of power imbalance. Throughout this thesis, I will be using the term neoliberalism to describe a general trend of free-market economics that uplifts and maintains the power of core countries. Neoliberalism encourages the pursuit of resources within a “rentier state” (Martinez-Alier et al. 2003). A rentier state is defined as a country that is rich in resources and willing to exploit its population to generate revenue from these resources. “It is independent from its society, unaccountable to its citizens, and autocratic” (“Rentier State”, 2017). As a result of this movement, resource extraction has been at the heart of a large portion of intercultural and international tensions for centuries. Simultaneously, the inequalities of resource extraction have been heightening. These inequalities can be social, class, racial, cultural, or spatial inequalities, but are often a combination of all these. Population growth amplifies the impacts of these inequalities.

Currently, the resource extraction industry faces an immense division of labor: while the majority of the profits from resource extraction are going to core countries, the majority of the extraction is being done in periphery countries (Gunder-Frank 1991). This exploitation hinders development for periphery countries while inflating the GDPs of core countries, increasing

global inequality. Urban populations frequently support these extractive industries within their nation-states so that income can be generated for the country and social and health-related issues can be financially addressed. These issues tend to be concentrated in urban areas, due to their high density populations. However, this extraction largely tends to occur in rural areas, and thus the rural populations are those that experience the negative externalities of those practices (Gonzalez-Carrasco et al. 2011: 67). The concentration of resource extraction in rural areas and developing countries and the majority of profits from these extraction sites going to urban areas and developed countries is an example of spatial injustice. I will be using the term spatial injustice throughout this thesis to represent inequalities which are geographically distinguishable.

Mineral extraction, in particular, is characterized by low value and high environmental cost. The extraction and processing of minerals has a very high ecological impact, especially in relation to the correlated revenue. The greatest listed impact with mining in South America is the impact on water, and this impact becomes greater the more an area is mined, because as one mines deeper, the ores decrease in quality and more water is required to process them (Martinez-Alier et al. 2003: 101). This shows that having mineral extraction concentrated in the global south is not only inequitable, it is becoming *increasingly* inequitable.

Unequal resource exchange creates conflicts over human rights, land rights, and economics globally. Global systemic inequalities can be understood through the study of resources, as resources are the root as well as the practice of neocolonial power abuse. Throughout this thesis, I will be exploring these issues within the contexts of British Columbia, Canada and Zaruma, Ecuador. I aim to draw larger conclusions about core-periphery relations through the case studies of these areas.



## 1.2 Land

The distribution of resource extraction can be partially attributed to historical imperialism that creates a sense of entitlement to public lands by extraction industries. This entitlement has created a land-grabbing epidemic, which has been a global concern since the early 21st century. Land grabbing occurs when a transnational company, typically headquartered in a core country, purchases large plots of public land for the purpose of resource extraction. Land-grabbing is largely recognized as a problem in the agriculture industry; however, it is equally existent in other industries such as mining, oil extraction, and logging. In his book “Land Grabbing: journeys in the new colonialism” (2013) Stefano Liberti argues that while land grabbing often masquerades itself as a tool for periphery development, it is, in reality, a harmful neocolonial mechanism that leads to a cycle of exploitation. He explains that land grabbing is a way in which extraction companies can justify their actions without regard to its impacts on the local communities. Resource extraction industries often claim to be bringing a vast, growing economy to the rural areas of a country, when in reality, most extractive industries are economically unsustainable, short lived, and ultimately cause continued underdevelopment of the area. These industries frequently target vulnerable populations, especially indigenous peoples.

In her book “Wastelanding,” Traci Brynne Voyles offers an explanation for the targeting of vulnerable populations. She states:

*The distribution of toxins is merely a signifier of the foundational, enabling modalities of modernity: capitalism, colonialism, and white supremacy. To ask for a just distribution of industrial pollution, waste sites, mines, unsustainable and toxic labor, and so on, is not to ask for redistribution but rather to ask for modernity to throw up its hands and dismantle itself (Voyles 2015: 25).*

Here, Voyles illustrates that the spatial injustice in resource extraction is rooted in systemic issues, not just circumstance. She coins the term “wastelanding,” where she argues that society continues to see certain bodies and lands as pollutable, while others remain “unpollutable” (Voyles 2015: 25). Voyles uses the example of uranium mining in the Navajo nation in America’s Southwest to explain this issue. She relates the impact of United States settler colonialism to modern day racism, and explains that this ultimately has caused the harmful placement of uranium mining industries on Navajo territory. This example is powerful, as Voyles follows a direct timeline through which the Navajo people were deemed pollutable bodies. However, the structural issues of wastelanding and environmental privilege can be applied in many areas globally. This variation in risk to ecological problems and disasters is rooted in global power structures that have derived from colonial power, and continue to be present through neoliberal structures. This is important to consider when coming to understand the economic theory of risk and externalities, as it challenges the idea that risk comes from the market, but instead argues that the market is shaped by and intertwined with systemic injustices. In my methodology section, I will discuss the implications of the market in creating a continuation of inequitable power structures. These structural issues ultimately demonstrate that fighting systemic oppression requires systemic change.

Rob Nixon explores how this form of colonial oppression continues to occur globally. He explains the concept of “slow violence,” which Nixon defines as “a violence that occurs gradually and out of sight, a violence of delayed destruction that is dispersed across time and space, an attritional violence that is typically not viewed as violence at all” (Nixon 2011: 2). Nixon attributes the continuance of this slow violence to neoliberalism. According to Nixon,

neoliberalism acts as a mechanism through which violence is excused by the people of a state. Slow violence is built up over time, and often involves warning signs of impending disaster which are ignored. This kind of violence often occurs because the voices of those who experience this violence are not amplified in the media. Slow violence serves as a way in which governments continue to exploit marginalized populations while masking this exploitation with disillusion of development and economic growth. Together, Voyles and Nixon present a dilemma in the resource extraction industry that is difficult to address. Their theories demonstrate the cyclical nature of spatial injustice. These roots of injustice suggest that resource extraction is influenced by power structures, and through this, the vulnerability of marginalized peoples is strengthened.

### 1.3 Labor

Environmental justice is defined as “the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” (US EPA 2018). The promotion of environmental justice actively recognizes the issues of environmental injustices throughout global history, and the ways in which these injustices are often associated with race, socioeconomic status, development, and gender. In Cutter et al.’s article “Social Vulnerability to Environmental Hazards,” the authors define vulnerability as a potential for loss. Loss of environmental quality, safety, economic wealth, or even life. Cutter et al. studies what they call the “Vulnerability Paradox.” This is the idea that social vulnerabilities are often difficult to quantify, due to the variation of vulnerability spatially. For example, women in developing countries might have a larger vulnerability gap from men than they would in

developed countries (Cutter et al. 2003). Cutter et al. use the Social Vulnerability Index to identify different categories that might increase or decrease vulnerabilities. This theory of the vulnerability paradox can provide a means through which to economically and socially analyze the distribution of hazardous resource extraction sites globally.

Vulnerable populations are often targeted as sources of labor for resource extraction industries, as they provide a source of inexpensive labor in terms of wages and prices of risk. I will later explore the market incentives for targeting vulnerable populations more in my methods. It is this targeting of vulnerable populations that perpetuates a history in which many resource extractive industries are rooted in systems of slavery. While these systems have largely been displaced, their racialized or classist labor sources remain through the presence of environmental injustices and environmental racism (Cutter et al. 2003).

How can vulnerability, risk, wastelands, and slow violence can be analyzed together to understand the persistence of labor exploitation globally? Like land exploitation, labor exploitation has lasting effects on communities in both developing and developed countries. These impacts raise questions about existing power structures that create these inequalities. In the mining industry, labor exploitation is prominent due to its high-risk, low-reward nature (Cutter et al. 2003) As I discuss Ecuador and Canada's power structures in this system, I will interact with these theories as ways to understand the multiple truths in the histories of these two mining regions.

#### 1.4 In *Whose Backyard?*

The phrase NIMBY, or "Not In My Backyard," is used by communities to object to some kind of industry or practice that would affect their spatially located community specifically. This

objection pleads industries to relocate themselves elsewhere. While on the surface NIMBY seems like a way in which communities protect themselves, in reality, it can be a mechanism of neocolonialism. Michael Gerrard, in his essay “The Victims of NIMBY” states that NIMBY “creates and perpetuates privileges for whites at the expense of people of color” (Gerrard 1993: 495). Like Voyles’ theory of wastelanding, Gerrard argues that NIMBY creates a societal division between “pollutable” and “unpollutable” populations. While mining deposits are located in many places around the world, they tend to only be harvested in areas that society deems “pollutable,” which, uncoincidentally, often overlaps with the land of vulnerable populations. Cutter et al., Voyles, and Gerrard’s theories complement each other, all supporting the idea that resource extraction is almost always an act of environmental racism. “Ecocide and genocide do not occur together by happenstance; rather, extractivism requires dispossession of people from people and life from life,” (Bowman 2017: 31). Thus, resource extraction is a physical manifestation of systemic injustice.

In recent years, NIMBY has been problematized by environmentalists and anthropologists alike. In 1994, at the Basel Convention, the phrase “Not On Planet Earth” or NOPE was coined. This notion works to problematize extractive industries globally, not just in certain communities (Furtado et al. 1999). Solutions such as heavy metal recycling and renewable energy could be adopted in the near future to help decrease the need for new extractive industries. Where extractive industries do continue to exist, increased communication between the government, the industry, and the community in which the extraction occurs needs to be mandatory.

## 1.5 Corporate Social Responsibility

As I have discussed above, the majority of exploitation in the resource extraction industry occurs in periphery countries. Not only is this spatial distribution unjust, but it also is harmful in the long run for developing countries. In Andre Gunder-Frank's essay "The Underdevelopment of Development" (1991), he discusses how "development projects" such as logging, fisheries, or other extractive industries have more negative effects than positive effects on the long-term development of periphery countries. Gunder-Frank argues that countries achieve their greatest economic development through the revolution against dependence, imperialism, and capitalism. The dependency created by "development projects" hinders development, and thus is a form of injustice. With the rise of neoliberalism globally, core countries increasingly exploit periphery countries through resource extraction. One way in which companies protect themselves in this exploitation is through Corporate Social Responsibility (CSR). While CSR is intended to act as a self-regulated commitment to the social and ecological well-being of the areas which are impacted by a company's practices, it often instead serves as a mask to frame this exploitation as aid in development (North et al. 2008).

Underdeveloped countries, according to observations by Gunder-Frank, experience their greatest economic development when they are most disconnected from their metropolis. He argues that periods of crises in metropolises lead to loosening of trade and investment ties to other countries. The loosening of these ties encourages independence movements which result in social and economic development. Additionally, "geographic and economic isolation of regions that at one time were relatively weakly tied to and poorly integrated into the mercantilist and capitalist system... initiated and experienced the most promising self-generating economic

development of the classical industrial capitalist type,” (Gunder-Frank 1991: 11). This concept of uneven development contributes to Gunder-Frank’s perception of development as misrepresented and complicated.

This relationship becomes paradoxical, because countries may feel like they are experiencing development as they are being “modernized” through the pressures of colonization, however, they are simultaneously creating a strong dependence on core countries (and core countries are also becoming dependent on them), and thus they are pushed into remaining in a position of being a periphery country. I will later discuss how the mining relations in Ecuador and Canada serve as an example of the global imbalance of the profits of resource extraction and the negative externalities that come with extraction. Within these relationships, it is important to understand that rhetoric and reality are not mutually exclusive, but can be intertwined through a series of multiple truths.

## 1.6 Multiple Truths

Despite a vast understanding of the systemic issues that perpetuate environmental injustice, addressing these issues is still complex. This is due to the presence of multiple truths in environmental conflicts. The phrase “multiple truths” refers to the overlapping but varied realities of stakeholders. Frequently, the theme of multiple truths arises in a disconnect between the experiences of locals to an extraction area and the experiences of extractors. In order to create an understanding within the industry, it is important for each stakeholder to recognize the truth of other stakeholders. Oftentimes, each stakeholder’s livelihood is influenced by the industry. For example, a miner may depend on a mining industry for labor, while a local may be experiencing health problems due to their proximity to the extraction field. Sometimes, these

conflicts may overlap with one stakeholder--e.g. a miner who also lives in close proximity to the extraction site. In Patricia Richards's ethnography *Race and the Chilean Miracle*, she discusses conflicts over land in Southern Chile between the Mapuche, farmers, and the government. Each of these stakeholders has a different take on the truth behind the history of this land. The Mapuche feel that the land is rightfully theirs, as the land was stripped away from them in an act of violence by the Chilean dictatorship in the 1970's. This land was given to small-scale non-indigenous farmers. The farmers, many of whom have resided on the land their whole lives, feel that they are entitled to the land. One farmer states "When my family came here, there was nothing! We made this what it is today" (Richards 2013: 47). The Chilean government is a more complicated stakeholder, as their motives in transferring the land were likely rooted in anti-indigenous morals. Richards explains that this history is an important example of the complexity of a conflict with multiple truths. Richards also explains that while each stakeholder feels their truths are unbiased, the repetition of a false reality often creates what she calls a "truth effect." In Chile, the rural farmers were told repeatedly that they were entitled to the land in the South. This reiteration created a sense of truth which then became their truth. Those who are in positions power are often able to push their truth narrative as a credible reality more than those who are marginalized. Richards summarizes this idea, stating "The winners write history-- The Chileans won it and wrote it as they saw fit" (Richards 2013: 47). The analysis of multiple truths and their roots, both those of marginalized peoples and other parties involved can help resist this single-sided history that dominates systems of education, politics, and media today. I will draw on this idea as presented by Richards as I discuss my experiences in Ecuador and Canada.



With the themes of land, labor, capital, development, responsibility, and varied narratives in mind, I return to the question I have proposed in the beginning of this thesis: **How does resource extraction vary in rhetoric and reality?**

## **2. Situated Context**

### 2.1 The Value of a Comparative Case Study

To provide a context in which I can exemplify the theory explored in this thesis, I have focused on two situated contexts. It was important to me to explore mining operations in two areas to compare the mining legislation, rhetoric, and practices in core countries to the same elements in periphery countries. In order to understand the core-periphery injustice, I chose two major mining sites: The CoreGold Dynasty Goldfield in Zaruma, Ecuador and the Imperial Metals Mount Polley Mine in British Columbia, Canada. Each of these operations is headquartered in Vancouver, BC. I chose these two operations due to their mutually located headquarters, as it will provide a clear comparison for the legislation that influences these two operations. I also chose these two operations due to their present and ongoing mining operations and international influence, and their proximity to vulnerable populations.

These two operations have similar general networks of stakeholders. This generalized actor-network map will act as a guide for the complexities of those involved in these two contexts.

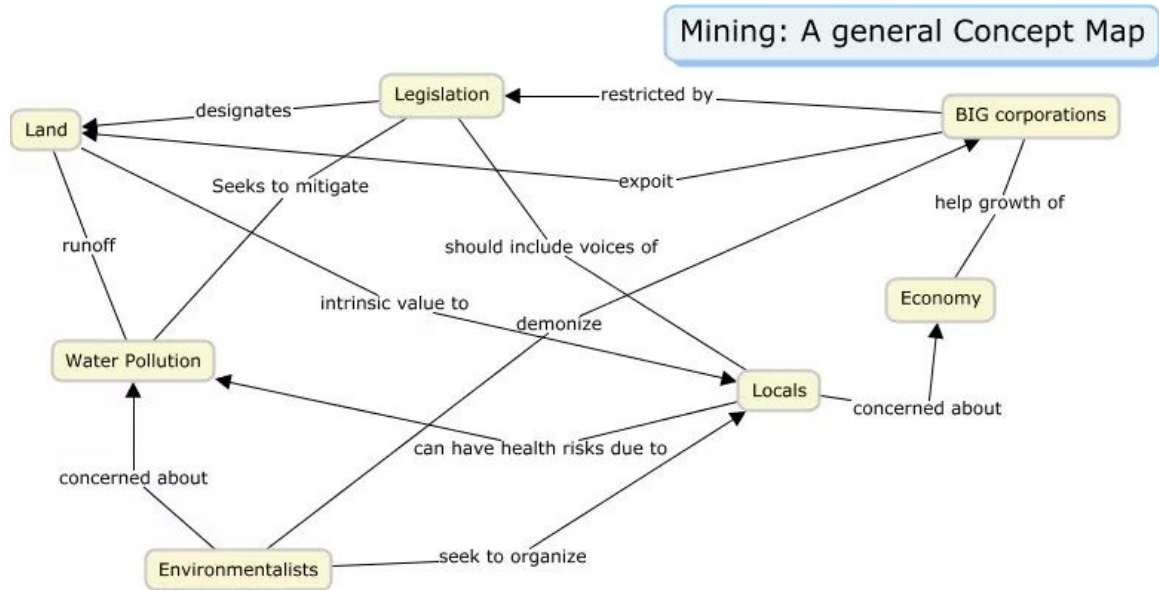


Figure 1: Actor Network Diagram of Mining

## 2.2 Ecuador (3-4 pages)



Figure 2: El Oro Province, Ecuador (seen in red)

### 2.21 History of Zaruma

The city of Zaruma is located in the El Oro province of Southern Ecuador. Today, it holds a population of around 22,000 people, with the majority of residents having a direct

involvement in the mining industry (CityPopulation 2018). In Zaruma, Ecuador, gold mining has been in action for over 500 years. Zaruma was first settled by the Zarzas indigenous tribes, who discovered gold as a resource by extracting gold pellets from the rivers. Word spread throughout the Andes that this valuable material could be found in what is now known as Southern Ecuador. Upon hearing this, the Incan Empire-- led by Huayna Capac-- overthrew the Zarza Nation for control of the land in the late 1400s. They remained there until 1549, when Spanish conquistadors-- lead by Alonso de Mercadillo-- entered Zaruma and overtook the area to send gold back to King Philip II. Spain continued to exploit Zaruma's gold until 1820, when Zaruma earned independence (Mora et al. 2008). The history of Spanish conquest and overturn of power in Zaruma remains apparent. Although they gained independence over 200 years ago, the city continues to experience difficulties with economic, social, and political stability. At the turn of the 21st century, the industry began to grow rapidly, and many foreign companies have come in to take advantage of the rising prices of gold. This foreign influence has upheld a neocolonial structure in Zaruma which has created controversy among residents (Gonzalez-Carrasco et al. 2011: 67)



Figure 3: Indigenous Exploitation in Early Stages of Zaruma Mining (Museo Municipal de Zaruma Archives, 1817)

## 2.22 CoreGold

One of the major companies that has influenced Zaruma in the 21st century is CoreGold. CoreGold started exploration of their Dynasty Goldfield project in 2007, and officially began mining operations in 2016 (“Dynasty Goldfield Project” 2018). The town of Zaruma is home to both national and foreign companies, however, with the rise in large foreign companies from core countries, local companies have struggled to compete. Companies like CoreGold have constructed larger mines, larger processing plants, and larger customer bases. They have harvested the cheapest labor and land deals with the Ecuadorian government. As a result, foreign countries like Canada are increasingly reaping the economic benefits of Zaruma’s land. Conversely, Zarumeños are increasingly experiencing labor exploitation, mercury and arsenic pollution in their rivers, sinkholes, and land loss and degradation (Mora et al. 2008). This case

serves as an example of neocolonialism. As small town citizens in a country where political power lies in urban areas, Zarumeños lack the large scale political power to fight the expansion of mining on their land.

Gunder-Frank's theory of underdevelopment can be exemplified in Ecuador because core countries in the global north continue to depend on Ecuador for raw minerals. While the money Ecuador gains from this helps them fund their cities, the rural areas in Ecuador continue to be exploited with little benefit in return. The exploitation of Ecuador feeds the further development of the core countries, and thus keeps Ecuador in the place of a periphery country.

### 2.23 Internal Conflict

In addition to the lack of power, Zarumeños experience political corruption from within their country and its law enforcement systems. In 2009, President Rafael Correa introduced a mining law reform that encouraged neoliberal structures by giving greater freedoms to corporations and less power to locals (Calisto 2017). It gave power to national police--rather than provincial police-- to enforce environmental and safety regulations in Zaruma. Reports of under-the-table bargains between national police and companies have been rising, as the national police do not have the same investment in the area to protect the land and the safety of the community. As these bargains occur, companies become reliant on these deals to avoid updating their equipment to meet environmental or health standards, ultimately saving them money.

In addition to the problems created by Correa's 2009 reform in Zaruma, mining continues to be an issue throughout Ecuador's Amazon region, coastal region, and high Andean regions. This has created social problems throughout Ecuador, including the endangerment of many small population indigenous nations and the biodiversity of the country and its unique resources. On

December 11, 2017, the election of president Lenin Moreno brought hope to the country's anti-mining populations. Moreno signed a bill that prohibited new mining concessions from being signed in indigenous nations (AmazonWatch 2017). Just one month later, the corrupt head of Ecuador's Ministry of Mining, Jose Cordova, stepped down from his position of power due to demands from indigenous activists. Ecuador's mining industry is rapidly seeing change, and a close study of the industry is revealing of the reform that is occurring throughout developing nations.

In the spring of 2017, I spent two weeks conducting participant observation and interviews within Zaruma, which sparked my interest in the variance in perspectives and structure of foreign and local companies within the area. Many of these perspectives emphasized themes of injustice. Upon further exploration, I chose to delve into the injustices that occur within the mining industry and how these injustices are framed within core and periphery countries. My evaluation of Ecuador and Canada will examine a variety of actors and processes, but I will be focused on labor rights, labor legislation, and laborers as well as ecological rights, land rights, land legislation, and indigenous peoples. These topics will also draw on global resource dilemmas, neoliberalism and trade, and neocolonialism and poverty. My personal experience in Ecuador is used in my methods alongside theoretical and academic research I have done throughout my studies. Before I traveled to Zaruma, I completed an independent study in which I did extensive background research on the presence of both foreign and domestic mining in Zaruma. I analyzed how companies presented their mining projects, and the overarching claims that they made about their relationships with the local community and land. When I traveled to Zaruma in person, I was able to speak to a variety of stakeholders: miners, gold

sellers, ore processors, mine owners, lawmakers, farmers, and general residents of the area. The insight that was shared with me through these stakeholders challenged many of the beliefs I had about the industry prior to visiting Zaruma. I quickly noticed a disconnect between the realities of each of these stakeholders and the presented media. This disconnect made me curious about the influence of rhetoric on resource extraction and exploitation.

Ecuador provides an example of the influence of mining in developing countries. Ecuador serves as a representation of a periphery country that is fairly economically stable, developing, and yet still exploited. To supplement this example, I will explore mining in Canada as a comparative example of mining in core countries, and the relationship created between core and periphery countries through the flow of resources.



Figure 4: British Columbia, Canada (seen in red)

### 2.3 Canada

Canada is one of the world's top headquarters for mining companies. It holds over 50% of mining companies worldwide (Government of Canada: 2018). The choice of Canada as a

headquarter for many mining companies is by no means random. With a solid look at Canada's policies on foreign extraction, it become clear that Canada is one of the most lenient countries in terms of the impacts of extraction abroad. The three major acts that control mining legislation *inside* Canadian borders are the following:

- **Canadian Environmental Assessment Act:** A company must assess and report the environmental (ecological) effects of an extractive project before beginning it.
- **Canadian Environmental Protection Act, 1999:** This act requires a published report of NPRI (National Pollutant Release Inventory) annually for emissions related to mining.
- **Metal Mining Effluent Regulations under the Fisheries Act:** This act regulates effluent that is discharged from mineral processing and extraction. (Government of Canada, 2018).

However, despite these laws that regulate mining inside Canada, the only one that applies to Canadian-owned companies extracting abroad is the Canadian Environmental Assessment Act, and even then, it only applies sometimes. "The *Canadian Environmental Assessment Act* applies to projects (as defined by the Act) outside Canada, where a federal responsible authority proposes to initiate or provide funding for a project. The environmental assessment process for foreign projects is set out in the *Projects Outside Canada Environmental Assessment Regulations* established under the Act. Mining projects outside of Canada do not typically trigger an assessment under these regulations" (Office of the Auditor General of Canada, and the Environment Canada Minister, 2017). Canada's leniency with mining policy abroad draws in many major mining companies hoping to save money by cutting corners. Canada relies on the soft law of Corporate Social Responsibility to ensure ecological and human safety; however, as I



have previously discussed, this isn't always proved effective (North et al. 2008).

In addition to complications with Canadian mining companies abroad, Canada's internal mining industries are also complex. Canada lies on mineral deposits of coal, gold, and hard rocks, as well as bountiful deposits of oil and tar sands. I have explored the impacts of internal mining operations in Canada through a careful study of the Mount Polley Mine.

### 2.31 Mount Polley Mine



Figure 5: Mount Polley Mine Breach Aerial View (CBC Canada 2014).

On the morning of August 4th, 2014, the Mount Polley open pit mine in Likely, British Columbia breached, spilling 15 million cubic meters of tailings into Polley Lake. The leakage continued, eventually emptying the Imperial Metals-owned tailing pond and spreading through

Hazeltine Creek into Quesnel Lake. The spill brought about concerns related to drinking water, local fishing, and proximity exposure to local residents (Sawyer et al. 2012).

Imperial Metals is a large mining company headquartered in Vancouver, British Columbia. The company is one of over 1,000 mining companies headquartered in Canada. Each of these companies owns mining operations in various places worldwide, and overall, Canadian mining companies account for over one-third of the world's mining industry. While some of these mines are located in Canada, a large majority of them are located in periphery countries in Latin America, Western Africa, and India. Resource extraction, more often than not, is allocated near vulnerable populations. With Imperial Metals, we see a large-scale, high-risk mine located on unceded Secwepemc territory. Across Guatemala, Colombia, Peru, and Ecuador, Canadian companies have pushed their way into poor, rural areas in search of gold, quartz, copper, and silver. Across Western Africa, many companies are fighting for opportunities to land-grab cheap mineral-rich land (Gordon et al. 2016). This unequal distribution of extractive industry externalities is rooted in vulnerability and capitalist pursuit of lenient labor and environmental laws.

The Mount Polley Mine represents structural land, labor, and capital issues in the mining industry through the lense of internal resource extraction. Imperial Metals is a Canadian-owned company, and that operates within Canada. Imperial Metals exemplifies domestic issues of injustice, while CoreGold represents international issues of injustice. In both of these cases, however, it is clear that stakeholder discrepancies have created immense conflict.

### 2.32 The Secwepemc Nation

The Mount Polley Mine is located on the West side of Quesnel Lake, and the territories of the Soda Creek Indian Band and the Williams Lake Indian Band are located on the East and South sides of Quesnel Lake, respectively. These two Secwepemc bands, as well as the rest of the Secwepemc Nation of Aboriginal Canadians, rely on these waterways for their primary income, as well as for a main source of their sustenance. Hazeltine Creek and Quesnel Lake serve as spawning areas along the path of Sockeye salmon migration in British Columbia. The mining breach caused many concerns for the health of the land, and especially for the health of the salmon, which are a sacred part of their community. The destruction of this land is just one example of a global threat of resource extraction on indigenous communities.

Immediately following the Mount Polley Disaster, the Canadian provincial government met with Imperial Metals to discuss disaster reparations, specifically in regards to the Secwepemc territory. They agreed upon a settlement with the Soda Creek Band and the Williams Lake Indian Band for \$200,000 each. This agreement was made with no regards to the input of either of these bands, and no initial assessment of the value of the impact. The amount given to these tribes has since been referred to as “shut-up money:” a way for Imperial Metals to incentivize indigenous peoples to keep their voices out of the media (Schoenfeld 2017). However, the Soda Creek Band and Williams Lake Band instead decided to use the money to set forward their own investigations on the quality of water and found contradictory evidence to the government's claims that their water was clean. I will discuss these discrepancies in truths in my rhetoric analysis later on in this paper. These narratives are important to understanding why resource extraction injustices continue today. The impact of the Mount Polley Mine on

indigenous peoples exemplifies Nixon's theory of slow violence, as well as Voyles' discussion of wastelands.

## 2.4 Vancouver

Vancouver is the uniting location of Imperial Metals and Coregold, as both of their headquarters are located here. Vancouver represents Canada as the home of the majority of the world's mining headquarters (Government of Canada). Canada and Ecuador have many similarities in their mining industries. In both places, one can find trends of mining extraction sites being located in rural areas as well as near the land of vulnerable populations. This raises conversations about both rural hinterland crises and environmental injustice. Additionally, Canada's immense influence on the Ecuadorian mining industry is important because the analysis of these two situated contexts can help reveal any discrepancies in how Canada manages mines within their own country and how they manage mines abroad. In effect, these two situated contexts provide further conclusions about spatial and social injustices in the world's resource extraction industries.

As seen through the exploitation faced by marginalized communities, resource extraction industry favors the voices and rhetorics of major corporations. Neoliberalism and systemic injustices such as wastelands act as forces that use slow violence to quietly exploit extraction sites. The distribution of power in the resource extraction industry must be uprooted in order to address the injustices. In the case of Ecuador and Canada, the marginalized populations in both mining areas experience corruption and exploitation due to the presence of mining companies that are not invested in their communities. However, these two areas experience these impacts to different extents due to their different levels of vulnerability.

### 3. Methods and Results

The methodology through which I explored this topic consisted of four types of analysis: spatial analysis, informal legal analysis, comparative economic analysis, and content analysis. These analyses use Zaruma, Ecuador and Likely, British Columbia as case studies to describe a greater core-periphery relationship. Each of these parts were contextualized through careful examination of related literature, and the analysis of Zaruma can be contextualized through the participant observation I completed while traveling there in the Spring of 2017. These four analysis parts seek to answer the question: **How do labor and land regulations vary in legislation and enforcement between Vancouver-headquartered mines in Likely, BC and Zaruma, Ecuador?** In addition to answering this question, they also seek to provide insight into my overarching question: how does resource extraction vary in rhetoric and reality? Studying the disconnect between legislation and enforcement in the industry will help distinguish how rhetoric and reality vary through discourse and action.

Comparing labor and land regulations in the mining industries in rural areas of a core country (Canada) and a periphery country (Ecuador) will allow me to understand the spatial variance of the resource extraction industry. Specifically, the legislation and enforcement of these regulations will tell a story about the functionality of structures intended to protect the space that experiences the externalities of resource extraction. I am interested in exploring the published and spoken rhetoric of various companies, outsiders, and locals alike, and comparing this to the realities experienced by all of these stakeholders. This exploration will aid in my understanding of the progression of resource extraction in a neoliberal society.

I have approached my methodology through both an extensive and an intensive analysis. The spatial analysis will serve as an extensive approach to my larger understanding of rhetoric and reality through visually exemplifying the distribution of the positive and negative externalities of resource extraction. I aim to understand the spatial allocation of the headquarters of mining companies in relation to their extraction sites so that I can draw inferences about the distribution of power in the forming of resource extraction legislation. The intensive analysis will use Ecuador and Canada as related examples to understand part of a whole structure of inequality. The legal analysis will explore the effectiveness of Corporate Social Responsibility as a form of legislation, and will work to understand the impact, or perhaps lack of impact, of that legislation on a global scale. The comparative economic analysis of Ecuador and Canada serves to approach spatial variance in mining legislation and enforcement from a market standpoint. In order to enhance my understanding of social and systemic issues of resource extraction, I hope to understand the way in which the economies of periphery countries impact the appeal of extraction in these areas, as well as how the economies in core countries influence the appeal of headquartering in these areas. I aim to explore the cyclical nature of these allocations. Finally, I will be completing a content analysis which will explore the interviews and literature I have collected throughout my past year of research. This portion of my methods aims to ultimately provide a direct comparison of the rhetoric and reality of resource extraction by comparing and contrasting multiple experienced truths.

### **Results: Extensive Analysis**

### 3.1 Spatial Analysis

In order to understand spatial inequalities, I looked at the distributions of extraction sites of the top ten mining companies in relation to the locations of their headquarters. Because Imperial Metals and Coregold have a mutual headquarter in Vancouver, I became increasingly interested in which places dominate the ownership of the mining industry. With my research of international mining law in mind, this distribution can allude to important information about how various extraction laws might be taken advantage of, and where these advantages might lie.

When searching for data to perform this spatial analysis, I found a lack of transparency. I found little information about the scale of each company, and was only able to find their extraction sites through extensive digging on each company's website. Thus, in the results, the extraction sites are only spatially located based on their country, not their geographic location within that country. This lack of transparency is worth noting as I analyze the rhetoric of major mining companies.

I created a map displaying the spatial distribution of mining headquarters and their corresponding extraction sites, which visualizes the inequalities of the resource extraction industry. I used Google MyMaps in order to manually input data from each of the top ten mining companies in the world. I coordinated the flow colors with their headquarter company to demonstrate the spatial connections in the mining industry.



Figure 6: Mining Headquarters and Their Extraction Sites

(green represents extraction sites, dots represent different headquarters)











View Full Map at: <https://bit.ly/2re2MX2>

### Key

 Extraction Site

### Headquarters



-  Melbourne, Australia
-  Melbourne, Australia
-  Baar, Switzerland
-  Dongcheng, China
-  Rio de Janeiro, Brazil
-  Kolkata, India
-  Phoenix, United States
-  Moscow, Russia
-  Toronto, Canada
-  London, United Kingdom

This map demonstrates a general trend of extraction being heavily allocated in the global South, and headquarters being heavily allocated in the global North. It also demonstrates the immense interconnectedness of systems of extraction, which has aided me in visualizing the importance of global systemic change, rather than incremental changes such as soft law through CSR.

### **Results: Intensive Analysis**

#### **3.2 Informal Legal Analysis**

The informal legal analysis of soft law and hard law in Ecuador and Canada provides an insight into the effectiveness of mining legislation. This creates an idea of how written legislation might vary from actual enforcement of laws, and the effects of this gap. With support from the literature analysis in my previous section, I have examined Corporate Social Responsibility through a careful analysis of the published web pages of major Canadian and Ecuadorian mining companies. I have compiled excerpted texts from these web pages into word clouds using Voyant Tools, which demonstrate the major themes addressed in CSR statements.



Coregold’s CSR statement was just 82 words long: a concise, yet clear description in comparison to other mining company's statements. On CoreGold’s CSR page, they state: “Our objective is to build and maintain prosperity for all stakeholders through responsible business practices” (“Corporate Social Responsibility 2018). With the context of CoreGold’s influence on Zaruma, in addition to a careful exploration of their related projects throughout Latin America, this statement provides an interesting insight into the emphasized values of the company. Keywords include “Responsibility,” “Respecting,” “Business,” and “Stakeholders.” It is also worth noting that CoreGold had a link for a page on Corporate Governance on their website, however, this page has been under construction for the entire duration of my research.



Figure 8: Imperial Metals “Our Commitments” Page

In his book *Corporate Social Responsibility: A Very Short Introduction*, Jeremy Moon states “CSR has often been mainstreamed in response to an issue or event which has shown the

company in a poor light” (Moon 2014: 11). The Imperial Metals website featured several lengthy statements which described their commitments to CSR. As is demonstrated in the Word Cloud, “the environment” was emphasized throughout these statements. “Red Chris, Mount Polley and Huckleberry mines are important drivers of economic growth and social prosperity in their regions. They provide assistance and participate in activities that benefit local communities and the environment” (“Our Commitments” 2017). This, and other statements, are important as they demonstrate Moon’s theory directly. The Mount Polley disaster has led Imperial Metals to make large claims which explain that their values are not aligned with the consequences of the event. The broadness of these statements is worth noting, as the company uses big words rather than specific commitments. Imperial Metals’ statements also demonstrate how Corporate Social Responsibility is often taken advantage of as a form of “soft law,” which can be used to protect the company image but not legally bind the company to follow through with their statements.



Figure 9: Analysis of CSR Pages for Top 10 Canadian Mining Companies

The top ten Canadian mining company websites all have relatively prominent CSR pages, which vary in length and depth. The above Word Cloud demonstrates many of the key themes emphasized in these pages. The emphasis of “development” particularly stood out in my analysis. As I have discussed above, Andre Gunder-Frank’s theory of underdevelopment in Latin America claims that underdevelopment is a result of foreign dependency established through development projects, such as mining.

These analyses of varying legal statements demonstrate the variance in legal rhetoric and legal reality experienced in extraction areas. As I will discuss more through my content analysis, there seems to be a large disconnect between the experiences of stakeholders within the resource extraction industry. This disconnect leads to slow violence, which frequently results in environmental disaster such as the Mount Polley Spill.

### **3.3 Comparative Economic Analysis**

Through analysis of economic theory and literature, I have explored the economic incentives for exploitation of periphery country land by core countries, examining these incentives through cost of risk and cost of externalities of mining in Ecuador and Canada. The spatial injustices in resource extraction can be examined through a series of economic analyses. One way we can examine the roots of these spatial injustices is through understanding the cost of lives at risk.

Value of a Statistical Life Lost (VSL) is a monetary measure of the cost of a lost life. From this value, we can come to understand how much a society would be willing to pay for a unit of risk reduction. It also can be used to incorporate risk into the wages of risky jobs, as it can

help represent an individual's willingness to accept a wage given a certain risk. In Viscusi and Masterman's article "Income Elasticities and Global Values of a Statistical Life," they estimate various VSL amounts globally by looking at income elasticity and GNI per capita of each country. In this report, the VSL of Canada is given at \$8.179 million, and Ecuador's VSL is estimated to be \$1.037 million (Viscusi and Masterman 2017: 245). This estimation can be used to understand why it might be financially beneficial for Canadian companies to mine in Ecuador. With this reduction in VSL prices comes a reduction in cost of risk, and thus a reduction in labor prices and clean-up costs of a potential spill, because their revealed Willingness to Pay for clean-up is significantly less. This often leaves already vulnerable populations with abandoned extraction sites and extensive negative externalities.

The difference between the VSL estimates in Ecuador and Canada can be dissected to understand the labor markets in these two areas. In Ecuador, the VSL estimates are much lower than in Canada. In fact, the estimates demonstrate that Ecuadorian VSL costs are about 1/8th that of Canadian VSL costs (Viscusi and Masterman 2017: 245). With this information, we can infer that in order to meet the demand for jobs, mining companies will have to increase the wage of laborers much more for each unit of increase in risk. Thus, mining companies would be more inclined to mine in periphery countries because the labor costs are cheaper. This can be represented by the comparative graphs in figure 10 below. Additionally, a lower VSL indicates a lower willingness to pay for clean-up, thus, clean-up costs will also likely be cheaper as the standards of clean-up will be lower. This is not representative of Ecuadorian moral values, but instead a difference in wealth.

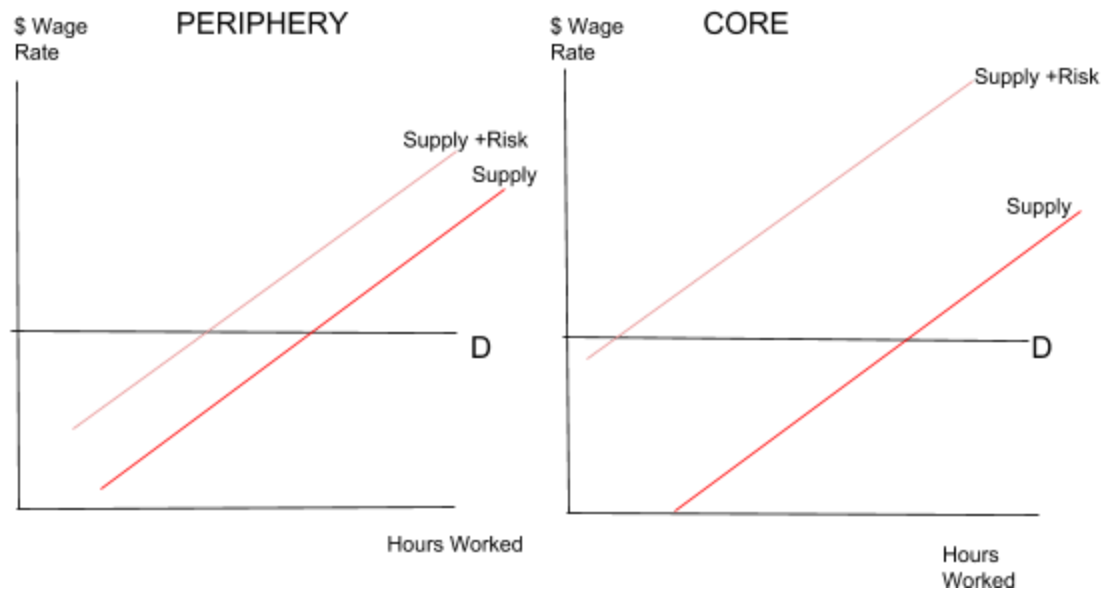


Figure 10: Labor Market Demonstrating Variation in Risk

Another economic factor in the spatial injustices associated with mining globally is the externalities associated with mining pollution and risk. Mining production, as we see with Mount Polley and Zaruma, can have many dangerous externalities such as tailings spills, sinkholes, leaks, processing fumes, and collapses. These externalities can be absorbed by the surrounding community, by communities within the watershed, and by laborers. This is represented below in figure 11. An effective solution for handling these externalities is to place a tax on production. For every unit of a hardrock material produced, the industry would have to pay a unit of tax to compensate for the pollution associated with that production. Then, this collected tax could be used to pay for mitigation and cleanup costs of these risks and pollutants.

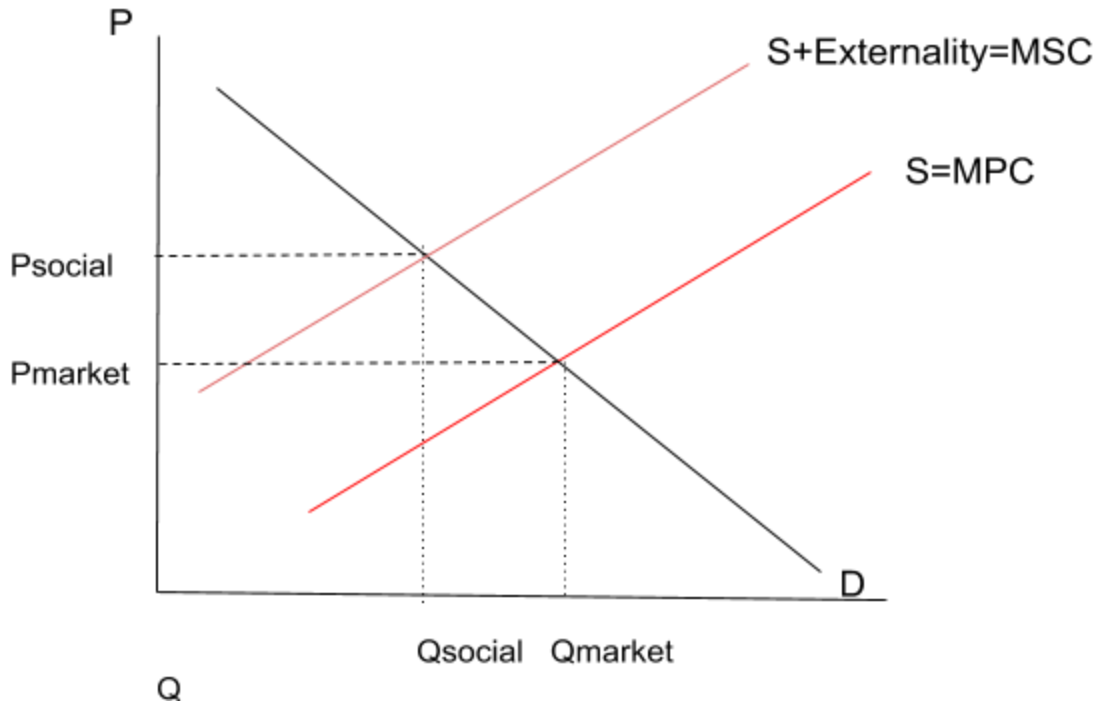


Figure 11: Externalities of Mining

The variation in the markets for labor in core and periphery countries creates a spatial injustice in resource extraction. Ecuador and Canada's relationship through resource extraction remains exploitative because of this. Canada continues to take advantage of the labor market in Ecuador, putting already vulnerable populations in rural Ecuador at risk. While this relationship can be understood economically, it is problematic socially. Thus, economic tools such as a tax on Canada for foreign extraction could be used to create spatial justice. The externalities felt by residents close to mines, like the Secwepemc Nation and Zarumeños are especially intense on already vulnerable populations. Populations who experience marginalization socially and politically due to their race, gender, or socioeconomic status are more likely to feel harsh externalities. Thus, it is important for companies to take responsibility for these externalities. Economic tools such as taxes could also be placed on mining companies, both foreign and



domestic, to account for these effects. When these taxes are placed, vulnerability to externalities should be taken into account when dividing repayments to residents.

### 3.4 Content Analysis: Rhetoric vs. Reality

As I researched Imperial Metals and CoreGold, I found many contradictory differences between the statements released by the major mining companies and quoted statements by other stakeholders. I analyzed these contradictions by creating a chart which allowed me to highlight key differences among descriptions of events and direct quotes from company-related media, local news sources, and personal interviews. These contradictions allowed me to explore the rhetoric and realities of the mining industry. While it is difficult to be sure of the true reality of the mining industry, it is important to understand that spatial injustices are described through a series of truths. The truths that are experienced by locals may greatly differ from the truths that are expressed by mining companies. This discrepancy does not necessarily indicate a dishonesty by one party, but instead indicates the complexities of the webs of stakeholders involved in spatial injustice issues.

#### Canada and Imperial Metals Statements

| Ref. Number | Company Rhetoric  | Local Perspectives  | Analysis  |
|-------------|---|---|---|
| 1           | “It's very close to drinking water quality, the water in our tailings...There's almost everything in it but at low levels.... No mercury, very low arsenic and very low | Michael LeBourdais, chief of the Whispering Pines Indian Band, went out fishing for Sockeye salmon in Six Mile Lake, near the spill. His niece caught the first fish and passed it off to LeBourdais, who wiped the | Discrepancies between company reports and reports of indigenous peoples was not an isolated incident during the Mount Polley disaster. The Soda Creek Band and Williams Lake Bands often reported the |

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|   | <p>other metals," (Coppin 2014)</p> <p>"Water sampling has concluded <b>affected areas were not toxic to aquatic life</b>. Water quality information has been communicated to the local community and stakeholders on a regular basis." ("Mount Polley") Imperial Metals Website</p>   | <p>outsides of the salmon with newspaper to remove the slime before filleting it. As he wiped the slime, <b>the skin of the salmon peeled back</b>, something LeBourdais had never seen before in his whole life of fishing ("Reports Of Skin Falling Off Salmon After Mount Polley Mine Spill").</p>  | <p>lack of honesty in Imperial Metals' reports.</p>  |
| 2 | <p>The Canadian government made a deal with the Williams Lake Band and the Soda Creek Band that they would be <b>entitled to full disclosure on all decisions regarding the operations of the mine there forward</b>, and Imperial Metals would allow them to sit in on meetings and make their voices heard (Schoenfield 2016).</p> | <p>In May 2017, the Women's Warrior Society, along with many other members of the Secwepemc Nation, traveled to the Imperial Metals headquarters in Vancouver, B.C.. The company was holding an investors' meeting, and the Women's Warrior Society wanted to express their stories about how the company has affected them, in hopes of encouraging other major companies to divest from Imperial Metals. <b>The group was not allowed into the meeting, and was met with violence at the entrance</b> (Murray 2016).</p> | <p>While Imperial Metals reported that the indigenous peoples in Likely would have a voice, the Women's Warrior Society reports that they were denied access to this disclosure and consideration. "Indigenous peoples insist they are not just another stakeholder to be consulted, they are rights holders whose identity, autonomy, and cultural survival are inextricably linked to their relationship with the land" (North et al. 2006: 216). North et al. argue that as the original peoples of a land, indigenous voices deserve priority consideration.</p> |
| 3 | <p>On August 7, 2014, B.C. Mines Minister Bill Bennett stated that the Mount Polley tailings dam collapse <b>was not an environmental disaster</b>, instead equating it to the "thousands" of avalanches that happen annually in British</p>   | <p>The chief of the Williams Lake Band responded to these reports, saying: "<b>I challenge anyone to come up to our territory and look at this disaster and say everything is fine</b>" (Hoekstra 2014).</p>   | <p>In addition to the Williams Lake Chief, many British Columbia news sources deemed Mount Polley the greatest environmental disaster in Canadian history. Bennett's statement shows the power of Imperial Metals to influence the</p>   |

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|   | Columbia (Hoekstra 2014).   |  | statements of government officials.  |
| 4 | <p>“The Canadian mining industry knows that there is a right way and a wrong way to operate. <b>Doing it right builds trust among communities and decision-makers, and reduces key business risks</b> – both critical elements to a company’s bottom line.” (Mining Canada, Corporate Social Responsibility Page).</p>                  | <p>“Mining companies enjoy a power and influence that far exceeds their actual economic contribution. To obscure this reality, mining companies <b>spin elaborate myths about the contribution of mining to the public good, and the necessity of corporate mining to local and national development, retold endlessly until fact submits to fiction</b>” (Joan Kuyek, <i>Community Rights and Corporate Social Responsibility</i>” p. 203).</p>   | <p>The notion of trust between corporations and locals is compromised by the abuse of power exemplified through the many disasters and destructive tendencies of Canadian mining companies.</p>  |
| 5 | <p>“Using our financial products and services, our customers’ export sales and investments totaled almost \$99 billion. We estimate that this helped generate \$63.9 billion of Canada’s GDP, contributed more than 4 cents for every dollar earned and helped sustain 525,400 jobs” (Export Development Canada Mission Statement).</p> | <p>“...these companies are, rather, integrally linked to the networks of violence in the countryside, and the configurations of elite Colombian power, which enable extractive capitalism to flourish, whatever the costs to displaced local communities of small-holding peasants, indigenous and Afro-Colombian populations, and artisanal miners, not to mention the workers sent to open the pits themselves” (Gordon and Weber 2016:150).</p> | <p>Export Development Canada’s privatization of the finances of the mining industry allow these companies to escape government control. Meanwhile, they have an immense investment in the corporations and their growth and whether they make ethical or economically efficient decisions.</p> |

Figure 12: Rhetoric and Reality Analysis in Canada

## Ecuador and Coregold Statements

| Ref. Number | Company Rhetoric   | Local Perspectives  | Analysis   |
|-------------|--|---|--|
| 6           | <p>“This law also said that there should be controls surrounding the volume of extraction--because they are nonrenewable resources-- and that they should control the indexes of production. <b>This is to say that they can determine how much gold, silver, quartz, whatever it be, is produced each year</b>” (Ramiro, Personal Interview).</p> | <p>“But this information is false. Why? Because the royalties that are presented--- if a company is producing the report of what is produced, <b>they are going to report here (holds hand at a low level), when in reality their production is here (holds hand higher up)</b>....What is this a product of? It’s a product of corruption” (Ramiro Rodriguez, Personal Interview, 2017).</p> | <p>Ramiro demonstrates a lack of trust in corporations and the enforcement of laws in Ecuador. Here, the history of police and political corruption in Ecuador makes a system of pollution control ineffective.</p>  |
| 7           | <p>“With [criminalization], the aim is to reduce the mining work that is not regularized and to promote the development of a responsible mining that strengthens the Buen Vivir of Zarumeños” (Agencia de Regulación y Control Minero).</p>  | <p>“When the Spaniards came, they pushed out the indigenous peoples who were in Zaruma. They came in and started mining the land that the indigenous peoples had been so careful with... And now... <b>they are trying to reclaim their land and the media is calling it ‘illegal mining.’</b> It’s unjust” (Mateo Sarmiento, Personal Interview, 2017).</p>                                  | <p>One of the first interviews I conducted in Ecuador with Mateo gave me an insight into the influence of the media in Ecuador on mining and social justice issues. The rhetoric of “illegal mining” in Ecuador has been used to benefit foreign companies and villainize indigenous peoples and locals.</p>                     |
| 8           | <p>“<b>It is a safe job. No one is worried about the safety today.</b> 100 percent of the mines on our property have a medical center on site, and on the processing plants as well.” (Juan</p>  | <p>“To the miners... whose lives are consumed by deep sinkholes-- dark, humid, and suffocating-- <b>Who puncture the rocks and breathe in the dust, gases, and bad smells, which mix with dreams and hopes sometimes failed.</b> All to find the precious gold which helps them subsist for the cost of the hard and sacrificial work in the mines” (Mora</p>                                 | <p>While CoreGold and Bira make claims about the safety of their mining practices, the locals to Zaruma express that the risks of mining are a great issue in their community. With the history of exploitation in the area, in addition to the continuation of risky events like sinkholes and high mercury concentrations,</p> |

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|   | <p>Carlos Manzur Loor, Personal Interview).</p> <p>“Health, Safety, Environmental and Community (low risk) – the Project has systems and procedures in place for addressing health and safety matters: employees are trained as appropriate and the mine employs both nurses and a health doctor for its operations. Environmental management plans are well established (and controlled from Quito) and the Company has strong community engagement with well established relations and commitments to the community” (Procter et al. 2014: 185).</p> | <p>et al. 2008, Dedication).</p> <p>“Very dangerous. There are rockfalls, collapses—I am sure you heard about the men stuck underground in Chile a few years past– that happens here too. It is never on the news. The electricity for light and transportation here sometimes creates explosions. <b>A lot of things, building up, they explode and people die. It is not good for the health over time to be breathing here too, it goes into your body you know?</b>” I asked him if the technology has developed to make it safer over the years. He said, “Yes, of course, it has developed a lot. But to develop from the majority of workers dying in their early 30’s to the <b>majority of workers dying in their mid-50’s...</b> that’s not enough. The government doesn’t regulate it but... but we have no choice this is where we work. This is where we have to work.” (Cristo, Mina El Sexmo Tour Guide, Personal Interview).</p> | <p>Zaruma continues to feel threatened by the health and safety risks of the mining industry.</p>   |
| 9 | <p>“Mining activities which occur inside the zone of exclusion will be considered illegal mining” (Agencia de Regulación y Control Minera: Translated from Spanish).</p>   | <p>“We have the ‘zone of exclusion’ that spans from over there (points toward west) to all the way out there (points down mountain). So that sounds good in theory, but <b>in practice, this area is still affected by the mines. You see, there’s not a lot of protection or security in the area.</b> There is just the local government, which can be corrupt. They take advantage of that. All it</p>  | <p>The government corruption in Zaruma makes the promises of a protected zone in which mining cannot occur hard for locals to trust. While Zarumeños feel that the Zone of Exclusion could help protect them from the health risks of mining, the runoff as well as the corruption in the area make the impacts of mining present</p> |

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|    |  | takes to process the metals is water and a ball of mercury. The byproduct, with the mercury, they can just throw it in the river and it goes straight to the zone of exclusion. The artisanal mines are worse, though. They are small, they have laws protecting them too” (Rodriguez 2017).   | in all areas, including the zone of exclusion.   |
| 10 | “Core Gold is committed to responsible business conduct, placing the utmost importance on respecting the safety and health of our employees, <b>protecting the environment, and respecting the human rights of all people, especially our employees and the residents of the communities in which we operate</b> ” (CoreGold CSR Statement). | “The worry now for us small companies is the money. The big companies do not worry about money. Those are the companies from other countries: China, Europe, Canada..... China. We’ve found ways to reuse the water here. They don’t have to do that. They use all the water they want and send it up the mountain. On the topic of environmental security and degradation, we here do the most. We clean the water 3 times before we send it out of our plant. You won’t find that anywhere else. The other companies do the minimum possible. <b>The foreign companies do not want to deal with the waste, they do not have the same interest in the land. They just pay to get it sent away. They do not want to spend the money to make sure it is done correctly, they are not from here</b> ” (Juan Carlos Manzur Loor, Personal Interview, 2017). | While CoreGold claims that they have a connection to the communities that they operate in, locals claim that the companies have no responsibility or investment in the community. They are concerned about the presence of these big foreign companies because they do not have the same respect for the land or the people of Zaruma that local companies do. |

Figure 13: Rhetoric and Reality Statements in Ecuador

## Concluding Remarks

### 4.1 Generalization

The cycle of exploitation of the land of vulnerable populations by Canadian mining companies is one that is difficult to break. While the cases of Ecuador and Canada are important, they serve as just one comparative example of a greater issue of spatial injustice in the resource extraction industry. Mining is key to the creation of new infrastructure and technology; however, alternatives to mining such as metal recycling and e-waste reduction should be considered in the future. The development of periphery countries is dependent on their ability to grow without reliance on foreign influences. Core countries have furthered their own development through the reaping of periphery country land. Meanwhile, the resource extraction industry leaves periphery countries in a perpetual state of underdevelopment, while disguising itself as an economic aid for the nations that it exploits (Rice 2007). This exploitation must be uprooted in order to address the continued struggles of vulnerable populations.

Ecuador's place as a developing country with a major economy built in their mining industry is important to study as it serves as a complex and interesting example for how injustices can be modified and ultimately reduced through the greater presence of rural communities in country politics. Canada's exploitation of its indigenous populations demonstrates how spatial injustices are not always international, but sometimes exist internally. Both of these places represent the power of amplifying marginalized voices to fight the skewed rhetoric surrounding resource extraction globally. This general structure of exploitation in resource extraction can be exemplified globally, but especially concentrated throughout rural areas of East Asia, West Africa, and South and Central America (North et al. 2008). Additionally, examples of exploitation which is similar to that of the Mount Polley Mine have been gaining more attention in the media recently, with some examples including the Standing

Rock conflict with the Dakota Access Pipeline, the conflict over Bears Ears National Landmark, and the Bougainville Mine in Papua New Guinea (Mander et al. 2006). While each of these examples have their own complexities and histories, the telling of the stories of vulnerable populations is a consistent key factor in the shift toward equity.

#### 4.2 Applications to Framing Question

At the beginning of this thesis, I proposed the question: How does resource extraction vary in rhetoric and reality? With this question to frame my research, I delved into both intensive and extensive analyses of various themes that spatial injustice has been attributed to. I looked at social issues, such as racism, nationalism, and classism, economic issues, such as vulnerability and risk pricing, systemic issues, such as media portrayal and development, and legislative issues, such as Corporate Social Responsibility and soft law. Through these analyses, I learned that each of these themes plays an important role in the continuance of spatial injustices in resource extraction. As a result, I have concluded that each of these issues must be addressed as parts that make up a whole, as their effects are immensely intertwined.

Spatial injustice is a continuing global issue. Through the case studies of Ecuador and Canada, and their interconnected industries, I have exemplified that vulnerable populations are so often targeted by resource extraction industries. I have concluded that neocolonialism, neoliberalism, and vulnerability are all factors that influence spatial injustice. It is important to study these systems and how they are applied in different cases in order to understand how we might be able to tackle these injustices in the future. Ecuador and Canada represent a spectrum of vulnerability and power, and demonstrate the duality of internal and international conflict.

I have continuously grown to understand that whether information comes from



interviews, government databases, scientific studies, or local media sources, it cannot be taken at face value. In every resource conflict, there are many stakeholders who present many truths. Hence, although this thesis is a study of discrepancies between rhetoric and reality in resource extraction conflicts, it is also a recognition that there is no single and true reality, but instead a conflict of multiple experienced truths accompanied by a series of rhetorics which work to communicate these truths. However, when the rhetoric of a stakeholder does not match their experienced truth, and is instead used to masquerade this truth, resource exchange becomes corrupt.

#### 4.3 Next Steps

In order to address this continuing issue, mining companies need to work with locals and participate in the creation of an international framework that includes legislation surrounding the impact of mining companies on their extractive sites. This legislation must also include some sort of monetary, social, or health benefit for the community that is long-term and enforceable, unlike the soft law of CSR.

The media and law enforcement need to prioritize marginalized voices such as those of people in rural areas and indigenous peoples in order to break a cycle of vulnerability. Promises made to these populations must be firm and not empty, like those that were made to the Secwepemc Nation. Companies and environmental agencies must work together to provide equal reparations for the damage they cause to land and locals. Rob Nixon suggests that the issue with environmental disasters is that responsible companies so often rely on the idea that “the causes and the memory of catastrophe [will] readily fade from view as the casualties incurred typically

pass untallied and unremembered” (Nixon 2011:8-9). Thus, ensuring that the realities of environmental disasters are told in mainstream and local media can help prevent further disaster and encourage major reparations be made.

Environmental assessments must be taken seriously and be thorough, no matter where the extraction is set to take place. Countries must work together, especially through international agreements like the Paris Treaties, to create a uniform standard for resource extraction laws. These laws must equate the precautions taken for extraction domestically to the precautions that are taken in foreign countries. However, as cited earlier in this paper, Voyles claims that “to ask for a just distribution of industrial pollution, waste sites, mines, unsustainable and toxic labor, and so on, is not to ask for redistribution but rather to ask for modernity to throw up its hands and dismantle itself” (Voyles 2015: 25). The resource extraction injustices cannot be solved through small steps, but rather through large systemic change. Norah Bowman, in her essay on the Mount Polley disaster, argues that neoliberalism is the first system we must reevaluate. She states of neoliberalism: “I fear, rather, that there is a vision, and it is one of frightening clarity and efficiency. It is not the Secwepemc vision. It is not an indigenous vision; it looks no further back than the last budget, and ahead only to profits,” (Bowman 2017: 33). She suggests both local and national resistance as a way to approach the fight against neoliberalism. She cites resistance from the Secwepemc Nation--such as the Mount Polley seminar-- as good examples of this.

As new president Lenin Moreno has begun to take steps to limit the growth of mining operations throughout Ecuador, the next steps would be to expand these limitations to reduce pollution and risk of currently operating industries throughout the country. Zaruma would benefit from having representation in the larger government by locals, especially those who are directly

affected by the mining industry. Zaruma could also benefit from an expansion of their zone of exclusion, as well as better enforcement of this area. In a personal interview with Ramiro Rodriguez, he explained that the zone of exclusion aims to protect Zarumeños from the hazards of gold mining, and it cannot do that unless there is proper and equal enforcement. He argues for a larger presence of rural residents in Ecuador's political climate, so that marginalized and vulnerable perspectives can be amplified (Rodriguez 2017).

In the case of Imperial Metals, the Secwepemc Nation was largely left in the dark about the risks of the mine before, during, and after the spill. Legislation surrounding extraction should be applied to both the land of the nation, as well as of any nations it might affect. For example, actions such as the creation of environmental impact statements should include the impact on indigenous nations when the extraction takes place near borders. On top of this increased communication, the populations which surround the extraction should receive some form of compensation for the externalities of extraction, no matter how small those externalities may be. Whether it is noise pollution or physical pollution, extractive industry almost always makes an impact on the populations surrounding it, so this compensation should be mandatory.

On a broader scale, the solution to the spatial injustice in resource extraction must be addressed through uprooting systems of oppression. As I have discussed through this paper, extractive industry is continuously allocated more heavily in the spaces that are occupied by vulnerable populations. The only way to deal with this issue in a way that will be sustained both globally and temporally is to conquer its roots. As the Secwepemc Nation has demonstrated, resistance is not always met with justice. However, the resistance of the Secwepemc Nation to the Mount Polley disaster has amplified their voices in the media. Communities within and

outside of Canada have become aware of the injustice to these people, creating a larger support for their resistance and future resistance against similar issues. This mobilization of a larger community has had immense impacts in other resistances against resource extraction, such as the Standing Rock resistance against the Dakota Access Pipeline in 2016. The enormous community that gathered for the resistance, whether it was physically at Standing Rock or supporting the Water Protectors in the media, created an unavoidable awareness of the issue throughout the United States. Resistance to extraction helps uproot systems of oppression, power, and spatial injustices through this increase in awareness and mobilization.

The Mount Polley spill has also been cited as an example of the dangers of mining by protestors of other proposed extraction projects, such as the PolyMet mine in Northern Minnesota (Meador 2014). The recurrence of this spatial oppression around the world shows the prevalence of neocolonialism in the form of environmental racism. However, acts of resistance can contribute to the awareness of this continued oppression, helping uproot slow violence and environmental racism through the grassroots empowerment of vulnerable communities.

#### 4.4 Further Research

While I have aimed to write a thesis that encompasses many theories and themes related to resource extraction and spatial injustice, this is an extremely large and growing topic. I used mining in Ecuador and Canada to create a focus that was manageable as well as exemplary. Thus, a continuation of this thesis could look into the various applications in other sectors of exploitation. It could also look at other case studies of these relationships. This research can be used to identify examples of the forces of neoliberalism, capitalism, and neocolonialism. We can bring in the theories of Voyles, Cutter et al., Gunder-Frank, and Rice and apply them to a variety

of other spatial injustices to understand the diversity of these issues.

Another branch of research could seek to provide alternatives to the resource extraction industry in general. While Gerrard's theory that NIMBY frequently targets vulnerable populations is important to create equity, the shift toward the idea of NOPE: Not On Planet Earth is practically impossible with the current global dependence on resources. Thus, we need innovative solutions, i.e. renewable energy for resources such as oil and coal, extensive recycling practices for resources such as hard metals and ores, and shifts in societal value for extracted resources like gold and diamonds.

I, personally, hope to explore applications of this thesis in the context of the PolyMet mining proposal in Northern Minnesota. I aim to use the lessons I have learned and the conclusions I have drawn while writing this thesis to educate stakeholders in Northern Minnesota about the complexities of mining project. I hope to help stakeholders understand each other's perspectives, and expand their minds to create a compromised plan that does not sacrifice the livelihoods of marginalized peoples. Ultimately, within any resource extraction conflict, it is important to remember the roots of rhetoric and reality and their impacts. This understanding can help create a world which uses and extracts resources in an ethical and equitable manner.

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