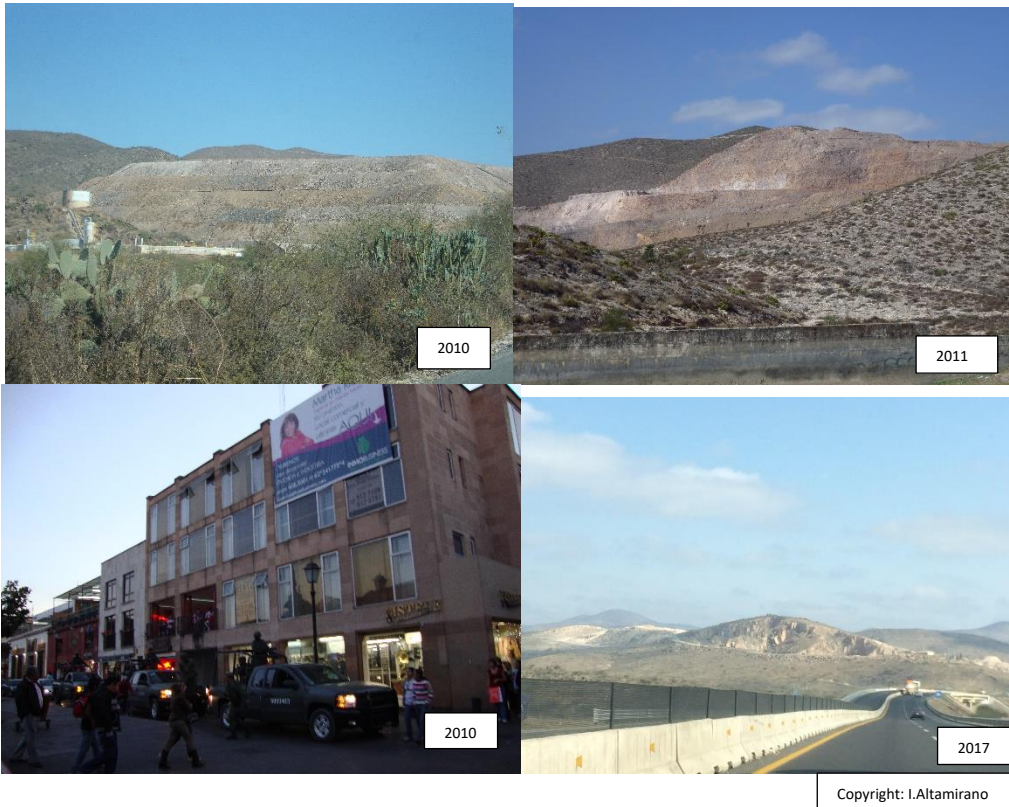


# Canadian mega-mining in Central Mexico: Ecologically Unequal Exchange, Violence and Organized resistance 1992-2016



Degree of Master of Science (Two Years) in Human Ecology: Culture, Power and Sustainability  
30 ECTS

CPS: International Master's Programme in Human Ecology  
Human Ecology Division  
Department of Human Geography  
Faculty of Social Sciences  
Lund University

Author: Ingrid Altamirano  
Supervisor: Alf Hornborg  
Term: Spring 2017

Department:	Human Geography
Address:	Lunds Universitet, Kulturgeografi, Sölvegatan 10, 223 62 Lund
Telephone:	046-222 17 59
Supervisor:	Alf Hornborg

Title and Subtitle:	Canadian mega-mining in Central Mexico: Ecologically Unequal Exchange, Violence and Organized resistance 1992-2016
Author:	Ingrid Altamirano
Examination:	Master's thesis (two year)
Term:	Spring Term 2015

**Abstract:**

This thesis examines the historical dynamics of ecologically unequal exchange, coloniality of power, and systemic violence embedded in mining activities. With the use of a combined Marxist and De-colonial critical approach, it accomplishes a political ecology analysis of Canadian mega-mining in central Mexico and the socioenvironmental conflicts related to it, particularly in Cerro de San Pedro and the sacred territory of Wirikuta, between 1992-2016. In like manner, the research focuses on how the discourses and promises of development, economic growth and sustainability have been used to conceal processes of accumulation by dispossession, often accompanied by systemic violence and militarization that aim to de-articulate opposition and resistance movements in contexts of exacerbated poverty, social inequality and environmental degradation. The present study was carried out through fieldwork, participant observation and in- depth interviews in Central Mexico during December 2010, December 2011 and February-March 2017.

**Acknowledgments:**

This thesis would have never been possible without support from the research team within the program “The world in the 21st Century”, supervised by D. John Saxe Fernández and hosted by the Interdisciplinary Research Centre for Sciences and Humanities at the National Autonomous University of Mexico, UNAM. Funding from the project PAPIIT IN302710 “Geo-economics and Geopolitics of the Capital in a time of crisis and hegemonic transition: USA-Latin America” (2010-2012), made possible to conduct fieldwork in 2010 and 2011. I would like to deeply thank the *Juanas* for their complicity and camaraderie during all these years. We started this journey together because we had to break the silence imposed on our generation.

I am grateful to my supervisor Alf Hornborg, for his encouragement, supportive and thoughtful guidance during the writing and revising phases. Thanks also to all the people who have contributed to this thesis in different ways: the key informants and activists from FAO and REMA, Astrid Bahari and Bernadette Barth for their proofreading and Andrea Urbina for helping me out with map editing. Besides, I would like to thank Rosita, Rodolfo and my extended Mexican- Swedish family for their constant support.

But most of all, thanks to Raja Bahari, Emiliano and hermanit@ for being my endless source of love and inspiration.



## Table of Contents

<b>Introduction</b> .....	p. 6	
Hypothesis.....	p.7	
Lines of inquiry.....	p. 8	
On the approach and methodology.....	p. 8	
Types of primary data/material that the research generated or gathered.....	p.9	
Secondary data/material used.....	p. 9	
Concepts applied in gathering data and interpreting phenomena.....	p.9	
Spatiotemporal frame of research activities 2017.....	p. 9	
Thesis Outline.....	p. 10	
<b>Chapter 1.</b>		
<b>Ecologically Unequal Exchange &amp; Coloniality of power:</b>		
<b>A historical Mexican perspective on mining</b>		
1.1 Latin America as geostrategic mineral reserve.....	p.11	
1.2 Mexico as geostrategic mineral reserve.....	p.14	
1.3 Environmental conflicts: Linking power, culture and sustainability.....	p. 16	
<b>Chapter 2</b>		
<b>Political ecology of contemporary mineral extractivism in Central Mexico</b> .....		p.18
2.1 The part played by the Mexican elite: <i>Tecnócratas</i> and economic dependency.....	p. 19	
2.2 Legal framework and neoliberal reforms in the 90´s.....	p.20	
2.3 Impoverishment and militarization of the country .....	p.22	
2.4 Free market vs armed neoliberalism .....	p.25	
<b>Chapter 3</b>		
<b>Canadian Open-pit mining projects in Central Mexico: Whose national interest?</b>		
3.1 Why mega-mining or open-pit mining? .....	p. 26	
3.2 Positioning Canadian mega-mining in Latin America and Mexico .....	p.28	
3.3 The paradoxical status of mining in Mexican Law vs Canadian interests.....	p.30	
3. 4 Mexican embodied land in mega-mining concessions.....	p. 31	
3. 5 Embodied water in mega-mining concessions.....	p. 32	
3.6 Canadian mining in numbers.....	p. 33	
3.7 Unequal Exchange between Mexico and Canada.....	p. 34	
3.8 Legitimizing environmental degradation: Discourses on sustainable mega-mining for development .....	p. 36	

3.9 Canadian mining and socioenvironmental conflicts in Central Mexico.....	p. 38
<b>Chapter 4.</b>	
<b>Case Studies</b>	
4.0 Further research.....	p. 40
4.1 Cerro de San Pedro. The pioneer.....	p. 40
4.1.1. Historical, natural and cultural heritage in Cerro de San Pedro (CSP) .....	p. 40
4.1.2. Exploration and production phases.....	p. 42
4.1.3 The conflict .....	p. 42
4.1. 4 Legal battle against SXMC is won but operations continue.....	p. 43
4.1.5 Fieldwork assessment.....	p. 46
a) Commitments made vs findings.....	p. 47
b) Mining regulations vs findings.....	p. 48
c) Updated findings. Field trip 2017.....	p. 49
4.1.5 Opposition movement and resistance.....	p. 50
4.1.6 From FAO to REMA.....	p. 51
4.2 Wirikuta. Indigenous rights and international solidarity .....	p. 51
4.2.1 Historical, natural and cultural heritage in Wirikuta .....	p. 51
4.2.2 The conflict and legal battle .....	p. 53
4.2.3 Field work assessment.....	p. 55
4.2.4 Opposition movement and resistance.....	p. 56
<b>Chapter 5 - Concluding Remarks</b>	
On how the promise of development turned into a neo-colonial nightmare.....	p. 57
<b>Notes</b> .....	p. 63
<b>References</b> .....	p. 68
- <b>Appendixes</b>	
1. Appendix 1. Maps.....	p. 77
2. Appendix 2. List of Canadian companies with mining projects in Mexico.....	p. 79
3. Appendix 3. Data Tables & Graphs.....	p. 85
4. Appendix 4. Fieldwork pictures.....	p. 88

## INTRODUCTION

It would be difficult to recall the number of times a text has started by acknowledging that we live in times of crisis and despair, which is certainly the case of our time, but I would rather open this dissertation by stating that such an assumption is simply not enough. Never before in the history of humankind has the atmospheric concentration of CO<sub>2</sub> exceeded 400 parts per million<sup>1</sup> and never before has there almost been more plastic bags in the ocean than fish. During recent years we have depleted more resources than during the previous century, and everyday people are forced to leave their countries by the threats of war, death and weather chaos. And still, we have not yet defeated nor effectively questioned the global paradigms ruling our lives.

It is, therefore, necessary to let our imagination conceive other worlds, other theoretical and analytical tools to explain what we witness today and what is yet to come. Ours, might not be a time of crisis the way we have experienced before, since there are major changes in multiple spheres that we still have no proper concepts to describe. Warfare, alienation and annihilation are part of what we witness today but resistance, hope and solidarity are other sides of the same process.

The project of capitalist modernity proves unable to contribute to freedom, liberation, and imagination. Some might say it is because modernity never aimed to fulfil those values; others would affirm that the project of modernity failed, ending up kidnapped by a reduced global elite that has largely benefited from its supporters, the ones who believe in promises of progress, prosperity and development. But, how did we end up where we are as humanity? And which are the promises we believed in? There is not one single answer to it.

With this background, my major concerns have to do with natural resources extraction and use, worldwide but particularly in Latin America and Mexico; the ecological implications of our lifestyles; the limits to growth; the social and cultural consequences of economic progress and the distribution of wealth. Among other concerns are the

right to have a good life; the systematic violence we have learned to live with; the right to exist and define autonomous-independent projects to accomplish survival, not only for the coming generations in a few decades but for the survival of at least the next hundred generations.

Resource exploitation has been historically connected with promises of prosperity, progress, liberation and in our time, with the legendary promise of development. The idea of a linear progress that will “naturally” reach every society sooner or later, and the idea that some “collateral” sacrifices; say cultural, social or human, are necessary in order to ensure a better material life in the future. This thesis is about those effects and the way they are related to Canadian mega-mining in central Mexico.

In 2010 and 2011, I conducted, together with a group of four Mexican students from the National Autonomous University (UNAM), fieldwork in central Mexico, San Luis Potosí, particularly in Cerro de San Pedro and Cerro del Quemado (Wirikuta) in order to explore the expansion of Canadian mega-mining and its dynamics. Our findings, however, were not published in written form. Therefore, this Master thesis aims to fill in the gap of those hours of work, discussion, disillusion and astonishment, while incorporating new findings encountered during a personal fieldwork trip in 2017 to the same geographic area.

My research starts from the assumption that colonial domination is over but that the power structures of colonialism still linger in Mexico. By analysing the historical dynamics of **ecologically unequal exchange** and the **systemic violence** embedded in mining activities, specifically Canadian mega-mining, I aim to show that the discourses on development, economic growth and sustainability have been used to conceal processes of **accumulation by dispossession**, often accompanied by systemic violence and **militarization** that de-articulate opposition and resistance movements in a context of exacerbated poverty, social inequality and environmental degradation.

This enterprise, that can accurately be characterized as **neo-colonial**, since accumulation in the core capitalist countries is accomplished (in this particular case) through mineral resource exploitation in “less developed countries” such as Mexico.

Accordingly, the argument, analytical framework and methods are based on the following **lines of inquiry**:

- What are the historical characteristics of mining in Mexico?
- What is the web of causality behind Canadian mega-mining in Mexico?
- How can concessions be given to companies that violate legal procedures to get mining permissions and how are the environmental impact assessments conducted?
- What is the current situation of socio-environmental conflicts in Central Mexico, particularly in Cerro de San Pedro and Wirikuta?
- How have the conflicts evolved in the past seven years (2010-2017)?
- Why can this topic be understood as a case of ecologically unequal exchange and coloniality of power?

The **spatiotemporal frame of studied phenomena** covers 1992-2016 in Central Mexico, particularly San Luis Potosí's socioenvironmental conflicts, and my **group of study** is constituted by the local population affected by the implementation of Canadian open pit mining projects in Cerro de San Pedro and Wirikuta, México.

On the approach and methodology

A combined Marxist and De-colonial critical approach is used in this research as means of accomplishing a political ecology analysis on Canadian mega-mining in central Mexico and the web of causality behind it. In similar fashion, having these two main analytical and theoretical tools in dialogue constitutes a way of advocating for an interdisciplinary understanding of reality based on a combination of theoretical and methodological approaches, which interaction results in a more comprehensive study of socioenvironmental, political, economic and cultural issues.

Therefore, the methodology chosen draws on both qualitative and quantitative approaches. A quantitative analysis based on statistics related to Canadian mega-mining and embodied resources has been dedicated one chapter, while the rest of the texts draws on qualitative methods.



∞ Types of primary data/material that the research generated or gathered:

Interviews, testimonies, pictures, information obtained during fieldwork activities in 2010, 2011 and 2017; direct observation.

In depth semi-structured interviews and short opened interviews were conducted in December 2010, December 2011 and February-March 2017. All interviews conducted with activists and representatives of social movements have been anonymized. The interviewees kept their original names only under previous consent.

∞ Secondary data/material used:

Official websites (Mining Watch, Mining Companies studied), Government information, national and international statistics, articles written on the subject and literature review. (See the reference list at the end of the text)

∞ Concepts applied in gathering data and interpreting phenomena:

Ecologically unequal exchange, coloniality, colonial domination, environmental load displacement, geostrategic mineral reserves, political ecology, colonial elite, national interest, sovereignty, accumulation by dispossession, militarization, armed neoliberalism, environmental degradation, environmental racism, poverty, violence, systemic violence, state violence, war on drugs, repression, extractivism, sustainability, culture, power structures, economic dependency.

∞ Spatiotemporal frame of research activities 2017:

a) December 2016 - January 2017. Location: Sweden.

State of art, documents, readings, preparing for fieldwork.

b) January 2017- 10 March 2017. Location: Central Mexico.

Fieldwork: Collection of official documents, interviews, library visits, document environmental degradation by collecting photographic material and testimonies.

## Thesis Outline

The first two chapters of this dissertation are dedicated to the background, context and theoretical framework. **Chapter 1** draws on a Mexican historical perspective of mining in light of the concepts of Ecologically Unequal Exchange (EUE) and coloniality of power. It explores the cases of Latin America and Mexico as geostrategic mineral reserves for the core economies and elaborates an argument on the connections between power, culture and sustainability expressed in socioenvironmental conflicts.

Likewise, **Chapter 2** combines a Marxist/ de-colonial analysis of Mexican political ecology, emphasizing the role of Mexican elites in the ongoing despoliation dynamics, in which impoverishment, economic dependency, structural reforms, militarization and violence are deeply intertwined.

In the **third chapter**, I offer a compilation and detailed analysis of various statistics on Canadian mega-mining in Mexico and highlight the importance of studying the particular cases of mega-mining and resources embodied in it. Particularly, I suggest that by reading the gross numbers of Mexican- Canadian trade in the area of metallic mining, and others, one can easily see that Mexico and Canada's material flows and relations area based on premises of unequal exchange.

In **Chapter 4**, I discuss my two case studies of socioenvironmental conflicts in Cerro de San Pedro and the sacred territory of Wirikuta. In like manner, I present the findings obtained during fieldwork in 2010, 2011 and 2017 and give brief recommendations for future research.

Finally, **the fifth section**, summarizes the findings and importance of this study, explaining how the promise of mega-mining development has turned into a neo-colonial nightmare that perpetuates the colonial dynamics of accumulation by dispossession, sacrificing human lives and nature for the maximization of corporate transnational profits.

## 1.-Ecologically Unequal Exchange & Coloniality of power:

### A historical Mexican perspective on mining

The division of labor among nations is that some specialize in winning and others in losing. Our part of the world, known today as Latin America, was precocious: It has specialized in losing ever since those remote times when the Renaissance Europeans ventured across the ocean and buried their teeth in the throats of the Indian civilizations. Centuries passed, and Latin America perfected its role. *Eduardo Galeano (1973: 11), Open Veins of Latin America*

#### 1.1 Latin America as geostrategic mineral reserve

Historically, Latin America has been a provider of raw materials, minerals and other strategical natural resources which exploitation has, above all, facilitated economic growth in the core capitalist countries. It was only recently that extractivism<sup>2</sup> was associated with the local economies and came to be considered an agent of national economic growth in the region. Nevertheless, in order to de-mystify its developing potential it is necessary to look into the historical characteristics of global natural resources flow and the logic it has followed.

The discovery of the Americas in the 16th century gave Europe a privileged position due to the “control of gold, silver, and other commodities produced by the unpaid labour of Indians, blacks, and mestizos.”<sup>3</sup> On top of that, the control of the area became a geopolitical advantage since all those commodities had to pass through the Atlantic to reach the global market. Therefore, Latin America was from the very beginning incorporated to the global capitalist system as a provider controlled by a foreign entity’s economic interest.

A foreign entity whose access to faraway natural resources was guaranteed by the existence of new technology; advances that enabled Spain and Portugal to do maritime explorations in order to conquer new territories, the availability of modern engines and labour force that made big boats move across different continents and the technological developments that facilitated transporting natural resources from the colonies to the conquerors’ land.

That technology was to improve drastically with the shift to fossil fuels as a source of mechanical energy in Great Britain. From then on, according to Hornborg,<sup>4</sup> “the concept of technology...signified the seemingly magic capacity of some humans to

improve their conditions through sheer ingenuity. Technology thus continued to be perceived as more or less completely a product of inventiveness, without regard to the particular kinds of global exchange relations on which it depended.” This means that metropole- satellite relations started to be understood merely in economic terms of exchange rather than in terms of material flows and power structures, and even more so after the Latin American colonies had gotten their political and administrative independences signed on paper in the 19th century.

In other words, the idea of a world in which “newly independent” countries and former metropolises could establish commercial relations on equal terms, as if both sides had started over from the same point of departure, was slowly incorporated to new discourses of free market, freedom of commerce and years later to the ideas of economic growth, progress and development.

Already in 1967, André Gunder Frank presented his metropole- satellite, dependency theory<sup>5</sup>, affirming that the core capitalist countries developed under the premises of satellite areas being economically exploited for the profit of metropolises whose economic growth and development could only be explained by the underdevelopment, pillage and poverty of those satellites. Gunder Frank’s theory did not consider the ecological dimensions of this exploitation or **accumulation by dispossession**<sup>6</sup> but **coloniality**<sup>7</sup> was an indispensable part of it.

Profound structural dependency was the main characteristic of colonial power relations where one entity was the winner, and the other was the loser, or the producer for someone else’s benefit, simply because that relation was never based on equal terms of exchange. Colonial regimes draw on looting, spoliation and racism<sup>8</sup>. But far from disappearing, the power structures established during colonial times survived the independence struggles in Latin America. This can be easily observed in the economic structures of those countries, in the way their productive chains are articulated and even their political compared histories.<sup>9</sup>

With this in mind, Clark and North identify the historical booms and busts of mining economies and divide them in three stages or mining waves. The first great mineral export boom in Latin America, according to their classification, took place from the 16<sup>th</sup> until the mid-19<sup>th</sup> century, bringing prosperity to Spain and contributing at the same time to set in motion the early stages of the European Industrial revolution. Notice that

the consequences for local people reached genocidal dimensions and contributed nothing to their well-being since the aim of the colonial model was the extraction of precious metals for the economic benefit of European powers.<sup>10</sup>

The second great wave of mining started at the end of the 19<sup>th</sup> century “to satisfy the needs of the later stages of the Industrial Revolution in Europe and North America”<sup>11</sup> via the extraction of copper, tin, industrial minerals and oil. Precious metals had a secondary role during this wave. Most of the mining activities were organized in enclaves, “isolated from the functioning of the national economies: the operations were almost always owned by foreigners (mostly U. S. - based transnational corporations) who repatriated profits to their home countries and investors.”<sup>12</sup>

And finally, the third stage started at the end of the 20<sup>th</sup> century, between 1980-1990’s driven once again by the external demand of industrialized countries, including some Asian powers. As Clark & North emphasize “the growth of mining was so rapid that by 2000, Latin America accounted for 30 percent of world mineral investment, up from 12 per cent in 1990.”<sup>13</sup> The main problem during this stage is, as it was before, that Latin American countries lack any kind of control concerning the demand and the prices of minerals. Furthermore, neo-liberal policies effectively reduce the capacity of State intervention to regulate mineral extraction in favour of the national economy and to protect people from the environmental consequences of it.

History shows that mineral extraction in the past resulted in environmental degradation and brought only momentary prosperity to the countries when the State intervened in mineral extraction by redirecting the profits to national projects and by means of taxes paid by the foreign companies, which were the cases of Chile and Mexico in the late 1930’s, for example.

An important lesson learned from the past is that:

as the ores were stripped from the ground and extractive activity eventually declined during the later years of Spanish colonial rule, virtually all the mining regions of the Empire were left environmentally degraded and mired in poverty. The first great mineral export boom in Latin America, then, had dire consequences for people and land alike. Indeed, Potosí [the most prosperous mining town during Spanish colonial rule, in Bolivia<sup>14</sup>] today is one of the poorest districts in the entire hemisphere.<sup>15</sup>

When we refer to the region as a mineral reserve for European countries, and later on for the United States<sup>16</sup> or even for Canada, the idea of **coloniality of power** as a constitutive element of capitalist power becomes significant for revealing the true nature of resources flows. Specifically, the imposition of the idea that some geographic areas are racially or ethnically inferior and their main function is to serve as providers of material resources for core areas.<sup>17</sup>

Yet, the concept **ecologically unequal exchange**<sup>18</sup> reveals another side of the same coin that has often been ignored. Through this Marxian understanding of reality, power refers not only to the capability of coercing someone else to act for your own political and economic benefit but to the capacity of displacing *environmental and social loads* to a different part of the world. In this manner, the economic growth accomplished via resources and mineral extraction in Latin American countries guaranteed not only a geopolitical privileged position for the metropolises since colonial times, but it also transferred environmental degradation and social unrest to the countries where extractivist projects were executed.

Such a process was justified by the inferiority of Latin Americans, “savages who had cultures instead of civilizations”<sup>19</sup> and who could not understand the economic progress that was about to reach them; such a dynamic has followed a systematic pattern until today. Environmental loads and social unrest displacement, I consider, are among the reasons why Capitalism is still advocated as a desirable, progressive and sustainable system, since the speeches that support it emanate from those core countries who have had the possibility of displacing and neglecting numerous negative impacts of its effects to an “out of sight” area they can ignore.

As the main *ecologically unequal exchange* scholar affirms, “a population’s perceptions of technology, economy, and ecology are conditioned by its position within global systems of resource flows, and how mainstream modern perceptions of ‘development’ can be viewed as a cultural illusion confusing a privileged position in social space with advanced position in historical time.”<sup>20</sup>

## 1.2 Mexico as geostrategic mineral reserve

In Mexico, “mining operations began almost immediately upon the fall of the Aztec capital of Tenochtitlan in 1521.”<sup>21</sup> Mexican population was devastated by new

European diseases, as well as by the harsh forced labour in mines, under terrible conditions that led to quick extermination.

Silver and gold industries were so important during colonial times that some scholars consider the economic history of Latin America became a history of mining with the Spanish conquest,<sup>22</sup> and it was actually mineral extraction in Mexico, Peru and Bolivia that became the base of Spanish colonial wealth. In this matter, Celso Furtado affirmed that “between 1530 and 1650 alone, Spain received 181 tons of gold and 16,887 tons of silver from its colonies.”<sup>23</sup>

It is important to specify that we can talk about a permanent colonial interest on Mexican mineral resources, as something that goes beyond the direct Spanish domination between 1521-1827. In fact, subsequent to the independence struggle, Spain continued to have direct influence in the country. Moreover, after the colonial rule, France, England, and United States of America (USA), took advantage of the possibility of increasing their power in the country and eventually interfere politically for their own economic and political benefit.

At the beginning of the 20<sup>th</sup> century, specifically in 1908, “there were 1,030 mining companies in the country with a combined investment value of 363 million gold pesos. Of these, 843 were U.S.-owned, 40 English-owned, and 2 French-owned, with 68.9 percent, 20.1 percent, and 3.3 percent of the total investment, respectively.”<sup>24</sup> Such composition of capital in the sector shows that the economic benefit from mineral extraction was still highly concentrated in foreign companies.

According to the Mexican critical scholar José Luis Ceceña, it was only during Lázaro Cárdenas’ presidency (1934-1940) that the country witnessed a general progressive tendency to limit the power of foreign companies and monopolies, although mainly for the oil sector.<sup>25</sup> Therefore, Delgado Wise & Del Pozo, argue that it was not until the beginning of the 1960’s that a real “mexicanization” process occurred in the mining sector. This meant that the national legal framework was changed in order to establish limits to foreign investment in the extractive sector and would then prioritize the participation of Mexican enterprises in mining activities.<sup>26</sup>

Nevertheless, such a process has been reverted by neoliberal reforms since the 1980’s, as we will analyse in Chapter 2, opening the debate even within international financial institutions, such as the Inter-American Development Bank (IDB), on how to

ensure that exploitation of natural resources effectively benefits the most vulnerable people after hundreds of years of mineral extraction.<sup>27</sup>

The fallacy of the Mexican independence, as if once and for all foreign interests had stopped interfering in the political life and the course of national economic policies, is a fundamental argument to understand the mining scenario we face today. According to Pro-Mexico<sup>28</sup>, due to its large reserves of key minerals and because of a business environment that favours investment, “Mexico is nowadays one of the major players of the global mining industry. The country ranks as the world’s ninth largest mining producer and the fourth in Latin America, being also the world’s largest producer of silver and bismuth, the fifth largest producer of lead, sixth largest of zinc, ninth of gold and 10th of copper.”<sup>29</sup>

However, even if Mexico had gotten payment from foreign powers for all the extracted minerals through history and this was positively reflected on the trade balance<sup>30</sup>, the monetary system does not take into account the value of the land embedded in the economic activities, the lives that bad working conditions cost nor the unpaid labour or underpaid labour employed in them. Those elements are among the focus of this study, together with the colonial system they are rooted in.

### 1.3 Environmental conflicts: Linking power, culture and sustainability

The fact that natural resources flow and power relations in Latin America, particularly in Mexico, have been deeply colonial and based on premises of ecologically unequal exchange (from now on *EUE\**), has resulted in a variety of conflicts where power, culture, sustainability and the current economic system are in dispute.

There is a big number of studies and scholars referring to an ecological distribution of conflicts. For instance, according to Joan Martínez-Allier, “the term has been used since 1995 to describe social conflicts born from the unfair access to natural resources and the unjust burdens of pollution, in other words, environmental gains and losses are distributed in a way that causes conflicts.”<sup>31</sup> Notice that in collaboration with students, academics and activists, Martínez Allier has coordinated an Atlas of environmental justice, within the project of Environmental Justice Organisations, Liabilities and Trade<sup>32</sup>(EJOLT) where many of the current global conflicts can be observed, including the ones presented in this text.<sup>33</sup>



Social-environmental conflicts can of course be analysed from multiple approaches other than the ecological, but we need a concept to describe them. Such conflicts can never be understood separately from the political realities where they occur and in our cases of study, Mexico's political and economic history becomes vital for further explanations on these disputes, as we will see in next chapter.

The present thesis focuses on socio-environmental conflicts in Central Mexico as a consequence of Canadian mega-mining, particularly in the state of San Luis Potosí. It is the belief of the author that the dynamics analysed in this area demonstrate a clear example of socio-environmental injustice and ecological unequal exchange, problems that are not exclusive to Mexico in the 21<sup>st</sup> century.

Natural and mineral resources extraction is a vital core of economic growth and accumulation in Capitalism. In that process, sustainability concerns have hardly ever been considered. On the contrary, the main concern has been to save time and space in order to maximize profits. Examples of this logic can be found in extractive industries, crop plantations and fishing, among others.<sup>34</sup> In this tenor it is important to keep in mind Martínez-Alier's warning on the fact that "the political platform of the actual extraction projects does not matter to the result measured in social metabolic terms and biophysical terms."<sup>35</sup>

## Chapter 2. Political ecology of contemporary mineral

### extractivism in Central Mexico

The conquest of Mexico and Peru led to the discovery of enormous new sources of precious metal, and these were exploited ruthlessly and systematically, even to the point of largely exterminating the surrounding populations to extract as much precious metal as quickly as possible. (...)

"Mining operations began almost immediately upon the fall of the Aztec capital of Tenochtitlan in 1521. While we are used to assuming that the Mexican population was devastated simply as an effect of newly introduced European diseases, contemporary observers felt that the dragooning of the newly conquered natives to work in the mines was at least equally responsible (...) The bodies of those Indians and of the slaves who died in the mines produced such a stench that it caused a pestilence, especially at the mines of Oaxaca. For half a league around these mines and along a great part of the road one could scarcely avoid walking over dead bodies or bones, and the flocks of birds and crows that came to fatten themselves upon the corpses were so numerous that they darkened the sun. (Taken from "The Conquest of America," Tzvetan Todorov: 1984:137-38, in Graeber 2011: 311, 314)

The need for studying mineral extractivism in Central Mexico, and the web of causality behind it, obeys to the depletion of resources and environmental degradation derived from ongoing mineral extraction projects. While preaching development, sustainability and better living standards for the citizens, mega-mining corporations, mainly Canadian, are currently dispossessing people from their territories, destroying the landscape where they reproduce their lives and culture, and risking the living conditions of future generations. All thanks to the omissions, exceptions or even the complicity of the national State.

In this sense, a political ecology analysis turns out pertinent for revealing the political forces underlying mega-mining in this geographic area and studying the ecological dimension of politics and the political dimension of ecology, or the politics of environmental conflicts that have to do with broader social conflicts. According to Robbins, *political ecology*<sup>36</sup> refers to a "field that seeks to unravel the political forces at work in environmental access, management, and transformation."<sup>37</sup>

The following pages present a political ecology study that makes use of the two main analytical and theoretical tools developed in the first chapter: *EUE* and coloniality of power. By having these tools in dialogue I subscribe not only to an interdisciplinary understanding of reality based on a non-conventional combination of theoretical approaches, but also to an understanding of reality in which nature is not an external entity outside the realm of human beings.

In this Chapter, I combine a Marxist and De-colonial analysis of Mexican political ecology, highlighting the role of Mexican elites in the ongoing despoliation dynamics, in which impoverishment, economic dependency, structural reforms, militarization and violence are deeply intertwined.

The way Canadian open pit mining projects are implemented, the conflicts they derived in and the multiple irregularities around them cannot be explained by a single cause, but by a multiple scale elements<sup>38</sup> or a quite complex web of causality.

## 2.1 The part played by the Mexican elite: *Tecnócratas* and economic dependency

Mexico is an extraordinarily easy country to dominate, as it necessary to control only one man: the President. We must abandon the idea of installing an American citizen in the Mexican presidency, as that would only lead us, once again, to war. The solution requires more time: we must open the doors of our universities to young, ambitious Mexicans and make the effort to educate them in the American way of life, in our values, and in respect for the leadership of the United States. Mexico will need competent administrators, and over time, these young people will come to occupy important positions and will eventually take possession of the presidency. And without the United States having to spend a single cent or fire a single shot, they will do what we want: And they will do it better and more radically than we ourselves would have done. **Robert Lansing, Woodrow Wilson's State Secretary, 5<sup>th</sup> February 1920 in García Cantú, Idea de México, 2003: 10.**

Who could have imagined that Robert Lansing's words, expressed in the 1920's, would become a prophetic and accurate description of the Mexican political elite's roll in the indiscriminate accumulation by dispossession we witness today. It would be unfair and naive to blame solely the "external market forces" for the wholesale opening of all economic sectors in Mexico. The implementation of neoliberal reforms derived from the *Washington Consensus* would never had been possible without the endorsement of Mexican politicians. In fact, it was exactly in the 1980's when a big number of upper class young Mexicans, practically all men, had just returned to Mexico after having completed their undergraduate or graduate programs in some of the most prestigious technical Universities in the USA. Many of them belonged already to the political elite in Mexico and others were ready to be incorporated in a project of political modernization.<sup>39</sup>

They embraced with enthusiasm the idea of maximizing entrepreneurial freedom, private property and free trade. They were convinced that economic crisis and debt renegotiation could only be solved through fiscal discipline and austerity. At the same

time, the economic growth they believed in was an export-led one that required opening up national natural resources to private and foreign exploitation.

Under those circumstances, the political elite running Mexico had been indoctrinated in another country. They learned that values such as efficiency, macroeconomic growth, wealth and sacrificing of the poor were more important than welfare and employment to satisfy the need of the majorities. They lost connection with their historical national duty and tended to identify themselves more in terms of a privileged class<sup>40</sup>, such was the profile of the ***tecnócratas***. Furthermore, their prime commitment became the privatization of public assets and becoming administrators of private and foreign interests in the country; coloniality has therefore been the main characteristic of their political actions.

How would they defend sovereignty while negotiating commercial treaties with the representatives of those countries they felt so much gratitude for?

As we will see, the Mexican political elite can be characterized as one of colonial administrators of the big oil, energy and mineral extraction corporations that have contributed significantly to facilitate the plundering of their own country.

## 2.2 Legal framework and neoliberal reforms in the 90's

The end of the 1980's and beginning of the 1990s in Mexico, as in many other parts of the world, was characterized by an increased political will to open the national markets to foreign investments, privatization processes and the reduction of State regulations for the benefit of certain economical and financial entities. Thus, the arrival of neoliberal governments and the *tecnócratas*, together with structural reforms applied to the whole Mexican market, are fundamental elements to understand the regulation or *de-regulation* framework in which mining activities have developed during the last twenty-five years.

The Mexican Constitution, as well as the National Mining Law and its Codes, have suffered numerous modifications for their adaptation to the "laws of free market" and international trade agreements, particularly NAFTA<sup>41</sup>. Those deregulation frames have in fact defined both national and local socioeconomic structures.

Significant changes in the laws regulating extracting activities and national resources took place in 1992, 1997 and 2013.<sup>42</sup> A discussion on these reforms could be the topic

for another survey, but for our study, suffice it to say that the main difference between the latest and former legislation regarding concessions is the duration of permits given to transnational corporations and the nature of the different permits companies need to get before their operations begin.

After the Mining Law reform in 1992, the bureaucratic process for obtaining concessions was simplified in order to attract foreign companies and their investments. However, regulations concerning the protections of peoples' rights or prevention of landscape damage, water and air pollution were not prioritized. Since then, mining companies only require a general permission for exploration and exploitation, instead of applying separately for each one of them. They do not need to notify the State about the specific mineral they are looking for during the exploration phase, and the exploration permit is valid during the whole period of concession.

According to article 15 of the Mining Law, companies get permission for accessing Mexican soil, look for any resource they are interested in and can keep the concession up to a hundred years<sup>43</sup>, a very lucrative investment scenario that allows them to speculate and exploit Mexican mineral resources depending on the international prices of them.

By the year 2012, under these circumstances, 25% of the Mexican territory, almost 52 million hectares<sup>44</sup> had been given away in the form of concessions to private foreign companies for the exploitation of mineral resources. Most of them were Canadian, aiming to take advantage of new legal frameworks and new extraction technologies.

Important to mention is that in 1992, there was even a law reform regarding land ownership, particularly communal property which equals approximately to 40% of Mexican territory<sup>45</sup>. By changing the law, communal ownership of land became a commodity that anyone can purchase, a situation that had been impossible in the past since the legal protection of the *ejido*,<sup>46</sup> accomplished during the Mexican Revolution (in the past, whole communities or a group of people would permanently have the inalienable right to usufruct and access to certain plots). Such a reform catalysed a rampant process of accumulation by dispossession that resulted into greater impoverishment of the rural population. Actually, many of the dispossessed peasants who could not keep their production or their lands because of the competitive prices of

imported products<sup>47</sup> ended up working as non-qualified temporal miners in the newly opened mega-mines, a dynamic we will get back to in chapter 3.

### 2.3 Impoverishment and militarization of the country

Privatization processes and the closing down of various industries and State owned enterprises,<sup>48</sup> since the mid 1980's, resulted in big numbers of employments and economic inputs getting lost and the constant economic growth registered at 6.5% between 1934-1982, changed drastically.<sup>49</sup> Reliable studies on macroeconomic indicators showing the relation between GDP and population's well-being show that from 1983 to 2005 life quality improvement did not even reach 1%.<sup>50</sup>

The national project Mexico had followed since the 1930's, in which national production played a privileged role in the economic insertion to the world market, was changed for a "global" adaptation project whose handbook had been elaborated mainly at international financial institutions such as the International Monetary Fund (IMF), World Trade Organization (WTO), and Organization for Economic Cooperation and Development (OECD), all of them directed by hegemonic American interests in the Latin-American region.

Mexico had prepared legal frameworks *ad hoc* to multiple trade agreements that theoretically would offer the key to prosperity, economic growth and financial stability. Those agreements were signed with countries who had diverse income level and power but they were theoretically based on principles of equality, at least in monetary terms of exchange. Nevertheless, the trade agreement that most dramatically affected Mexican economy was the NAFTA, in force since January 1<sup>st</sup>, 1994.

By means of it Mexico established a relation of profound structural dependency with the United States. Even though the treaty also included Canada as a partner, more than 90% of Mexico's total exports goes to the USA since the treaty entered into force<sup>51</sup> and not only economic but military ties have continued to tighten, a process that started already during the years after the Second World War.

It is not a coincidence that on January 1, 1994 the revolutionary indigenous group Zapatist Army of National Liberation (EZLN) declared a resistance war against the Mexican state, the national army, the paramilitary and potential corporate intrusions in the state of Chiapas, southern Mexico. Not to mention that NAFTA implies the eventual

dismantling of Mexican administration of community land rights and the dispossession of rural- indigenous communities for the benefit of corporate elites (national and foreign).

The immediate effect of signing the agreement was economic growth of only 0.25% at the end of 1994 and a negative rate of -7% between 1994 and 2000.<sup>52</sup> Equally important, within the new “global dynamic”, was that importing grains such as corn became much cheaper than producing them locally. Food and oil sovereignty are nowadays severely threatened. As a matter of fact, Mexico, one of the main oil producers in Latin America, already in 2007 imported more than 40% of its gasoline.<sup>53</sup> Correspondingly, 28 million people suffered food poverty in 2016; all these numbers are highly significant and show that after all these years of neoliberal policies, Mexican population has not yet benefited from the great promises made 25 years ago. On the contrary, 80 out of 130 million Mexicans<sup>54</sup> still live in poverty.<sup>55</sup>

Together with poverty, inequality is a key aspect to consider during 1992- 2016. In this period of time, inequality has not reduced but increased among Mexicans,<sup>56</sup> which has deeply contributed to a sentiment of unfairness and injustice at a national level. Economic mobility and the possibility of having a good income are becoming even harder, which has impelled lots of young people to find hope in criminal activities such as drug dealing and organized crime, a problem that in recent years surpassed the capacity of the State and that started to be confronted in 2006.

Let's analyse the issue from a closer perspective; high unemployment levels, increasing poverty, malnutrition, ethnical discrimination, limited access to education, housing, clean water and other basic services; together with the dismantling of public enterprises, lower salaries plus more flexible conditions of employment and higher taxes created during these years added to a perfect scenario for social unrest and contributed, directly or indirectly, to reinforce the power of existing criminal groups in Mexican society and even empowered new ones.

The result was a more insecure atmosphere in which drug cartels and criminal organizations offered protection to certain groups of the population under their control as well as more attractive life-job opportunities than the ones the Mexican State could offer its citizens. The presence of drug cartels and their power was something familiar to the majority of the population in Mexico but the violence they acted with against their

rivals had never been so visible; moreover, they had never acted against civilians with such a cruelty and frequency.

Therefore, in 2006, the newly established right-wing government (Partido Acción Nacional) implemented a new National Security Strategy, based on the *War on drugs* and organized crime, meaning the militarization of Mexican territory and a frontal war against drug cartels instead of addressing the economic and social roots of drug related problems. In other words, the consequences of implementing unsuccessful economical and financial policies were handled through a strategy based on violence and armed conflict. Such a strategy cannot be ignored in the study of Canadian mega-mining in Central Mexico and its dynamics of ecologically unequal exchange and coloniality.

The fact that Mexico faces a War on drugs and that large regions of the country are militarized makes it difficult to differentiate between cases of plain social repression and cases of military action against criminal groups, since most of the State security measures are justified by the current strategy. Neither can we ignore that this war depends on the endorsement and direct support from Mexico's northern neighbours and commercial partners, particularly from the USA, through the Merida Initiative.<sup>57</sup> After all, social unrest and other security threats that could potentially affect their economic and financial interests are among their concerns.

Although NAFTA is internationally known as a trilateral trade bloc in North America, the political and economic studies made on it have largely focused on USA's direct influence in the contemporary structure of Mexican local market, its politics, socio-environmental issues and violence. Only recently experts have acknowledged the gap concerning the understanding of the part Canadian interests have played in the country. Mexican history is riddled with direct actions of American imperialism, but there has been some kind of blindness towards the Canadian role in dispossession processes in Mexico and the way Canadian economic interests have contributed to create a scenario of environmental devastation and violence.<sup>58</sup> If those interests are closely analysed there is more than one North American commercial partner whose hands are not free from blood.



## 2.4 Free market vs armed neoliberalism

In a parallel effort to attract foreign private capital and offer facilities for extracting companies, militarization has become a clear trend in Latin America, where free market policies have frequently been enforced by the power of the States, and later with the expansion of neoliberalism to warfare, by private armed groups.<sup>59</sup>

After all, it is the State as political entity that since its origin has the right to exercise a legitimate power that might include force or the threat of force. It is the State that in times of acute socio-political and economic crisis exercises its legitimate use of force as a way to preserve its structures and proper functioning with the minimal disruption, while facing explosive social conflicts. Those disputes have often arisen as a direct consequence of privatization, commodification and appropriation processes related to neoliberal de-regulation but its continuity has been guaranteed by the national States, sometimes through the use of ideological and soft coercing mechanisms and at other times to blatant armed responses and repression. Countries such as Chile, Colombia, Peru, Ecuador, Argentina, Venezuela, Honduras, Guatemala and Mexico provide much evidence for that.<sup>60</sup>

Due to the fact that neoliberal policies, including the relentless economic opening for natural resources extraction, have not proved efficient for economic growth and wealth redistribution that can benefit the masses, some critical readings on neoliberalism have described it as a “project to restore class dominance to sectors that saw their fortunes threatened by the ascent of social democratic endeavors in the aftermath of the Second World War. Although neoliberalism has had limited effectiveness as an engine for economic growth, it has succeeded in channelling wealth from subordinate classes to dominant ones and from poorer to richer countries.”<sup>61</sup> This argument goes in line with our interpretation of historical natural resources flow and the current economic system as a continuous project of global pillaging in natural resource rich areas.

In other words, neoliberalism is the ideological-political base used to justify imperial and neo-colonial interests contained in the current economic system that serves itself from *coloniality of power* and *coloniality of being* in order to perpetuate the privatization and uneven distribution of wealth and profits while socializing the human and environmental costs of it among the poor of the world. The latter are constantly being told that they will benefit from capital accumulation accomplished through structural

reforms and private direct investments in all sectors, but what they witness and experience is simultaneous and multiple dispossession process that lead to poverty, marginalisation, sickness, violence, despair and a lost future.

Since the gap between political rhetoric and harsh reality keeps widening, the current economic project cannot be sustained via discourses and the preaching of good intentions, and so it requires armed forces that can guarantee the *status quo*. Notably, the Mexican case is an example of this trend, in which armed or militarized neoliberalism becomes the only way to sustain a transnational despoliation project, where the local populations live in conditions of exacerbated poverty, marginalisation and environmental degradation.

### **Chapter 3. Canadian Open-pit mining projects in Central Mexico:**

#### **Whose national interest?**

##### 3.1 Why mega-mining or open pit mining?

Due to the decreasing ore grades in global metallic mining<sup>62</sup> and the fact that the biggest amount of minerals is currently found in small seams, national and transnational corporations increasingly lean toward the operation of open pit mines, which are highly efficient in terms of total extraction but represent higher risks, socioenvironmental impacts and higher energy intensity, in comparison with the ones traditional mining used to have.

Open pit mining or mega-mining implies a cut on the surface of the ground for the exploitation of a mineral deposit. Those cuts take the shape of terraces and the use of explosives, as well as toxic substances, are needed for separating minerals from the soil through a method known as lixiviation.<sup>63</sup> As a matter of fact, mega-mining has become very popular in a time of scarce resources, nevertheless, it implies numerous sustainability issues ranging from the relationship with ore grade over the years, electric energy use,<sup>64</sup> fossil fuel consumption to severe health problems and acute socioenvironmental conflicts.

Worldwide, cyanidation is the standard method used for recovering most of the **gold and silver** extracted today, and this is actually the case of gold and silver extracted by Canadian mega-mines established in Mexico. Of course, this does not mean that Mexican companies cannot operate the same kind of mining. However, the present

study aims to expose the main characteristics of mega-mining when the mine in question is operated by a transnational company, since the resulting socioenvironmental conflicts acquire different features that involve major power asymmetries.

In Latin America, numerous open pit mines operated by transnational corporations can be found, for example in Cajamarca, Peru (gold mine *Yanacocha*); La Guajira in Colombia (Copper mine *El Cerrejón*); Santa Cruz in Argentina (Cerro Negro gold mine) and Atacama, Chile (gold, silver and copper mine *Pascua Lama*; and the *Escondida copper mine*), among others. This is, in countries where environmental legislation is generally weak and where the free market has been less regulated.<sup>65</sup>



Yanacocha (Newmont Mining Corporation)<sup>66</sup>



Pascua Lama (Barrick Gold)<sup>67</sup>



La Escondida (BHP Bilton, Rio Tinto)<sup>68</sup>

Such projects are generally legitimized through the discourses of corporate social responsibility and sustainability,<sup>69</sup> and yet they are often located in poor areas, very close to actual towns or territories within natural protected areas, or indigenous lands, therefore the implementation of mega-mining has not been exempt from conflicts.

As Gordon and Webber sharply point out:

Canadian and other foreign mining interests have been fairly successful, as resource-rich countries like Chile, Argentina, Bolivia, Peru and Colombia have adopted mining codes that unambiguously favour foreign corporations over indigenous people, the environment and labour rights, and allow corporations greater ability to repatriate profits to their home economies while significantly reducing royalties imposed on them. The most egregious example of this is perhaps in Colombia, where the mining code allows international capital to enter indigenous territories containing mineral deposits unfettered, while Plan Colombia also 'guarantees private sector control over natural resources, even if this means the forcible removal of the existing population from certain areas of the countryside'.<sup>70</sup>

For this reason, implementing mega-mining projects in impoverished areas of Latin America is, according to a Marxist- de-colonial understanding of the problem, part of the global imperial/colonial process of exporting the most polluting industries to the

capitalist peripheries that turn into “dumping grounds for entropy generated by affluent core areas.”<sup>71</sup>

In this thesis I will be looking at two different study cases where Canadian gold and silver mega-mines are implicated. The socioenvironmental conflicts they have generated are at different stages since in case 1, in Cerro de San Pedro, open pit mining has been going on for almost ten years, while in case 2, in Wirikuta, the mine is not yet in operation due to the strength of the opposition movement and the international solidarity it relies on. What becomes important, in this sense, is to observe the conflicts characteristics and dynamics, in two different natural areas that involve urban and indigenous population respectively, as well as the legal and rhetorical tools people and government have made use of, and the way in which Canadian companies have responded.

What are the implications of Canadian mega-mining for the Mexican population? What do these projects mean for the national economy? What do they signify in commercial terms? What do they represent in monetary terms of exchange? What do they entail in social and ecological terms? And who benefits the most from the operation of these mega-mines? These are among the questions guiding the content of the following pages.

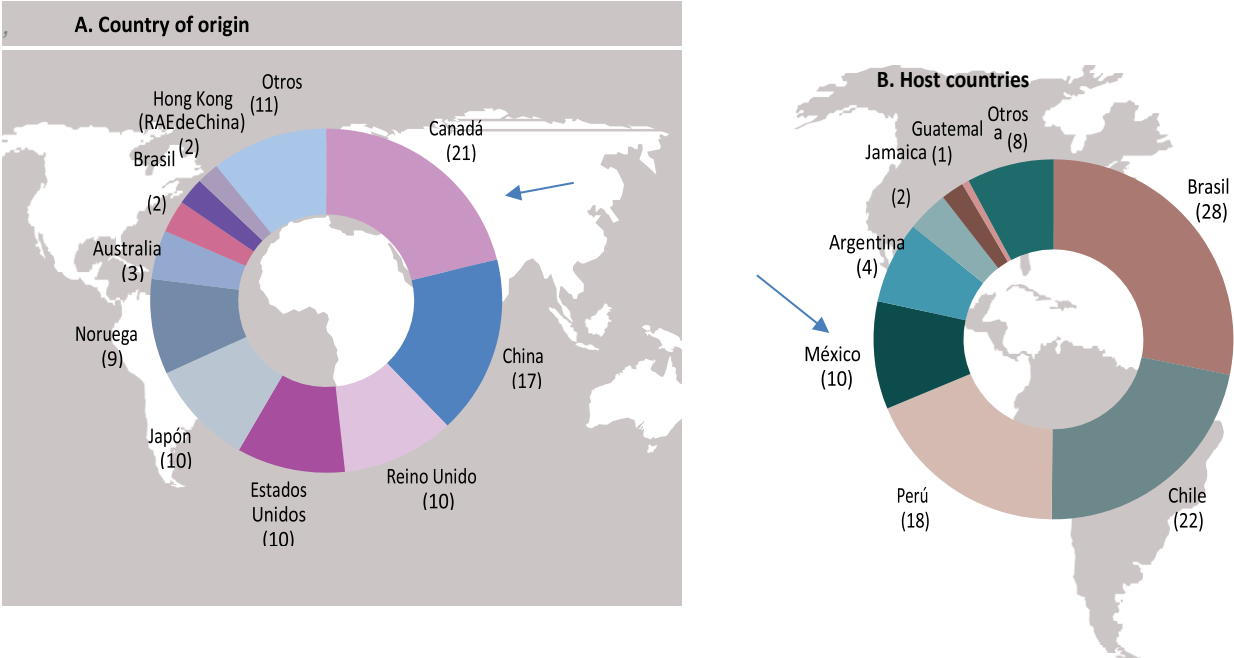
### 3.2 Positioning Canadian mega-mining in Latin America and Mexico

Canadian mining industry is the largest in the world and much of its outward investment goes to Latin America.<sup>72</sup> In fact, since the adoption of neoliberal reforms in the 1980s-1990s, Canadian capital investments in the Latin American extractive sector, particularly mining, have increased significantly. This is not surprising if we consider that apart from being home to 25% of the world's forests and 40% of its biodiversity, Latin America and the Caribbean, contains “a third of the globe's reserves of copper, bauxite and silver, 24% of oil, 8% of natural gas and 5% of uranium.”<sup>73</sup>

Notice that between 1990 and 2001, mineral investment in Latin America quadrupled. By 2005, the region received 23% of the total worldwide exploration market, and between 2004 and 2005 investments increased 360 million USD, a significantly higher increment than that of other regions.<sup>74</sup> In this context, Canada positioned itself as one of the most powerful players in Latin American mining, and Mexico was not an exception for its expansion. According to the ECLAC, between 2000 and 2015, as we

can see in the graph below, Canada was the biggest investor in the region and Brazil, Chile, Mexico and Peru attracted most of the capital.

Graph. I. Foreign direct investments (FDI) to mining in Latin America and the Caribbean: Country of origin and transnational acquisitions in metallic mining. 2000-2015 (percentages of total participation).



Source: Economic Commission for Latin America and the Caribbean (ECLAC)-Comisión Económica para América Latina y el Caribe (CEPAL), based on Bloomberg data base. Author’s translation and added highlighting. April 2017.

It is important to mention that the Canadian International Development Agency (CIDA) and the departments of Finance and Foreign Affairs have been, since the 1970’s, strong supporters of structural adjustment in the region. Apart from having free trade agreements with the USA and Mexico, Chile and Costa Rica, Canada has been the most aggressive proponent of the Free Trade Area of the Americas (FTAA), and has pursued sub-regional commercial deals with Mercosur and the Andean countries. It has also signed Foreign Investment Protection Agreements (FIPAs) with nearly 25 countries since 1994.<sup>75</sup>In fact, the majority of the mines, smelters and refineries abroad where Canadian companies have invested, are located in Latin America, increasing to approximately 70% of their total IED in the sector.<sup>76</sup>

Not to mention that FIPAs signed since 1994 are actually based on NAFTA’s 11th chapter, which has been criticized for its establishment of a strong pro-corporation investment climate, “including among other things, guaranteeing foreign corporations whose states are party to the agreement the same treatment as domestic corporations, while also giving them the right to sue governments for perceived failures to meet their

obligations under the investment agreements.”<sup>77</sup>This is a right that Canadian mines in the region have not hesitated to use.

All things considered, thanks to the modified legal frameworks, numerous exploration projects in Mexican territory were led by Canadian corporations in the 1990’s, particularly in Central and Northern Mexico, where most of the mines are established nowadays. The states of Sonora, Coahuila, Chihuahua, Zacatecas, Durango, Guanajuato and San Luis Potosí are the leaders of national mineral production,<sup>78</sup> in which gold, silver, copper, graphite, molybdenum, and coal have historically played a major role. Actually, the Canadian *Goldcorp Inc.* is the largest producer of gold in Mexico.<sup>79</sup>

### 3.3 The paradoxical status of mining in Mexican Law vs Canadian interests

According to the law, the Mexican state has the unique right to extract natural resources and minerals from national territory, therefore, the only way private companies can take part in this industry is by means of concessions. Those concessions are regulated by the Mexican Political Constitution or Supreme Mexican Law, the Mining Law, Mining Secondary Regulations, Foreign Investment Law and the General Law of Ecological Equilibrium and Environmental Protection.<sup>80</sup>

Correspondingly, extracted resources are Mexico’s property and private property ought to be regulated in order to make sure that public interest is above any other interest. One aim of mining regulations, expressed in the political discourse, is actually to ensure social benefit, equal national development and the improvement of living conditions in rural and urban areas. Besides, the law goes further when it emphasizes the importance of preservation and, if that is the case, restoration of ecological equilibrium.<sup>81</sup>

Mining is then described in the Mexican Constitution as a **national interest economic activity** that will be privileged over others, including those of cultural and natural preservation, tourism, human settlements, etc. However, if we look at percentages of national and foreign participation in the sector, the number of employments created, the origin of machinery for mineral exploitation, and the money big extracting companies pay in taxes to the Mexican state for land use and mineral extraction (both metallic and non-metallic), the affirmations contained in the law contrasts significantly with reality.

During the course of this research I have asked the following question to all my interviewees, experts on the topic and activists against mega-mining: Do you consider that mining, as it is carried out nowadays in our country, can be described as a national interest activity? None of them was able to answer positively.

The expert Maria Teresa Rodríguez expressed:

I do not understand the vehement interest of the Mexican government in facilitating so much all the current extraction projects when they do not represent much gains for Mexico. The mining sector accounts for not even 2% of the PIB and it represents around 3.5% of the industry, but its costs are very high. The number of employments has increased but not because mega-mining creates many jobs as much as for the number of operating projects. Right now its 11% of the projects that are active, let say more than hundred mines, they occupy enormous pieces of land and if one uses Google Earth to track the open pit mines, deforestation is one of the most visible consequences. Those huge holes in the country. What do they add to the economy?<sup>82</sup>

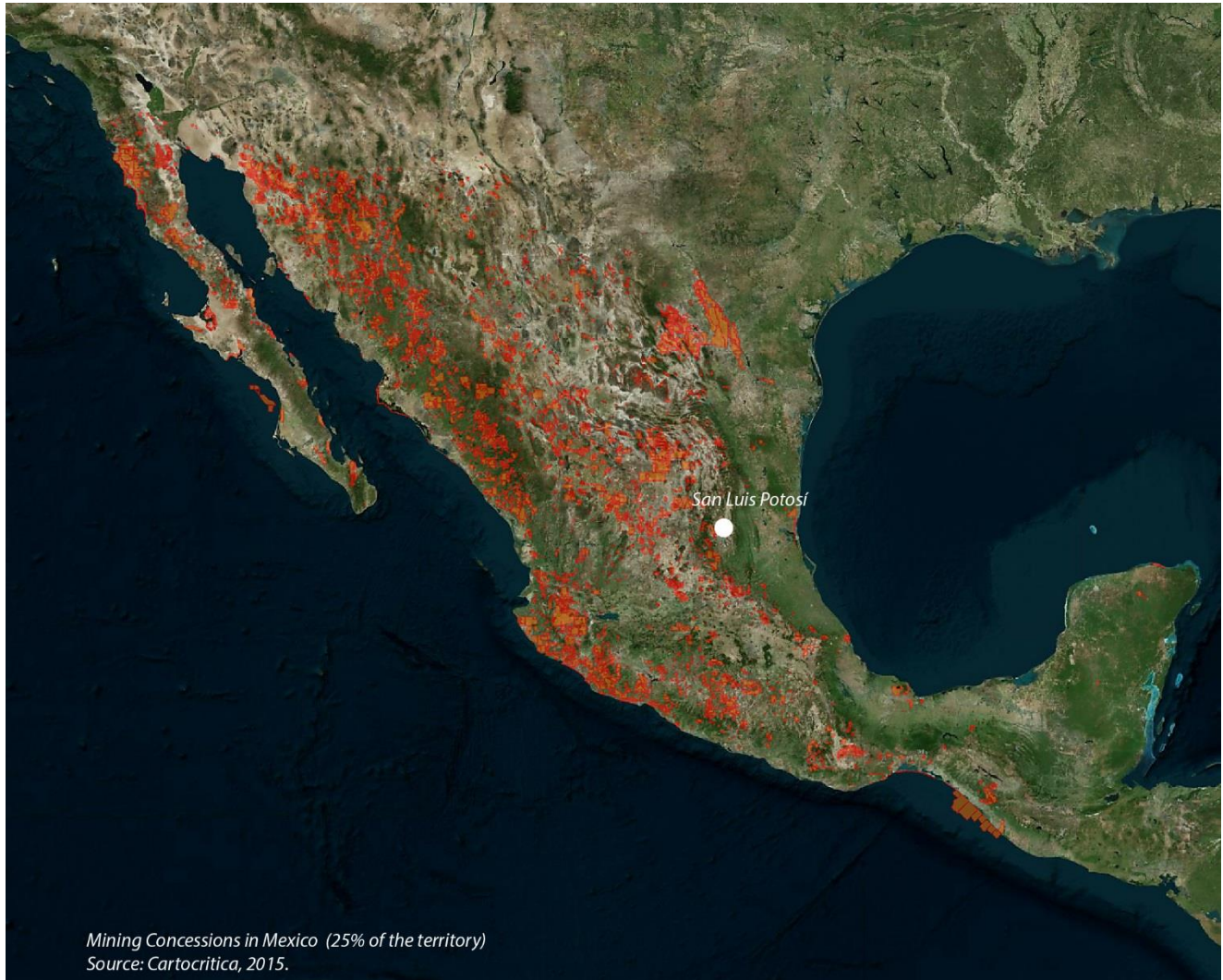
On the other hand, José Ma. Izquierdo considered:

The most serious problem with current mining activities is that they are quite profitable in the short term, but what about the environmental passives that are left when the mines shut down? Who is going to do something about them? Nowadays, mining is based on a scheme of subsidiary companies that are created for ruling a certain project and disappear as soon as that particular exploitation is over. So there are companies created *ad hoc* that will disappear when the mines are gone and there will be none to enhance accountability. There will not be any company responsible for what is left. And you have also the problem of taxation, the Mexican state gets very little money for concessions and mineral extraction.<sup>83</sup>

### 3. 4 Mexican embodied land in mega-mining concessions

Depending on the source of information, it is estimated that the territory given in concession to mining projects varies between 20 and 25% of the Mexican territory. The Mexican Network of People Affected by Mining (REMA)<sup>84</sup> indicates that there are actually between 30,000 and 32,000 mining concessions in an area of 38 million hectares<sup>85</sup>. Moreover, when referring to mining concessions it is actually not only minerals that are involved, but water concessions as well, since huge amounts of water are required during production processes.

Map. I. Mining concessions in Mexican territory



Source: Own elaboration based on Cartocritica 2015.

Consider that if only ongoing projects are taken into account, 80% of them implement mega-mining for the extraction of 19 different minerals, out of which 58%<sup>86</sup> corresponds to gold and silver extraction. This means that a third of Mexican productive land is already in use for mining processes whose consequences are not reversible. Even in the best post-mine closure scenario numerous ecological problems such as water contamination, extinction of animal species, and deforestation might be faced, while topsoil restoration and the productive use of land might simply not be possible. Furthermore, the land incorporated to mega-mining activities can continue increasing, due to the fact that 70% of the country has potential for mineral extraction.<sup>87</sup>

### 3. 5 Embodied water in mega-mining concessions

Calculating the total embodied water in mega-mining concessions in Mexico over the last 15 years could be a topic for another dissertation, but for purposes of the present



study suffice it to say that the mining sector used almost 437 millions of cubic litres of water only during 2014, a quantity that would be enough to cover the human needs of Baja California Sur, Colima, Campeche and Nayarit’s entire populations.<sup>88</sup> In this context, Canadian Goldcorp used approximately 48 million cubic litres.

Map. I. Water concessions for Mining Companies in Mexican territory



Source: Own elaboration based on Cartocrítica 2014.

3.6 Canadian mining in numbers

Of the mining companies operating in Mexico, 70% are foreign,<sup>89</sup> meaning that only 30% of the sector is controlled by Mexican enterprises.<sup>90</sup> In 2013, 74% of these foreign companies were Canadian and 15% American. As previously stated, *Goldcorp Inc.* is currently the greatest producer of gold in Mexico. The company owns *Los Filos* mine in Guerrero, the largest gold mine in the country. While the largest silver producer is *Fresnillo PLC*, a Mexican-based mining company incorporated in the United Kingdom and headquartered in Mexico City.

By the end of February 2017, 345 foreign companies with mining projects in Mexico were registered,<sup>91</sup> and 219 of them are Canadian, that is to say 63% of the total.<sup>92</sup> If we look at Canadian mining projects in the production phase, the number adds up to 99 active mines,<sup>93</sup> mainly for the extraction of silver and gold (65%), polymetallic ores (20%), and copper (10%).<sup>94</sup>

### 3. 7 Unequal exchange between Mexico and Canada

It would be impossible to make a case for unequal exchange and ecologically unequal exchange between Canada and Mexico by analyzing in detail only one or two study cases. It is therefore important to indicate that even if we do not look at any particular case, by reading the gross numbers of Mexican- Canadian trade in the area of metallic mining, and others, one can easily see that Mexican material flows to Canada are more significant in comparison with Canadian material flows to Mexico. However, the monetary gains do not seem to be equally reflected in the economy, pointing at the fact that Mexico might be losing more than what it wins, and that is only considering the economic aspect. Once the socio-environmental and cultural dimension are incorporated in the analysis of this exchange the Mexican losses grow much bigger.

Mexico has an **export oriented economy** and its main exports are manufactured products (83% of total shipments) and crude oil and oil products (13%).<sup>95</sup> “Canada and Mexico are each other’s third largest trading partner, with two-way merchandise trade reaching over \$37.8 billion in 2015. Canadian direct investment in Mexico reached over \$14.8 billion (stock) in 2015, while Mexican direct investment in Canada totaled \$1.4 billion (stock).”<sup>96</sup>

Official records of the Bank of Mexico, indicate that Mexico buys 49 different products from Canada, most of them are agricultural products, but others are manufactured : 1) rapeseeds, 2) touristic automobiles, 3) aluminum and products made of aluminum, 4) motored vehicles and 5) cereals, particularly wheat. As of 2014, Canadian imports from Mexico included television sets, automobiles, gas-powered trucks, cigarettes, beer, telephones and agricultural goods (e. g. tomatoes and avocados).<sup>97</sup> Between 1993 and 2013, exports of Canadian **agri-foodstuffs** increased more than 500%, while Mexican agri-foodstuffs exports to Canada grew by 1000%.<sup>98</sup>

Among the disparities of this relation it is worth mentioning that Canada is the 4th biggest investor in Mexico,<sup>99</sup> while Mexico is merely the 10th major investor in

Canada.<sup>100</sup> Equally important, in 2016 Canadian exports to Mexico accounted for 7 billion USD, while the imports accounted for 33 billion USD. Likewise, it is important to consider the disparity of the two economies, in the sense that Mexico has a GDP per capita of 11,337 USD while Canada's GDP per capita accounts for 55,939 USD.<sup>101</sup>

Ever since the NAFTA came into force, the most benefited companies in the Canadian-Mexican relation have been "Bombardier, Scotiabank, Goldcorp, Palliser Furniture, Transcanada Pipelines, La Costeña, Apotex, MABE, Modelo, Magna, Bimbo, McCain, Linamar, CP Rail, CN, Bombardier Recreational Products (BRP), NewGold and Nemak."<sup>102</sup> And there is actually plenty of oil and gas providers interested in the Mexican market, especially after the law reform in 2013 that open oil exploitation for foreign private companies.

Between 2001 and 2003 an average of 20 billion USD accounted for annual **exports of metallic minerals** in Latin America and the Caribbean but since 2004, the sum has increased and in 2010 started to exceed 100 billion USD. Exports from Chile, Brazil, Peru and Mexico accounted for almost 90% of the total between 2005 and 2014, but the economic impact of those exports has greatly differed for every country.<sup>103</sup>

Having in mind that 63% of foreign mining corporations in Mexico are Canadian (219 out of 345) and that all in all, mining companies in Mexico extracted more precious metals in the last ten years than during 500 hundred years of colonial domination<sup>104</sup>, the numbers contained in ECLAC's 2016 report on IED and Metallic Mining<sup>105</sup> and other investigations, contrast with what **mining tax revenues** are expected to account for.

As investigative journalist Erika Ramírez points out, transnational mining corporations paid to Mexico only the equivalent of 1.18% of the resources obtained through the exploitation of Mexican soil between 2005- 2010.<sup>106</sup> During that period of time, transnational corporations extracted mineral resources for more than 552 billion pesos (MX), but only paid 6. 5 billion in taxes<sup>107</sup>.

This entails a highly unequal relation between corporative foreign profits and mining revenues, a proportion that is better put into perspective when the biophysical amounts of minerals extracted are shown. For example, in 2008 Canadian, American, Australian, and Brazilian corporations extracted more than 50 tons of gold and 2,600 tons of silver.<sup>108</sup> In other words, during the past few years, transnational mining

corporations have paid in taxes approximately 1 % of the total profit from their operations ; correspondingly their total net profits have reached 90% or even more, depending on the metallic mineral extracted.<sup>109</sup>

Another key aspect to consider is the **employment** created in the sector, since one of the main arguments for the Mexican state's strong support to Canadian mega-mining companies has been the interest in offering numerous job opportunities for Mexican citizens. Between the years 2001 and 2014, employment in mining corporations represented an average of 0.3%<sup>110</sup> of the total employment generated in the country. It is also significant to highlight that according to the ECLAC, data for some years is not available since the participation is actually lower than the minimum registered in the data base.

Another observation made by the ECLAC is that as a general fact, **direct employment creation** in Latin America is quite low even considering the impact of the metallic mining sector in the GDP and foreign money entering as FDI for mining. More over, mega-mining is not properly incorporated in the **productive chains**, which inhibits the expansion of the sector and the possibilities of creating more job opportunities at a local level, since there is no other economic activities benefiting from the mining sector's productivity. The difficulties of having metallic mining incorporated into the productive chains can be partially explained by the fact that mega-mining requires advanced machinery that is normally produced in scale economies and commercialized in global distribution networks, eliminating the chance for local producers to compete. In the majority of Latin American and Caribbean countries, mining corporations import not only the **machinery** they use but also the chemicals and manufactured products they require (rubber, iron, steel and other metallic products).<sup>111</sup>

### 3.8 Legitimizing environmental degradation: Discourses on sustainable mega-mining for development

According to the Mexican Network of People Affected by Mining (REMA), negative impacts of mega-mining can be divided into the following categories: 1) damages to human health (physical and psychological), 2) environmental damages (flora, fauna, soil water/sediments, air), 3) community effects (fractures in communities' social

cohesion, identity and cultural loss, displacement, family disintegration), and 4) historical and cultural heritage destruction.

Up to the present time, socio-environmental consequences of mega-mining projects across the world are widely documented<sup>112</sup> and it cannot be denied that mega-mining routine work operations have in fact the unintended effects mentioned above. Those effects can also be called social impacts or be described as the socialization of negative consequences, which are always assumed by local populations and not by investors or entrepreneurs. Those impacts are neither considered in the actual prices of metallic minerals nor in national taxation systems, and cannot be easily prevented nor avoided. Indigenous groups are often the most affected by mining operations. In fact, “it is estimated that by the year 2020, up to 60-70% of copper production will take place in indigenous territories.”<sup>113</sup>

Of course, mining corporations have become more aware of these issues over the last fifteen years, insisting on their constant innovative “green technologies” for avoiding environmental degradation and guaranteeing a sustainable extraction. A point often overlooked is that the elite within the branch understood already in the 1990’s the advantage of incorporating sustainability discourses in their negotiations with governments and communities; since the environmental movement had already gained some strength and disseminated information on ‘polluting industries’ worldwide.

Hence, a flexible legal framework for the mining companies to freely operate in poorer nations was not the only condition needed for these projects to be implemented with the acceptance of national governments and parts of the population, a new discourse on development and social corporate responsibility was also necessary. Previous to the 1992 Rio summit, debate arose around the need of a “cultural change”<sup>114</sup> for the communities to happily adopt neoliberal economic projects. Companies conducting *business as usual* made use of a sustainability discourse and that rhetorical shift gave origin to the idea of a new way of mining, in which highly advanced technology was to be the key for economic growth, maximum mineral extraction and sustainable policies at the same time.

If there were negative environmental consequences, human technique had reached such a peak point that technology would make it possible to restore the environment afflicted by mega-mining by simply introducing smart and modern solutions. According

to the “new mining paradigm,” mineral extraction entails sustainable national development, benefits people at local and global level, is advanced, modern, desirable, and entails economic prosperity and social well-being.<sup>115</sup> These ideas were endorsed by international think tanks, universities, specialized committees, and mining councils, where key entrepreneurs, CEO’s and corporation owners were the main advocates of sustainable mining.

In the Mexican case, mega-mining corporations can be certified as “clean industries” by PROFEPA,<sup>116</sup> while numerous mine projects are planned together with foundations, social projects in accordance with what has been called *minería social y sustentable* or “sustainable mining with social purposes”. But can mega-mining be sustainable? By closely analysing our two study cases, I will offer the reader a clearer and more comprehensive answer.

### 3.9 Canadian mining and socioenvironmental conflicts in Central Mexico

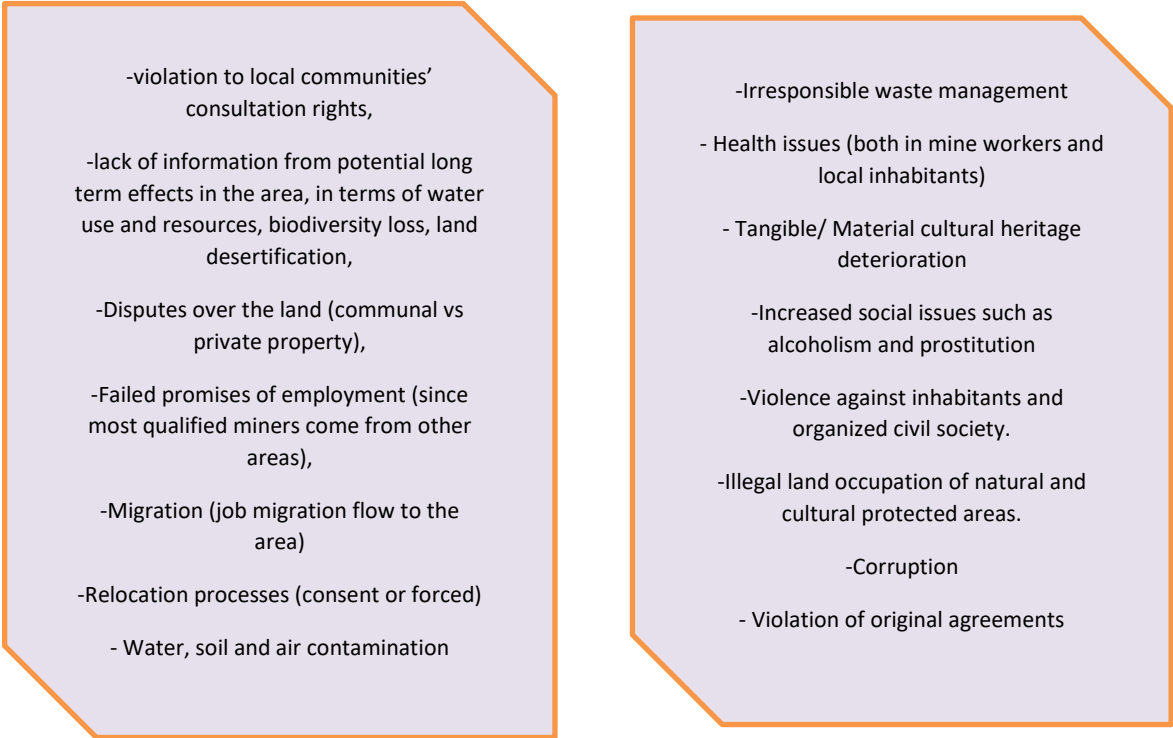
Mega-mining is always accompanied by a promise of economic progress, development and employment creation. Generally speaking, local population is divided among the ones who look forward to find an economic activity and benefit from the revenues and others who might not be qualified or interested in the project, or that simply believe that short term extractivist projects will not be as beneficial in a distant future. In other words, development projects are rarely accepted by consensus among communities.

What has been particular in the case of mega-mining is that either people have decided to negotiate with the mine for the best agreement possible or totally rejected its implementation. Some cases involve opposition groups or movements from the very beginning, but others become conflictive when negative environmental, social, and cultural effects are experienced. The issue is that once the projects have started, it becomes difficult to re-negotiate terms or to stop their operations.

During the last years socioenvironmental conflicts related to Canadian mega-mining have multiplied across Latin America and the Caribbean. In the case of Mexico, it is believed that 60% of socioenvironmental conflicts in the country take place in towns where mines are operated by transnational corporations, particularly Canadian. According to the Observatory of Mining Conflicts in Latinamerica (OCMAL), a total of 39 active conflicts related to mega-mining were identified in Mexican territory in

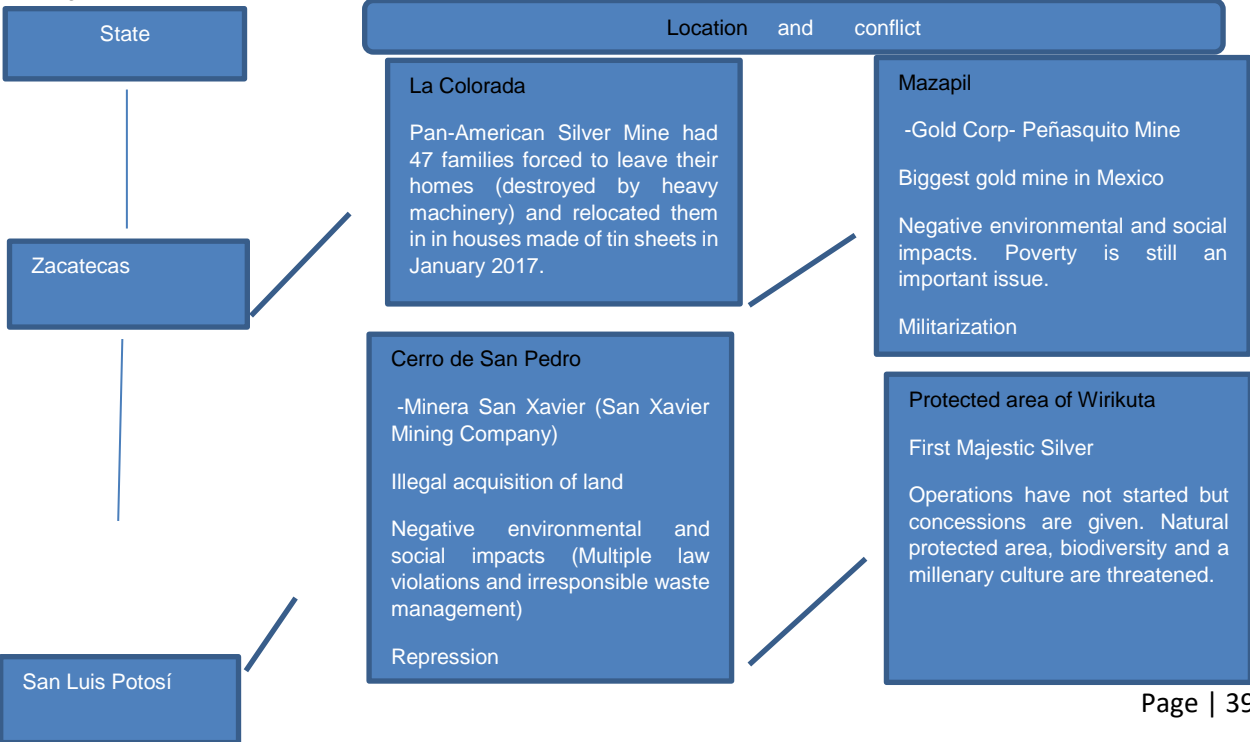
february 2017.<sup>117</sup> In the figure below I list the main causes of these conflicts, based on numerous information sources, reports and opposition movements' documentation:

Figure 1. Socienvironmental conflicts in Mexico. Main Causes.



Indeed, *Forbes Mexico* reported the country as the Latin American entity with most socioenvironmental conflicts in 2016.<sup>119</sup> Grupo México's environmental scandals in Coahuila and Sonora<sup>120</sup>(in northern Mexico) are among the best known in recent years. But there are also numerous conflicts related to Canadian mega-mining in Mexico. In the following figure, I enumerate the most acute ones in the area of central Mexico.

Figure. 2 Central Mexico's most acute socioenvironmental conflicts related to Canadian mega-mining.



## Chapter 4. Case Studies

Within the incipiently developed discipline of Mexican Political Ecology, the cases of mega-mining concessions in Cerro de San Pedro and the sacred territory of Wirikuta, stand out among the most cited and discussed cases of Canadian mega-mining in central Mexico<sup>121</sup>. Although mentioned in recent literature, the need of analysing their concrete neo-colonial dynamics in this research has to do with the aim for a deeper analysis that goes beyond political discourse analyses or a mere description of facts and that engages long-term participant observation and a combined theoretical Marxist- De-colonial critical approach to understand both conflicts in a more global and comprehensive context of historical material flows.

### 4.0 Further research

Further research would be necessary to cover the whole spectre of mega-mining in Central Mexico and the rest of the country according to the same comprehensive and critical approach. In fact, the case of *Peñasquito-GoldCorp*, in Mazapil- Zacatecas, was originally planned as a third case study but for security reasons fieldwork to that state was cancelled in February 2017.

### 4.1 Cerro de San Pedro. The pioneer

2010- Fieldwork diary

It is December 2010 and we<sup>122</sup> are heading to Cerro de San Pedro (CSP), a colonial architecture-UNESCO heritage town that is being threatened by the presence of *San Xavier Mining Company (SXMC)*. During the last months, we have followed news about corruption, illegal permits conceded to the subsidiary of a Canadian corporation, and threats and violence against members of the opposition movement. We are hoping for interviews with people in town, some representatives from the mine and activists as well.

Rumour has it that Cerro de San Pedro has become a ghost town and that it will not be easy to find people to talk to. We have also experienced the strong militarization of the country in this particular region since we have, at times, found ourselves driving next to random military convoys. Even in San Luis' capital, military convoys and heavily armed soldiers can show up, aiming fire at random civilians walking by the main plaza.

#### 4.1.1 Historical, natural and cultural heritage in Cerro de San Pedro (CSP)

Cerro de San Pedro is a town located on the top of a mountain at San Luis Potosí (S.L. P.) state in central Mexico. Being the town that preceded the foundation of the whole province or state of San Luis, it is located 20 km away from the centre of the capital city of San Luis Potosí and only 8km from the outskirts of this large urban district, whose population equals approximately 1.2 million people.<sup>123</sup>



Part of CSP's territory is listed as a world cultural heritage site by UNESCO, and the town is regarded as one of the key historical places for understanding colonial mining in Mexico.<sup>124</sup> It is not a coincidence that the image of CSP compounds the local emblem on the province coat of arms, which portrays Luis IX, King of France standing on top of the San Pedro Mountain, between one ingot of silver and another one of gold.<sup>125</sup>



San Luis Potosí's Coat of arms<sup>127</sup>



Cerro de San Pedro, 2010<sup>126</sup>

Besides its historical importance, the town used to be known for its biodiversity as it hosted approximately eleven endemic plant species and a few endangered animal species.<sup>128</sup> In fact, back in 1976, CSP was announced as colonial monument zone and in 1993 it was declared as *protected natural area for the conservation of biodiversity and wild life*. As a result of these decrees, Mexican law explicitly forbade the establishment of mining industry from then onwards, a situation that made the local population interested in taking advantage of the area for developing touristic infrastructure and museums.<sup>129</sup>

CSP's inhabitants were ready to move away from the mining legacy and promote the town as a vivid storyteller of cultural and colonial history, as well as a natural preservation landscape. However, neoliberal reforms and the growing global demand for precious metallic mineral resources were about to change the course of those plans.

#### 4.1.2. Exploration and production phases

Exploration for gold and silver in CSP started around 1995 by the Canadian Company Cambior Inc., which later on sold the project to the American Glamis Gold Lt. (2000), a company that in its turn sold exploitation rights to the Canadian Metallica Resources Inc. (2003).<sup>130</sup> Finally, those rights were purchased by the Canadian corporation *New Gold Inc.* in 2008.<sup>131</sup>

This sale-purchase chain is very characteristic of foreign mega-mining projects that involve significant IED, and it is often related to the difficulties posed by legal battles and grassroots movements against the implementation of mining projects. In addition, lack of commitment from purchasers and their loss of interest in processes that turn into socioenvironmental conflicts are other elements to consider. Usually, investors and transnational corporations are willing to take part in the extractive sector as long as the States protect their interests and guarantee high profit levels, but at the beginning of the productive phases it can be hard to know if conflict involvement with local populations would be worth the trouble.

From 2008 up to the present time, metallic mineral extraction of gold and silver in CSP has been operated by Minera San Xavier **or *San Xavier Mining Company (SXMC)*** which is actually a subsidiary of the Canadian Company New Gold Inc. The company originally planned its operations to finish in 2016, but the production phase is still going on.

#### 4.1.3 The conflict

In 1999, the Mexican Ministry of Environment and Natural Resources (Semarnat) gave SXMC environmental impact assessment authorization for the gold and silver mine. This was clearly against the natural and cultural preservation laws that applied to CSP, but the authorization was given as a fast track, regardless of previous laws and the prohibition of mining industry in the area. It must be remembered that mining is considered a national interest economic activity.

However, before a drastic land use change is decided there are multiple factors to be considered, including those of land ownership, community consultation rights and evaluation of cultural, historical and natural heritage. In fact, no local or regional authority was formally consulted; the authorization came directly from the federal

government, whose intentions were to attract more foreign investment in metallic mega-mining in correspondence with the openness to foreign trade and the neoliberal spirit.

Soon after the environmental impact assessment authorization was issued, the use of explosives and the construction of a lixiviation system were allowed. Notwithstanding the unfortunate circumstances, all those illegal permits inspired the beginning of a legal battle against the company, and motivated the organization of an opposition movement to confront SXMC's illegal occupation of land.

A Broad Opposition Front, called **FAO** after its Spanish initials, was created in 2000 and the activists involved brought a lawsuit against the controversial and illegal authorizations. This was the very first time that an opposition front against mega-mining was created in Mexico and the first time that a mining project of this magnitude was implemented in Mexico by a foreign investor, therefore Cerro de San Pedro is often referred to as *the pioneer*. The battle for CSP has been an experiment or social laboratory, both for Canadian companies with mining interest in Mexico, and for social movements against this kind of accumulation by dispossession and neo-colonial dynamics. In an interview with representatives of the Opposition Front to SXMC, one of the leaders indicated:

When CSP was declared a natural protected area, the idea was that the town would become a 'lung' for the capital city. The real owners of the land were not willing to sell to the mine. A group of impostors were paid by the company to pretend being the owners of the land, which was an *ejido* and then multiple irregularities occurred. The municipal president, for example was murdered in 1998, when he opposed the project. After that, there has been a chain of corruption and influence peddling. We had no option but organizing ourselves.<sup>132</sup>

#### 4.1.4 Legal battle against SXMC is won but operations continue

FAO won the legal case in 2004, but that information remained secret for the public. Nevertheless, in June 2005, SXMC got permission from SEMARNAT for a temporary occupation of the land.<sup>133</sup> Shortly after, a new legal claim was lodged by FAO. However, it was not until September 2010 that the Supreme Court's decision favoured the plaintiff. FAO members were never notified of the verdict and they affirm to have discovered it by coincidence in 2011. In an interview with Manuel González, leader of FAO, he expressed in December 2011:

They are awful. In fact, the government here in our country is an administrator for these companies, more than a popular representative. It represents them and it is their administrator. They go abroad and offer to sell the country. – Therefore what we are fighting against is more than a mine, it is a political, economic and social system that prioritizes transnational corporations regardless of the environmental consequences. These companies have a huge environmental debt to us and it just gets bigger. I do not know really what they are thinking about, these people governing us and in other places like Guatemala. They want to get rid of nature. There is no harmony between economic progress and nature, it is all about depleting the resources. We have demonstrated that the mine is illegal and nothing happens. No one stops it.<sup>134</sup>

Certainly, the Court's verdict was never taken into account and two years later, in July 2013, FAO got official notification of the 2005 claim: their case was still considered viable even though some important documents had got lost.<sup>135</sup> Nonetheless, reality offered a very different perspective; it was already too late to make the mine cancel its operations since it had operated all the time, creating important links with part of the local population and becoming a "strategic corporation" according to the local and federal governments.

These irregularities show that no matter how advanced and protective the law might be for the national population, what is written in the Constitution and secondary regulations loses its power if there is no effective institution that can guarantee the rights listed in Mexican law.

On March 26<sup>th</sup>, 2011, a key law in this conflict was modified. San Luis Potosi's local government published a decree declaring that **land use permit** in CSP would change from "protected natural area for the conservation of biodiversity and wild life to mining exploitation", a land use scheme that would also apply to the closest four municipalities to CSP. Changing the land use scheme would nullify unlawfully and immediately, the legal claims from the opposition movement and cede all the occupation rights to the mine.<sup>136</sup>

More importantly, in August 2011, SXMC got a new environmental impact assessment authorization because national authorities concluded that the company had constantly acted according to the law and its activities corresponded to the new land use decree. This meant in practice, the regularization of an illegal occupation, showing that laws can be easily adapted to the interest of the mining companies at any time, even beyond the changes already made during the 90's.

Notably, in the words of Manuel González:

The corporations have huge political power thanks to all the international agreements like the NAFTA, and other commercial agreements between Mexico and other countries. Those agreements make everything very easy for them. The law was on our side, and what did the authorities do then? Change the law! - Then they said - the mine is not illegal you see! It is not only that they control and loot the land, it is their political power.<sup>137</sup>

In contrast with the opposition movement arguments, SXMC boasts of its excellent reputation for contributing to local and national development. It was awarded the *CanCham Outstanding Business Award* in 2015, in recognition for “Cerro San Pedro’s effective engagement, caring for sustainable development, well-being of its workers and families and its constructive presence in each of the 13 communities surrounding the mine.”<sup>138</sup> Likewise, the mine representatives affirm to have a close relationship with the residents of the Municipality of Cerro de San Pedro, and they take pride in providing the communities with access to medical and dental services, support the local educational system with computer equipment and transportation to and from children’s homes to their schools. They also argue to contribute to the preservation of local heritage and culture, and have provided financial support for the restoration of the church of San Nicholas.<sup>139</sup>

However, SXMC’s award for sustainable development contrasts with 1) the actual dump areas management, areas that in 2010 and 2011 were located closer to the population than the distance stipulated in the regulations,<sup>140</sup> and 2) the environmental consequences derived from the lixiviation system<sup>141</sup>. Besides, dispossession dynamics embedded in this mega-mining have not been free from violence. In this regard, Manuel González stated:

We decided to be pacific. We cannot really take other kind of resistance actions. As you have maybe seen, there is a military headquarter in the mine. There are the leaching piles and right after there is a bridge, when you descend, there on the right side, there are the barracks. I think they settled there soon after the mine started working, maybe it took them around three weeks and there are three operating commands. I mean, this is not news, it is the same in Huizopa, Chihuahua. One can see that the soldiers are driving trucks owned by the company. In other words, you see that the army is at the service of the mining companies. Things are very serious for us! The situation in our country is that there is no guarantee for social fighters; not even for journalists! They can actually make themselves heard and be loud, and still they are not safe. People get killed often in Guerrero, in Michoacán, everywhere! Here, they have tried to kill me many times! I filed a lawsuit against the ones who did it. The authorities know exactly who they are and nothing happens!<sup>142</sup>

#### 4.1.5 Fieldwork assessment

Through participant observation and field research in 2010 and 2011, relevant information regarding the social dynamics in CSP town was found. A town that previously had an approximate population of 500 hundred people had turned into a ghost town, where one could only find some sort of activity during the weekend.

During our visits to the town, it was a major challenge to find food available since there was no convenience stores or restaurants whatsoever. The only open place we found was a cantina where few old miners spent their free time, and there was a house on top of a hill where one could buy coca cola soda, but there was no other product for sale. It was easy to figure out that not many people could live there permanently. The town was dominated by the mine presence and the landscape had been transformed by the open pit terraces and the leaching piles.

We visited an old man whose house had access to the old seams from colonial times, he showed us his stone collection and praised the past of mining glory in CSP, a past in which his father had worked as a “real miner”, not the kind of miner that uses explosives for mineral extraction, but a ‘pick and shovel’ miner. He explained how divided the community was and how the opposition could not understand the importance of economic progress. He himself had not so much apart from his house and a monthly sum of money he got from the mine.

He believed it was important not to close the door to job opportunities and money, since “things would not have been better without the mine”. The man had collected newspapers and information leaflets from SXMC, which he let us read and photographed; that way we had access to the arguments the company had presented from the beginning of the exploration processes and I had the opportunity to contrast them with reality.

In a document titled “San Xavier Mining Company’s commitments”, representatives of the mine affirmed to have found a low-grade mineral reserve of 1.50 million ounces of gold and 30 million ounces of silver and promised to respect 13 different commitments during the time of operations, which was expected to be 8 years long.<sup>143</sup>

In the following table I compare the commitments stated in the document and the findings obtained during the three fieldwork trips to the town (2010, 2011, and 2017.)

a) Commitments made vs	Findings
1. Under no circumstances due to mining activities, the town, its ruins and buildings will be destroyed.	<p>*The town has not been totally destroyed, but the open pit could eventually collapse and sweep CSP along.</p> <p>*Buildings have significantly deteriorated. It is exclusively the buildings owned by the mine that are in good shape. Others, such as the old Municipal house and Ministry of Tourism and Culture, are abandoned and falling apart.<sup>144</sup></p>
2. The Cerro de San Pedro Apostle church will be structurally stabilized.	*Stabilization was not confirmed through observation.
3. Cerro de San Pedro (CSP) will not disappear.	*CSP has not disappeared but the landscape and social dynamics have suffered drastic changes.
4. An altruistic association was registered as means to administrate the company's profits.	SXMC has started social projects under the label of "altruistic" tasks. But their positive effects have not benefited the community as they could. In fact, CSP went from a low level of marginalisation in 2005 to a highly marginalised municipality since 2010. <sup>145</sup>
5. A botanical garden will be installed to show local cactacea and other plants for controlled commercialization.	*Information not confirmed.
6. The best technology will be employed to guarantee that underground aquifers will not be contaminated.	*Already in 2008, the tabloid La Jornada, indicated that according to FAO, the mine used 16 tons of cyanide dissolved in 32 million litres of water. Filtrations are expected in the long run. <sup>146</sup>
7. The aquifer of Valle de San Luis will not be irrationally exploited.	<p>*The water is still extracted from an aquifer that was already on the brink of exhaustion. Before the mine started its operations there was a decree that prohibited taking more water from it. <sup>147</sup></p> <p>*People in the neighboring town have reported health issues. Some of them believe they are related to water contamination.</p>
8. 120 hectares will be reforested during the first year, supporting the emergent situation of peasants in the area with agave, edible cactus (nopal), grass and trees.	*Information could not be confirmed or denied. I found no signs pointing at this being accomplished.
9. Bike lines and running tracks will be built in the surroundings of CSP.	I found no signs pointing at this being accomplished.

10. Handicraft manufacturing (gold and silver) workshops will be provided to the population of CSP, Monte Caldera, Jesús María, Cuesta de Campa y la Zapatilla.	Accomplished.
11. The roads connecting Periférico-La Zapatilla-Cuesa de Campa- Cerro de San Pedro will be substantially improved.	Accomplished.
12. All company workers will have extensive training.	*Information confirmed.
13. Bases for touristic and cultural development will be set (medium term goal).	Accomplished - Information confirmed in 2017.  It is important to specify that the touristic infrastructure encountered in 2017(i.e. two restaurants and guided tours to the old seams), benefit SXMC and not the local population who had plans for touristic development back in the 90's.

#### b) Mining regulations vs findings

Besides the findings named above, it was observed that:

- The limits regarding loading of trucks with mineral material were not respected.
- The explosions were definitely perceptible, in contrast with what the mine had promised from the beginning. The experience can be described as being located at a minor earthquake epicenter.
- The explosions generate a “toxic cloud” that reaches people in San Luis capital, and La Zapatilla which is located only 200 meters downhill.
- The toxic cloud was more perceptible in 2011, in comparison with 2010. In 2017 no observation during the explosions was conducted do to health concerns.
- According to local tabloids and activists interviewed, the environmental impact assessment was manipulated and paid by the mine. Not by a third neutral party.
- The situation in the state of San Luis Potosí is tense due to militarization and growing insecurity.
- Interviewees talked about technical education being supported by the local government and social sciences and humanities disappearing from the main local university's curricula.
- The company representatives argue in favour of their sustainability parameters and their social responsibility, i.e. through the local health services SXMC provides in the neighboring town, La Zapatilla. Nevertheless, the fact that those



services are provided by the mine and not by the Mexican State constitutes an overtaking of public office.<sup>148</sup>

- According to the informants in 2010 and 2011, the resources embodied in gold and silver extraction are as follows:

<b>Resources extracted per day</b>	
<b>Mineral soil removed</b>	80,000 tons ( → to produce 2 grams of gold)
<b>Water</b>	32 million liters
	Note: ½ ton of cyanide must be used for every million liter of water.  Therefore, 16 tons of cyanide are required in the leaching process.

149

c) Updated findings. Field trip 2017.

The mine had approximately doubled its size since the first visit in 2010.<sup>150</sup> In fact, visiting Cerro de San Pedro felt like visiting a different town than in 2010 and 2011. A new big restaurant and three pubs had opened and plenty of people were visiting during weekends.

San Xavier Mining Company offered a guided tour to the mine (the museum or information site was closed this time). Nevertheless, the guided tours were to the old mine seams, and not to the open pit mine. My work hypothesis on this situation is that the company decided to also capitalize the touristic potential of the town; a project that was originally going to benefit the inhabitants of the town. Notice that nowadays most of the original inhabitants live somewhere else, some of them preserve their properties in CSP and visit them every now and then; others have sold their land to the mine. It is also worth to mention that mining operations were planned to end in 2016, which has not yet occurred. A woman interviewed on the streets of CSP in February 2017 affirmed – “I don’t believe they are leaving soon. They said they would in 2016, but they postpone it and postpone it, and promise every time that they will start the closing down process in three months.”<sup>151</sup>

At the present time, signs of opposition to the mine that were very clear in 2010 and 2011 have disappeared. Moreover, resistance and opposition messages that used to be on the walls have been deleted and/or substituted by other motives that celebrate colonial history.<sup>152</sup> On this occasion no interviews with representatives of the opposition front were conducted.

#### 4.1.5 Opposition movement and resistance

The Broad Opposition Front (FAO) was constituted by approximately 15 organizations, including Pro San Luis Ecológico, The board for the defence of CSP's heritage (Patronato por la Defensa del Patrimonio de Cerro de san Pedro) and the *ejido* representatives. In 2003, the Telephone Operators' Union, the National Union of Agricultural Workers, Colectivo Azul and the General Union "Tire" joined the anti-mining movement and the front was officially consolidated.<sup>153</sup> Later on in 2007, other local collectives and The Mexican Network of People Affected by Mining became also engaged in FAO's struggle.

In 2011, Manuel González, leader of FAO, described the organization as non-hierarchical but with leadership:

We are a movement with no verticality; but horizontally and supra-democratically structured. Of course some of the people have to make decisions, it might be radical decisions but always well founded and always pacific.

The next step in our struggle is to articulate a network of regional resistance, Mexican and Central American. Organizing ourselves has involved lots of trouble, it has meant jail, assassination attempts, machete wounds, and some people have left the town and the struggle because of fear. But we have demonstrated that big corporations are in fact vulnerable juridically speaking.

We cannot do anything but use the legal resources we have at hand. Violence is not an option. Can you imagine how dangerous it would be to just try to expel the mine? They have their hit forces and sometimes companies are even supported by the paramilitary. If bigger social movements in Mexico, like the ones in Atenco and Oaxaca, have been brutally repressed, imagine what would be our chances to succeed? But our landscape and our water are in danger, this means the basic conditions for life, we have to defend that, we cannot surrender.<sup>154</sup>

FAO was the first anti-mining organization that acted as consultant to other populations facing the threat of mega-mining. Nevertheless, according with information obtained in 2017, FAO's activities have significantly diminished. The leaders interviewed in 2010 and 2011 have left the anti-mining movement.

#### 4.1.6 From FAO to REMA.

The most important goals accomplished by FAO were 1) to delay the beginning of SXMC operations, 2) to actually stop mining operations between October and December 2010 via their legal action<sup>155</sup>, 3) to raise awareness at local and national level on the socioenvironmental threats related to mega-mining and 4) to launch a nationally organized movement against mega-mining.

The Mexican Network of People Affected by Mining, REMA, was founded in 2007 and at the present time counts with support from all across the Latin American region. Through REMA, numerous anti-mining workshops are offered in Mexico and Central America; nowadays the network collaborates with M4, the Mesoamerican Movement against the Mining extractivist Model (Movimiento Mesoamericano contra el Modelo extractivo Minero, in Spanish)<sup>156</sup>, Mining Watch<sup>157</sup> and PIAP A. C. (Integral Processes for the Peoples' Self-management<sup>158</sup>), among many others.

REMA is an extremely active organization that spreads information through numerous communication channels. Its members are always willing to offer public talks or debates, be interviewed and share their expertise and experiences with other social movements, activists, students and academics. For the course of this research their help has been invaluable.

## 4.2 Wirikuta. Indigenous rights and international solidarity

### 4.2.1 Historical, natural and cultural heritage in Wirikuta

Wirikuta is a geographic area of 191 thousand hectares, located in the Mexican Plateau in central Mexico. It is known as the sacred territory for wixarika or huichol<sup>159</sup> people, one of the most well know indigenous groups of Mexico, not only for their ancestral art and handicrafts but also because of their mysticism and world vision.

It is often believed that Wirikuta limits end in the very close surroundings of Real de Catorce town, but it is actually comprised of the municipalities Villa de Guadalupe, Villa de Ramos, Villa de la Paz, Matehuala, Catorce and Charcas.<sup>160</sup>In recent years, the territory's fame has grown internationally due to the environmental and cultural threats it faces. Indeed, together with Canadian mega-mining interests in the area, tomato plantations for agribusiness and the creation of dump areas for mining waste and

industrial waste are among the multiple socioenvironmental threats posed to local mestizo and indigenous population. Back in 1988, Wirikuta was included in the category of world sacred sites and defined as *Sacred Natural Site* by UNESCO. According to the organization:

The term 'Sacred site' embraces areas of special spiritual significance to peoples and communities; and the term of 'Sacred natural site' corresponds to the areas of land or water having special spiritual significance to peoples and communities... [These] are indeed the oldest protected areas of the planet, and have a vital importance for safeguarding cultural and biological diversity for present and future generations. Collectively, the religious and sacred properties capture a range of cultural and natural diversity, and each can singularly demonstrate the spirit of a particular place.<sup>161</sup>

In 1991 the area was declared as national Historical-Cultural Heritage and Ecological Conservation Area for the wixarika 'ethnic group', while in 1994 the area was announced as Natural Reserve Protected Area by the local government.<sup>162</sup> Every year wixarika people go on a pilgrimage to the *Cerro del Quemado* in Wirikuta in order to renew the universe, connect with the origin of the sun and everything that is alive. This is, in fact, one of the most important indigenous rituals taking place in Mexico and Wirikuta is a magnificent natural reserve, key for water preservation in the region and defined as a fragile landscape.

Moreover, Wirikuta's territory belongs to the Chihuahuense desert, one of the three richest semi-desertic biological areas on earth, birthplace to 60% of the mammals and 80% of the birds inhabiting this desert. Among the most important mammals stands out the black bear, the mountain lion or puma, and the bura deer. Besides, 141 bird-species, accounting for 15% of the existing birds in Mexico, are hosted in the area.<sup>163</sup>

For the reason that multiple ontologies and world-visions collide in this geographic space, the cultural and economic projects in dispute have often been analysed from the perspective of Anthropology and Political Geography as means to interpret the territorialities of landscape and indigenous identity. In this study I approach the socioenvironmental conflict as an accumulation by dispossession enterprise where Canadian mega-mining corporations struggle to impose a mining extractivism that would go against local development projects and the legacy of a millenary culture.

The fact that the socioenvironmental consequences of mining would be impact on local population and the wixarika people whose identity is attached to this particular landscape is one more example of capitalist environmental load displacement that implies neo-colonial dynamics. What is considered a sacred site by an indigenous

Mexican group is perceived as culturally and socially expendable by the mining corporations, whose main interest is capital accumulation.

Some scholars have even argued that these colonial enterprises are internationally justified by means of **environmental racism**, which implies more than the racialized distribution of pollution and environmental loads. It is about “the ways people, ethnic groups, nature and pollution are co-defined in the first place.”<sup>164</sup> Such racism comes in when projects grab indigenous peoples’ land and when the indigenous ideas of land are discriminated and conveniently ignored for constituting obstacles to the commodity export economy. In the words of Maristella Svampa, polluted areas where extractivism is established are called “zones of sacrifice.”<sup>165</sup>

#### 4.2.2 The conflict and legal battle

In 2009, the Canadian Corporation First Majestic Silver obtained 22 concessions situated along 6 327 hectares of Wirikuta, for exploration and exploitation of mainly, but not exclusively, gold and silver through the subsidiary companies Minera Real de Bonanza y Minera Real de Catorce. By type of deposits, the most appropriate method for exploitation would be mega-mining and leaching through cyanidation, but in some parts of the area, modern underground mining would be employed.<sup>166</sup>

This situation led immediately to conflict since there were numerous protection decrees due to the area’s ecological and cultural importance and the concessions implied that 70% of Wirikuta’s territory would be assigned for mining activities. Only one year before, in April 2008 the *Huaxa Manaka* Agreement<sup>167</sup> for the preservation and protection of the cultural and natural site had been signed in the presence of the Mexican President, Felipe Calderón.

Notice that the 22 concessions were given to the corporation before the government received any environmental impact assessment to prove that mining operations did not pose a severe threat to the landscape and population. This was not an isolated case, since the same absence characterized the concessions given to San Xavier Mining Company in Cerro de San Pedro.<sup>168</sup> According to wixarika people the corporation’s project “La luz Silver” would put at risk the survival of wixarika culture. Santos de la Cruz, spokesman for the huichol community affirmed in an interview in 2011:

Wirikuta represents the culmination of our ancestor's route, including *Real de Catorce* and the *Bajío*. What hurts the most is that Wirikuta is threatened by First Majestic and other enterprises. The Mexican government gives them concessions and it is a sorrow for us (...) It is our Cathedral and there are various chapels within it. It is also our University. The brother Deer and the father Sun, who gives light to this world, are right there. We are their disciples and that is what we defend. Imagine that a company would open a gasoline station in *La Villa*, the most important catholic sanctuary in the country - that would never be accepted. That is the size of the problem and even bigger since Wirikuta has not only energies for our people but for the whole planet.<sup>169</sup>

In 2011, Revolution Resources Corp., another Canadian corporation, publicly announced its intentions to start a project under the name "Universo", in the west zone of Wirikuta's natural reserve. The project, ten times bigger than La Luz Silver, would comprise 59 670 hectares and would be assigned to gold extraction.<sup>170</sup> The initiative was strongly criticized and led the government to re-negotiate terms with the corporation and local population involved. Therefore, in May 2012, representatives of the federal government, the wixarika authorities and Minera Real Bonanza gathered in Mexico City in a meeting that resulted in the corporation ceding 761 hectares of a mining lot (0.5% of the total land granted to the mine). Likewise, it was established that 45,000 hectares of the Natural Protected Area of Wirikuta would never be destined to mining activities. Nevertheless, wixarika people did not consider this agreement good enough since Wirikuta comprises more than only the Cerro del Quemado and 60% of the landscape plus vital hydric resources were left out from the declaration, remaining highly vulnerable.<sup>171</sup>

Afterwards, wirarika people continued the struggle, especially by using mass media and musical events, such as the Wirikuta fest concert, an initiative in which various Mexican and Latin American artists joined forces to demand the cancelation of all the mining concessions (72 in total) given in the area of Wirikuta to *First Majestic Silver Corp. y Revolution Resources Corp.* Accordingly the event's main objectives were to spread information about this conflict, raise funds to finance the legal struggle against Canadian mining corporations, and call other social movements to support wixarika people in the name of social justice.<sup>172</sup>

Two other important events occurred in 2012. In July, another corporation,<sup>173</sup> requested permission for an environmental impact assessment with the aim of re-opening an antimony mine that had closed down 25 years before and was located in the surroundings of San Jose Coronado, Tierras Negras, and the municipality of

Catorce.<sup>174</sup> This shows that even though national awareness and a visible social movement against mining in the Wirikuta area existed, corporations emphatically insisted on getting more concessions. In addition, by the end of the year, an initiative for declaring Wirikuta as National Biosphere Reserve was suspended.

Finally, in 2013 an unprecedented partial victory against the mining corporations was achieved when all the concessions in the area were suspended in their entirety. According to the law, “since it is a federal suspension, no entity of the government, whether it is municipal, state, or federal, can grant permissions for exploration nor exploitation for mining projects in the area, and in addition, the state is required to protect the area from other 3rd party actors who might violate the suspension.”<sup>175</sup> However, the suspension of concessions does not equal cancelation, which means that the concessions could be active again at any time while they are valid. It is believed that the strength of the wixarika movement against the corporations is the element that will define how the situation evolves in the future.

#### 4.2.3 Fieldwork assessment

After a five hour walk under the intense sunlight I reached the top of the mountain and asked the Marakame if he felt threatened or scared. He calmly answered he fears nothing, and he cannot imagine who provoked the fire. (Fieldwork diary 2017)

In 2011, I visited Real de Catorce and Cerro del Quemado in the Wirikuta desert, at that time different infrastructure and signs announced the presence of the project *La Luz Silver*, not only in Real de Catorce but in the perimeter of the town. Two interviews were conducted and the main information gathered through them had to do with the fact that people in the region were divided into a supportive group and an opposition one. One of the informants affirmed:

The mine has applied the same strategy here as in other parts of the country, they come, talk about the jobs they will create, try to bribe people to have them consent their operations and they even say things like: Come on! Huichol people have no idea of what this means, Wouldn't you like to have a better life? What is the mountain going to give you? (...) People here are very divided.<sup>176</sup>

By the beginning of 2017, the presence of the mining project had diminished and also the presence of the army in the zone. There was no infrastructure, signs or anything else that would indicate mining purposes. Nevertheless, while driving around in the

Wirikuta area one can find signs of multiple mine explorations and mountain perforations that have permanent effects on the landscape.<sup>177</sup>

Once in Real de Catorce, new findings were collected. Through a narrative walk with Cerro del Quemado's guard or Marakame<sup>178</sup> and a short interview with the mountain's janitor (a mestizo peasant) I got information on a criminal act against the huichol hut on the top. It was burned down two months earlier (end of December 2016). The Marakame and janitor ignored the reasons behind the crime but it could be interpreted as an intimidation act. Two other fires had been registered on previous occasions but no people have ever been there while the fire is set. There have only been material damages of offerings and the altars.

It is important to mention again that the only reason why the mining concessions were suspended is because of the strength of the opposition movement that counts with wide national and international support since the wixarika or huichol is a highly appreciated millenary culture, recognized worldwide.

#### 4.2.4 Opposition movement and resistance

In 2010 different non-governmental organizations joined efforts and created the Wirikuta Defense Front (Frente en Defensa de Wirikuta) which would function under the leadership of Wirikuta's Regional Council (Consejo Regional Wixárika en Defensa de Wirikuta), presided over by wixárika authorities. The Defense Front relies on wide national support from other social movements, such as FAO and REMA, and even international organizations, including the United Nations, who periodically sends a Special Rapporteur for Indigenous Peoples, giving the chance to wixarika people to talk about the situation in their territories and threats that mining concessions represent to them.

A member of the Regional Council, explained in an interview that the Council's body is made up of representatives from various Wixarika communities spread over Jalisco, Nayarit and Durango, following a truly democratic form of leadership that is not centralized.<sup>179</sup> The strategy followed by the Defense Front has been largely based on the visibility of the movement in international media and there has even been a documentary on the struggle touring different countries, even in Europe (2015). In this way, fundraising for Wirikuta's protection and for the legal actions of the resistance movements has been successful.



Nonetheless, some of the criticism of this resistance movement, and particularly to the Wirikuta Defense Front,<sup>180</sup> coming from other anti-mining movements has to do with the amount of money the front has received from other groups, since they consider it can become a dividing element for the people involved. Other critiques have to do with their focus on media visibility and their narrow legal focus.

Resistance is still going on since the concessions in the area are suspended but not cancelled.

## **Chapter 5. Concluding remarks.**

### *On how the promise of development turned into a neo-colonial nightmare*

This is a global conflict in which human life and nature are at stake, but the corporations are turning it into a profitable business. It is not only SXMC or First Majestic Silver, it's many others. Mexico is in "danger of extinction", our people and our sovereignty are endangered. Manuel González - Interview, December 2011.

After the 19<sup>th</sup> century's independence struggles in Latin America, ideas of technology and progress as something positive coming from the core capitalist countries, were disseminated. Such an ideology would contribute to conceal not only the inherent violence and looting objectives of the colonization process, but also the brutal suppression of local ways of knowing, being and interacting with nature. As early as that time, the idea of local populations deciding over their production systems and terms of exchange with other regions was simply out of the question. It was, theoretically, the forces of the global market who would automatically create fair conditions of exchange and guarantee world access to natural resources. What was not considered in this premise was that the core capitalist countries and the poorer ones have never exchanged goods in terms of equality or equally benefited from the economic profits accomplished through resource extractions in naturally rich areas.

In the same fashion, Latin America in general and Mexico in particular have served as geostrategic mineral reserves for the core countries at the time that material flows and production processes have maintained the dependency relations established during colonial times. The fact that up to the present time, foreign mining corporations repatriate most of their profits instead of having them contribute to local economies, is a continuation of the post-colonial logic of enclave economies described in dependency theories.

The cases studied in this research provide evidence on how the most developed economies (i.e. Canada) have installed their most polluting extractive enterprises in areas where environmental legislation is weaker than in their own territories, and where local governments do not guarantee strict respect of human rights nor of international laws protecting indigenous peoples' rights over the land. As part of these dynamics, environmental loads have been displaced to naturally rich areas such as Mexico where politicians and entrepreneurs have their loyalties with the interests of capital accumulation rather than with the local population's well-being.

It is possible to talk about the coloniality of these relations, in the sense that current power structures function under the same logic as during the time of direct colonial domination when a satellite entity was exploited for the economic profit of a core one. But the mechanisms displacing entropy, environmental degradation, and social unrest to the exploited areas do not solely obey to external factors.

In the perspective subscribed to in this thesis I have not aimed to portray Mexicans as victims but to show how internal structural problems and the coloniality contained in the actions of Mexican political elites have contributed to perpetuate unequal relations in terms of economy, commerce, material flows, and ecology. Poverty and marginalisation have also played their part in the continuity of accumulation by dispossession processes.

The study of Cerro de San Pedro and Wirikuta as cases of ecologically unequal exchange (EUE) and coloniality of power embedded in Canadian mega-mining in central Mexico contributes to demystifying the development potential of extractivism and neo-extractivism in our times. Notice that the mining sector was never referred to as an industry, since the extraction of gold and silver in Mexico is only for commodity export. As ECLAC's 2016 report on mining and FDI shows, mineral extraction in Mexico is not articulated in the productive chains, since most of the machinery used in extraction is imported and the number of employments created is rather limited. Not to mention that mining revenues collected are obscenely inferior compared with Canadian corporate profits.<sup>181</sup>

As it was shown, accumulation by dispossession projects, implementing mega-mining and modern underground mining, are not easily accepted by local populations, particularly not when they go against the protection of biodiverse areas, historical and

cultural heritage or even sacred natural reserves. Furthermore, the collision of different economic interests and projects, cultures and world visions, values, and ways of interacting with nature often lead to the outbreak of socioenvironmental conflicts. In Mexican territory, these kinds of conflicts are frequently related to disputes over the land (*ejido* vs private property), water, soil and air contamination, irresponsible waste management, health issues, corruption, violation of original agreements by mining corporations, and illegal land occupation.

The two conflicts analysed in this text have numerous particular characteristics but also elements in common. The most important, in addition to the involvement of Canadian corporations and violations of local and international laws protecting people's rights to their lands and previous consultation, I would argue, is the systemic and systematic violence embedded in them:

First, the neo-colonial violence exerted by imposing polluting extractivist projects on local populations who do not benefit from them (or not significantly enough); secondly the violence of ignoring their knowledges, desires and autonomous projects of development; thirdly the violence of dispossession dynamics for the accumulation of capital in a foreign entity; and finally, the physical violence used in forced displacements and intimidation/repression of opposition movements. The year 2016, for instance, with more than 28, 000 people missing and 19,000 murders, was one of the most violent years in Mexico's recent history. Innocent people, students, human rights defenders, journalists and environmental activists, are part of these numbers.<sup>182</sup>

This study has shown that the rapid expansion of a new mineral extractivist wave in Mexico was followed by an unprecedented organized resistance against mega-mining activities (and other ongoing extractivist projects such as fracking), which made it more difficult than expected for Canadian mining corporations to start up their projects in Mexican territory.

Nevertheless, thanks to the neoliberal reforms initiated in the 1980's, the international treaties signed by Mexico, the political and economic commitments of Mexican politicians and their interests in constantly attracting more FDI, has led federal authorities to endorse Canadian mega-mining via discourses on sustainable development, employment, and promises of economic growth. When the former has not yielded positive results, foreign companies, Canadian diplomatic missions and

Mexican politicians have advocated for further law reformation that would favour foreign corporations. This affirmation is largely documented by NGO's such as Mining Watch Canada and social movements such as REMA.

Whenever opposition to mega-mining projects has been encountered, the increasing militarization of Mexico, the national security strategy and even drug cartels related violence, have conveniently played in favour of the interests of mega-mining corporations, contributing to a climate of fear and impunity that, directly or indirectly, aims to de-articulate social movements.

According to the information collected in fieldwork, members of FAO, REMA, and Wirikuta Defense Front have all suffered at some stage in their struggle pressures to leave the movement and accept the benefits of "mining progress." The particular ways in which this has occurred is not incorporated in this text in order to protect their identities. But national and international media coverage for the past ten years on the topic would be enough to confirm them.

All things considered, it is obvious that the solution will not come from the Mexican federal government and that there is no guarantee that people's well-being will be prioritized over the interests of Canadian or other foreign mining corporations. Therefore, only a national coordinated movement of organized resistance would allow the Mexican population to stop the socioenvironmental catastrophe before it is too late. Right now it is only 25% of the national territory that has been included in concessions to mining corporations, but as I mentioned previously, 70% of the territory has mining potential.

What would be the scenario of 70% of Mexican land being destined to mining exploitation without counting on an environmental legislation that protects the landscape and people from the devastating consequences of it?

The social movements analysed in this research have chosen different strategies; while FAO focused more on legal instruments, the Wirikuta Defense Front decided to attract resources in order to finance a more visible struggle in the media. Looking at the immediate results one could imagine that Wirikuta's struggle was in fact more effective, but it should not be forgotten that the struggle for CSP began when the mine had already illegally established itself in the town and that concessions in Wirikuta have not been cancelled. Certainly, a preventive struggle has better chances to succeed,

apart from the fact that international legislation protecting indigenous peoples' rights has been a key in articulating Wirikuta's organized resistance. CSP's population was not indigenous and they could not make use of such a powerful legal instrument.

Beyond a debate on which strategy is more effective, the aim of this study was to highlight how important national and international solidarity networks have been for these struggles, and how significant the initiatives become when they reach national levels. In this context, the creation of REMA as a national organization against mega-mining in Mexico constitutes the most important goal reached in recent years in Mexico. Besides, it is not only REMA, but also other organizations such as the National Assembly of Environmentally Affected People (ANAA),<sup>183</sup> the Mexican Alliance against Fracking,<sup>184</sup> and Mexican Movement of People Affected by Dams and in Defense of the Rivers among others.<sup>185</sup>

The above, reminds us that even though this is not the first time (nor the last) Mexico is used as an example of ecologically unequal exchange, coloniality of power and violence, nor is this the first time that Mexican organized resistance offers an example to the Latin American region and the world on how to resist in the most adverse circumstances, where marginalization, despoliation, militarization and repression are the only guarantees offered by the State. Spreading information on the devastating effects of mega-mining and its failed promises of development and progress is indispensable in a context of accelerated mineral extraction, ecological degradation and global warming. Local and global awareness on these issues are conditions for understanding that our ways of living in the core capitalist countries have direct and dramatic consequences for other people's lives, and cultures and for our planet.

Technology has not and cannot solve the fundamental inequalities of our time as if it were an act of magic. As can be seen, mega-mining is not sustainable because it is based on natural resource depletion and environmental load displacement. It is only the core capitalist powers, who can ignore the social and environmental consequences, that might see it with positive eyes. People experiencing the dynamics of coloniality of power in their countries, being forced to bear the environmental loads of others and to engage in activities that go against their well-being, are unfortunately unable to ignore the cruel face of mega-mining.

In brief, top soil and water contamination, landscape destruction, environmental degradation, deforestation, health issues, alcoholism, cases of depression, low employment rates, violence and dispossession are the main legacies of Canadian mega-mining, in the light of what I have witnessed during these years of participant observation and research. Even if there has been a minimum or derisory positive effect for the communities, the negative socioenvironmental consequences of mega-mining are enormous and cannot be ignored.

To emphasize, mega-mining cannot be sustainable for the simple reason that capital accumulation is the antithesis of sustainability. This is not a simple opinion, but an affirmation based on numerous Marxist, political ecology, and political economy analyses. Given these points, if there are no real benefits for local populations, if there is not enough employment creation, if there is no poverty reduction or the promised progress, what we have is an increased number of what Svampa named sacrifice zones. The risk is that sooner or later those zones will cover larger parts of earth.

If we do not act now and spread the word on these fundamental issues, the whole planet will turn into a sacrifice zone, not because of the economic activities executed by humankind as a whole, but for the imposition of extractivist and neo-colonial projects of accumulation by dispossession managed by big transnational corporations that count with the support of the state and its monopoly of violence.

## Notes:

---

<sup>1</sup> Cf. 400.350org.

<sup>2</sup> Extractivism is a mode of accumulation based on activities that imply the removing of large quantities of natural resources that are not processed (or processed only to a limited degree), particularly for export. According to this definition, extractivism can be found in various areas, such as mega-mining or open pit mining, forestry, fossil fuels (such as oil, gas, including fracking techniques) and farming or monoculture (i. e. soja). Those activities do not constitute an industry. Numerous scholars maintain that extractivism has been a mechanism of colonial and neo-colonial plunder and appropriation. (Cf. Gudynas, E. 2013; Acosta A. 2011).

<sup>3</sup> Quijano 2000b: 537.

<sup>4</sup> Hornborg 2016: 23.

<sup>5</sup> Cf. Gunder Frank 1967.

<sup>6</sup> The concept has been later developed by I. Wallerstein in the world-systems theory as well as David Harvey's theory on uneven geographical development. In his work "The New Imperialism", Harvey {2005 (2003)} uses *accumulation by dispossession* to denote the continuation of what Marx called "primitive" and "original" practices of capitalism, including: "(1) the commodification and privatization of land and the forceful expulsion of peasant populations (as in Mexico and India in recent times); (2) conversion of various forms of property rights (common, collective, state, etc.) into exclusively private property rights; (3) suppression of rights to the commons; (4) commodification of labor power and the suppression of alternative (indigenous) forms of production and consumption; (5) colonial, neo-colonial, and imperial processes of appropriation of assets (including natural resources); (6) monetization of exchange and taxation, particularly of land; (7) the slave trade (which continues, particularly in the sex industry); and (8) usury, the national debt, and, most devastating of all, the use of the credit system as radical means of primitive accumulation." (Harvey 2007: 34).

<sup>7</sup> According to Anibal Quijano, coloniality, "refers to long-standing patterns of power that emerged as a result of colonialism, but that define culture, labor, intersubjective relations, and knowledge production well beyond the strict limits of colonial administrations. Thus, coloniality survives colonialism. It is maintained alive in books, in the criteria for academic performance, in cultural patterns, in common sense, in the self-image of peoples, in aspirations of self, and so many other aspects of our modern experience." (Maldonado Torres 2007: 243).

<sup>8</sup> Quijano affirmed that "the racial inferiority of the colonized implied that they were not worthy of wages. They were naturally obliged to work for the profit of their owners. It is not difficult to find, to this very day, this attitude spread out among the white property owners of anyplace in the world. Furthermore, the lower wages "inferior races" receive in the present capitalist centers for the same work as done by whites cannot be explained as detached from the racist social classification of the world's population—in other words, as detached from the global capitalist coloniality of power. (Quijano 2000b:539).

<sup>9</sup> See Fanon 1963; Quijano 2000.

<sup>10</sup> Cf. Clark & North 2006:1-3.

<sup>11</sup> Ibid: 2-3.

<sup>12</sup> Ibid: 3.

<sup>13</sup> Ibid: 4.

<sup>14</sup> Note added.

<sup>15</sup> Clark & North 2006: 2.

<sup>16</sup> According to the Austrian anthropologist and historian, Friedrich Katz, the United States became the most influencing foreign power for Mexico's economic, productive and financial life during the time of the Mexican Revolution, particularly after 1914 when the First World War began and the European powers who had businesses in Mexico were forced to prioritize their regional problems. Both, European powers and Americans decided then decided to support different fractions of the revolutionary movement to favour their interests in Mexico and in various historical moments conditioned Mexico's recognition as an independent country. (Cf. Katz 1982: 619,620, 621).

<sup>17</sup> Quijano, Anibal 2014: 285.

<sup>18</sup> As in Hornborg 2012.

<sup>19</sup> Cf. Theodor Adorno's critique on culture and civilization.

An interesting summary on this debate can also be found in Gartman 2012.

<sup>20</sup> Hornborg 2012: 7.

<sup>21</sup> Todorov, Tzvetan in Graeber 2011: 311.

---

<sup>22</sup> Cf. Clark & North 2006.

<sup>23</sup> Furtado 1978:22 in Clark & North 2006:1.

<sup>24</sup> Cf. Urías, 1980: 953 in Delgado Wise & Del Pozo 2005: 67

<sup>25</sup> Cárdenas is better remembered as the Mexican president whose main economic project was the nationalization of oil production for reasons of sovereignty and preservation of national wealth. For further information on this topic see Ceceña, J. Luis 1970.

<sup>26</sup> Delgado Wise & Del Pozo 2005.

<sup>27</sup> Inter-American Development Bank (IDB) is the largest source of development financing for Latin America and the Caribbean. For further information on this debate within the IDB, see the document "Extractives in Latin America and the Caribbean: The Basics", published in January 2016.

<sup>28</sup> Established on June 13, 2007, through Presidential Decree, Pro-Mexico is the Mexican Government institution in charge of strengthening Mexico's participation in the global economy. (<http://www.promexico.gob.mx/en/mx/home>).

<sup>29</sup> See Promexico's official website, section Business- Mexican mining.

<sup>30</sup> Which is actually not the case, due to a model of mining that can better be described as an economic enclave.

<sup>31</sup> Marínez- Allier 2016.

<sup>32</sup> <http://www.ejolt.org/>

<sup>33</sup> In this study I have followed EJOLT's criteria on the terms socio-environmental conflict, environmental conflict, or EDC as interchangeable.

<sup>34</sup> As Richards 2003, points out:

Not only was this expansion (the capitalist one)\*- like those of previous civilizations- founded on slavery and other forms of forced labour, but the relentless pursuit of profitable resources from other continents wrought havoc on distant ecosystems and societies in order to satisfy European desires for, among other things, precious metals, ores, timber, plantation crops (e.g. sugar, tobacco, cotton, rice, tea, coffee, bananas, rubber, cocoa, palm oil), fertilizers, fish, whale, oil, ivory, furs, and feathers. The most tangible environmental consequences of this global expansion of resource extraction include devastated mining landscapes, deforestation, soil exhaustion, collapsed fisheries, and a dramatic reduction in biodiversity. (Richards 2003, in Hornborg 2012: pp. 52, 53). \*Note added.

<sup>35</sup> Marínez- Allier 2016.

<sup>36</sup> For a comprehensive study on political ecology, see Robbins 2012.

<sup>37</sup> Robbins 2012: 3.

<sup>38</sup> See Svampa.

<sup>39</sup> This was the case of Miguel de la Madrid's cabinet in 1982. Thirteen out of eighteen Secretaries were headed by technocrats (tecnócratas) who had studied at private American Universities and embraced orthodox economics and *laissez faire*. Many of them led the Mexican financial sector; among them is worth mentioning Jesús Silva Herzog, Carlos Salinas de Gortari, Miguel Mancera and Francisco Labastida (for the important roles they later had in Mexican politics). These figures were educated in Politics and Economics, but later on, in the year 2000, a new class would be empowered: the entrepreneurial. (Cf. Jaquéz; Fuentes Carranza (2014-06-21).)

<sup>40</sup> See Faux J. 2008; Wright M. 1956.

<sup>41</sup> NAFTA- North American Trade Agreement, signed by USA, México and Canada.

<sup>42</sup> López & Eslava 2011.

<sup>43</sup> Cf. Ibid.

<sup>44</sup> Ramírez: 2012.

<sup>45</sup> Cf. Carriles, L. 2017.

<sup>46</sup> Piece of land owned as common property by peasants or indigenous people.

<sup>47</sup> Such as genetically modified corn from the USA.

<sup>48</sup> Including the national petrochemical industry, the railway system; privatization of the electrical, financial and telecommunications sector.

<sup>49</sup> Decelis 2008: 15.

<sup>50</sup> Ibid: 18.

<sup>51</sup> Cf. González G. 2016.

<sup>52</sup> Decelis 2008: 19.

<sup>53</sup> Cf. Manifiesto 2007.

<sup>54</sup> See: World Population Review. Population Mexico 2017.

<sup>55</sup> Cf. Acción ciudadana frente a la pobreza (2015: 1,2); Flores 2016; Godoy 2015; Ramírez 2009.

<sup>56</sup> According to OXFAM:

Between 2008-2012, Mexico had a *Gini coefficient* (measure of inequality of income or wealth) of 0.441, while the average is only 0.737. Of 113 countries included in a study, Mexico was ranked 87th, which means that more



---

than 75% of the countries in the sample are less unequal. There is actually not official number emitted by Mexican authorities but according to the Global Wealth Report 2014 by Credit Suisse, 10% of the population in Mexico concentrate 64.4% of the total national wealth. Only in 2002, the wealth accumulated by 4 Mexicans (Carlos Slim, Germán Larrea, Alberto Bailleres y Ricardo Salinas Pliego) accounted for 2% of the GDP, number that between 2003-2014 increased to 9%, meaning that while Mexican GDP grows at an annual rate of 1%, those people's wealth multiplied five times. (Source: Sánchez Jiménez 2015; Forbes Staff 2015).

<sup>57</sup> The Mexican Ministry of Interior defines Merida Initiative "as an unprecedented bilateral cooperation initiative between the United States and Mexico to effectively and successfully fight transnational organized crime, particularly drug trafficking. Under the Merida Initiative, there is a new paradigm that aims to confront criminal impunity, produce a safer and more secure hemisphere and improve citizen safety as well as stability."(...) Translated by the author from: Mexican Ministry of Interior's (SEGOB) official website (2010), Iniciativa Mérida. Retrieved from <http://www.iniciativamerida.gob.mx/>. Accessed 2010-03-23.

<sup>58</sup> A comprehensive Marxist study on Canada as imperial power in Latin America has been recently published by Gordon Todd & Jeffery Webber (2016).

<sup>59</sup> The existence and power of the military industrial complex, actually proves that free market policies have never been based on solely the market itself, this applies to the global economy.

<sup>60</sup> Cf. Gordon and Webber 2016: Part II, III; T. Klare & Stein 2009; Harvey 2007.

<sup>61</sup> Harvey 2007: 22.

<sup>62</sup> For further information, see Calvo G., Mudd G.; Valero, A. *et al.* 2016.

<sup>63</sup> Cf. Silva 2010.

<sup>64</sup> " According to the International Energy Agency, between 8% and 10% of the world total energy consumption is dedicated to the extraction of materials that the society demands, and that number does not take into account metallurgical processes, transport and other mining-related activities." Calvo G., Mudd G., Valero A. *et al.* (2016: 1).

<sup>65</sup> Cf. North & Clark 2006; Gordon & Webber 2016.

<sup>66</sup> Copyright: Jeffrey Bury. <http://sciencenotes.ucsc.edu>. Peru's Mountains of Gold.

<sup>67</sup> Copyright: <http://www.coha.org>. Council on hemispheric affairs.

<sup>68</sup> Copyright: <http://www.miningglobal.com>. Top 10 Largest Open Pit Mines in the World.

<sup>69</sup> This will be further explained in section 3.7.

<sup>70</sup> Gordon & Webber 2008: 69.

<sup>71</sup> Hornborg 2012: 55.

<sup>72</sup> Gordon & Webber 2008.

<sup>73</sup> Ibid: 67.

<sup>74</sup> Ibid: 68.

<sup>75</sup> Ibid: 66.

<sup>76</sup> Lemeiux 2004: 7.9.

<sup>77</sup> Ibid.

<sup>78</sup> Silva 2010.

<sup>79</sup> ProMexico 2017.

<sup>80</sup> For further information, see Mexico's mining legislation ([http://www.siam.economia.gob.mx/es/siam/p\\_Legislacion\\_Minera](http://www.siam.economia.gob.mx/es/siam/p_Legislacion_Minera)), or the comprehensive study of López & Eslava 2011.

<sup>81</sup> Cf. Mexican Political Constitution of Mexico. (Constitución Política de los Estados Unidos Mexicanos - Original text in Spanish).

<sup>82</sup> Sánchez S., Ma. Teresa (Interview, February 21<sup>st</sup> 2017).

<sup>83</sup> Izquierdo José, Ma. (Interview, February 16<sup>th</sup> 2017).

<sup>84</sup> Red Mexicana de Afectados por la Minería, in Spanish.

<sup>85</sup> REMA, México. 2016, 2017.

<sup>86</sup> Morán 2012.

<sup>87</sup> To see the exact location of mineralized regions in the Mexico see Map. A in the Appendix I. p. 77.

<sup>88</sup> Cartocrítica 2016. Retrieved from: <http://www.cartocritica.org.mx/2016/concesiones-de-agua-para-las-mineras/>. Accessed: 2017-05-01.

<sup>89</sup> Rodríguez García 2013.

<sup>90</sup> The number is confirmed by numerous experts, among them Ma. Teresa Sánchez and the Mexican Institute of Geology. Cf. Morán Rodríguez 2012.

<sup>91</sup> Mexican Ministry of Economy- Secretaría de Economía, Dirección General de Desarrollo Minero. Number updated on February, 28th 2017).

- 
- <sup>92</sup> Own calculation based on numbers found in *Ibid.*  
[For a complete list of Canadian companies with mining projects in Mexico see the Appendix 2, p. 79.]
- <sup>93</sup> Own calculation based on numbers found in *Ibid.*
- <sup>94</sup> Morán 2012.
- <sup>95</sup> Trading Economics May 2017.
- <sup>96</sup> Government of Canada 2017.
- <sup>97</sup> Vázquez, Ricardo 2005.
- <sup>98</sup> *Ibid.*
- <sup>99</sup> Canadian government 2017. (Section: Comercio e inversión entre Canada y México.)
- <sup>100</sup> Statistics Canada 2017.
- <sup>101</sup> Statistics Canada 2017.
- <sup>102</sup> *Ibid.*
- <sup>103</sup> ECLAC 2016: 126.  
[A data table on Latin America and the Caribbean: Metallic Mining exports and participation in total exports 2001-2014, can be found in the Appendix 3, p. 85.]
- <sup>104</sup> Annual Report: Camimex 2012.
- <sup>105</sup> The table on Metallic Mining Tax Revenues offered by ECLAC's Report 2016 can be found in the Appendix 3, p. 86.
- <sup>106</sup> Ramírez, Erika 2012.
- <sup>107</sup> *Ibid.*
- <sup>108</sup> *Ibid.*
- <sup>109</sup> A data table on the cases of gold and silver can be consulted in the Appendix 3, p. 87.
- <sup>110</sup> Own calculation based on the numbers offered by the ECLAC's Report 2016.  
See Appendix 3, p. 86.
- <sup>111</sup> Cf. ECLAC 2006: 126-127.
- <sup>112</sup> Cf. North & Clark 2006; Gordon & Webber 2016.
- <sup>113</sup> Moody 2001 in Cohen 2015: 98.
- <sup>114</sup> Antonelli 2009.
- <sup>115</sup> Cf. *Ibid.*: 58.
- <sup>116</sup> Federal Attorney for Environmental Protection- Profepa: Stands for Procuraduría Federal de Protección al Ambiente, in Spanish.
- <sup>117</sup> Ocmal 2017 (<https://www.ocmal.org/>); Ramírez 2017.
- <sup>118</sup> Sources: Cohen 2015; Svampa 2009; Antonelli 2009, Gudynas 2013; Acosta 2011; Alquiciras 2004, Burcio 2013; Enciso 2011; Flores 2016.
- <sup>119</sup> Solís, A. 2016.
- <sup>120</sup> Cf. *Ibid.* and Macías, S. 2016.
- <sup>121</sup> Cf. the works of Áviles J. 2011; Burcio F. 2013, Delgado R, 2013.
- <sup>122</sup> The research team.
- <sup>123</sup> National Institute of Statistics and Geography (INEGI). Mexico. 2015.
- <sup>124</sup> Avilés 2011.
- <sup>125</sup> *Ibid.*
- <sup>126</sup> Copyright: Ingrid Altamirano.
- <sup>127</sup> San Luis Potosí's government site & Archivo General de la Nación.
- <sup>128</sup> Manuel González (Interview, December 2010).
- <sup>129</sup> Reygadas & Reyna 2008.
- <sup>130</sup> *Metallica Resources Inc.* was acquired by New Gold Inc. in July 2008. See: [ejatlas.org](http://ejatlas.org)
- <sup>131</sup> Reygadas & Reyna:2008.
- <sup>132</sup> Manuel González (Interview, December 2010).
- <sup>133</sup> Freshwater Action Network 2012.
- <sup>134</sup> Manuel González (Interview, December 2011).
- <sup>135</sup> Freshwater Action Network 2012.
- <sup>136</sup> Avilés 2011.
- <sup>137</sup> Manuel González (Interview, December 2011).
- <sup>138</sup> New Gold, Official Site. (2017). *Sustainability and Environment.*
- <sup>139</sup> *Ibid.*
- <sup>140</sup> See Pictures 1 & 2 in Appendix 4, p. 88.
- <sup>141</sup> See Pictures 3, 4 & 5 in Appendix 4, p. 88.

- 
- <sup>142</sup> Manuel González (Interview, December 2011).
- <sup>143</sup> Minera San Xavier (MSX) 1999.
- <sup>144</sup> See pictures 9 & 10 in Appendix 4, p. 90.
- <sup>145</sup> Secretaría de Desarrollo Social (SEDESOL) 2013.  
Information confirmed by the interviewees in December 2011.
- <sup>146</sup> Méndez, Enrique 2008.
- <sup>147</sup> Ibid.
- <sup>148</sup> See pictures 16 & 17 in Appendix 4, p.91.
- <sup>149</sup> Information confirmed by Mendez E. 2008 and Medrano, D. 2015.
- <sup>150</sup> See picture 11, in Appendix 4, p. 90.
- <sup>151</sup> Random Short Interview in the street of CSP, 2017.
- <sup>152</sup> See pictures 14 & 15, in Appendix 4, p. 91.
- <sup>153</sup> Cf. FAO's official website.
- <sup>154</sup> Manuel Gozález (Interview, December 2011).
- <sup>155</sup> Chavez, Patricio, JMA & Villamayor, S., 2016.
- <sup>156</sup> <http://movimientom4.org/>
- <sup>157</sup> <http://miningwatch.ca/>
- <sup>158</sup> Procesos Integrales para la Autogestión de los Pueblos, in Spanish.
- <sup>159</sup> In the past, mestizo Mexican population has used the term *huichol* as a derogatory. In this text, it used a synonym to *wixarika* for being a commonly used term in anthropological studies published in English.
- <sup>160</sup> Burcio F., C., 2013.
- <sup>161</sup> <http://whc.unesco.org>. UNESCO Initiative on Heritage of Religious Interest
- <sup>162</sup> Notimex 2013.
- <sup>163</sup> Morales G., E., 2015.
- <sup>164</sup> Lohman, Larry 2016.
- <sup>165</sup> Ibid; Svampa 2009.
- <sup>166</sup> *First Majestic Silver* obtained 38 concessions in total, 22 of them are located in the Wirkuta area. Cf. Ibid; Burcio F., Claudia 2013
- <sup>167</sup> Enciso L., Angélica 2011.
- <sup>168</sup> Cf. Ibid; Reygadas, P. & O. Reyna, 2008.
- <sup>169</sup> Ibid. (Translated by the author from Spanish).
- <sup>170</sup> Morales G., E., 2015: 44.
- <sup>171</sup> Ibid.
- <sup>172</sup> García Trejo A., 2012.
- <sup>173</sup> SB Wadely S. A. de C. V. – Project: El General, Quality Mineral S. A. de C. V. y Antimony de México S. A. de C. V.
- <sup>174</sup> Morales G., E., 2015: 46.
- <sup>175</sup> Cultural Survival.org (2013).
- <sup>176</sup> Pepe Mora (Interview, December 2010).
- <sup>177</sup> See picture 18 in Appendix 4, p. 91.
- <sup>178</sup> Marakame means shaman in wixarrica/huichol language.
- <sup>179</sup> Palma, Lilian 2013.
- <sup>180</sup> In other words, not to the wixarika authorities.
- <sup>181</sup> See Chapter 3 and Appendix 3.
- <sup>182</sup> Proceso No. 2096: 24.
- <sup>183</sup> Asamblea Nacional de Afectados Ambientales, in Spanish.  
Website: <http://www.afectadosambientales.org/>
- <sup>184</sup> Alianza Mexicana contra el fracking.  
Website: <http://nofrackingmexico.org/>
- <sup>185</sup> Movimiento Mexicano de Afectados por las Presas y en Defensa de los Rios.  
Website: <http://www.mapder.lunasexta.org/>

---

## References

### Books and articles

- Acosta A. (2011) "Extractivism and neoextractivism: two sides of the same curse" in Lang Miriam, Fernando Lyda & Nick Buxton (eds.). *Beyond development. Alternative visions from Latin America*, Rosa Luxemburg Foundation (RLF) & Transnational Institute (TNI). Quito, 61-86.
- Agamben, Giorgio (2004). *Estado de Excepción. Homo Sacer II. I*, PRE---TEXTOS, (Translation by Antonio Gimeno Cuspinera), 135pp.
- Alquiciras ,Yessica; Godoy, J.; Robles, E. et al. (2011). "La corrupción minera en Wirikuta" in *Revista Ojarasca*. Suplemento mensual, Number 169, May.
- Antonelli, Mirta A (2009). "Minería transnacional y dispositivos de intervención en la cultura. La gestión del paradigma hegemónico de la 'minería responsable y el desarrollo sustentable',"in *Minería transnacional, narrativas del desarrollo y resistencias sociales*. Editorial Biblos, Sociedad, Buenos Aires, 51-101.
- Ávila, P. (2006) "Movimiento urbano y conflictos por el agua" in S. Esch (coord.) *El derecho humano al agua en México, Centroamérica y Caribe: visiones vs. Realidades*, México, Ed. Böll.
- Avilés, Jaime (2011). "Minera San Xavier: Catastrófe para SLP" in *Minera: 500 años de saqueo. Suplemento Especial*. Retrieved from <http://www.jornada.unam.mx/2011/11/14/min---oro.html>. Accessed: 11-10-2015.
- Banerjee, S.B. (2003). *Who Sustains Whose Development? Sustainable Development and the Reinvention of Nature*. *Organization Studies* 24(1): 143–180.
- Bellamy Foster, John (2008). "Peak Oil and Energy Imperialism" in *Monthly Review*, 60:3, July-August. Retrieved from <http://monthlyreview.org/2008/07/01/peak---oil---and---energy---imperialism/>. Accessed: 23-10-2015.
- Burcio Feregrino, Claudia. (2013). "Conflictos socioambientales en San Luis Potosí" in Delgado Ramos, Gian C. (coordinador). *Ecología política del extractivismo en América Latina: Casos de resistencia y justicia socioambiental*. pp. 269-289.
- Burman, Anders (2012). "Places to think with, books to think about: Words, experience and the decolonization of knowledge in the Bolivian Andes". *Human Architecture: Journal of the Sociology of Self--- Knowledge*, Special Issue, 10(1): 101-120.
- Calvo Guiomar, Mudd Gavin, Alicia Valero et. al. (2016). "Decreasing Ore Grades in Global Metallic Mining: A Theoretical Issue or a Global Reality?" in *Resources*, MDPI, Basel, Switzerland, 5, 36.

- 
- Carey, Mark (2009). "Latin American Environmental History: Current Trends, Interdisciplinary Insights, and Future Directions" in *Environmental History*, 14: 221-252.
  - Carriles, Luis (2017) "Conflictos sociales amenazan proyectos de energía" in *El Economista*, Published on February 19, 26-27.
  - Ceceña, José Luis (1970). *México en la órbita imperial. Las empresas transnacionales, ediciones El Caballito*, México, 271pp.
  - Cohen, Miriam Alfie (2015). "Conflictos socio-ambientales: la minería en Wirikuta y Cananea" in *El Cotidiano*, 191: 97-108.
  - Daudelin, Jean (2003). "Foreign policy at the fringe: Canada and Latin America", in *International Journal*. 58 (4), 637-667.
  - Decelis Contreras, Rafael (2008). "Efectos de 23 años de política económica liberal 1982-2005" in Saxe Fernández, John (Coord.), *La energía en México. Situación y Alternativas*, El mundo actual, 15- 31.
  - Delgado Wise, Raúl & Rubén, Del Pozo Mendoza (2005). "Mexicanization, Privatization, and Large Mining Capital in Mexico" in *Latin American Perspectives*, Vol. 32, No. 4, *Mexico: Popular Mobilization versus Neoliberal "Democracy"* (Jul., 2005), pp. 65-86. Retrieved from: Sage Publications, Inc. Stable URL: <http://www.jstor.org/stable/30040253>. Accessed: 05-03-2017.
  - Enciso L., Angélica. (2011). " Otorgó el gobierno 22 concesiones mineras en Wirikuta, sitio sagrado" in *La Jornada*, November, 21th. p. 39.
  - Escobar, Arturo (1999). "After Nature: Steps to an Antiessentialist Political Ecology" in *Current Anthropology* 40(1), 1-16.
  - Escobar, Arturo (2007). "Worlds and Knowledges Otherwise: The Latin American Modernity/Coloniality Research Program" in *Cultural Studies* 21(2-3), 179—210.
  - Flores, Nancy (2016). "Pobreza: lo que oculta el gobierno" in *Contralínea. Periodismo de Investigación*. Retrieved from <http://www.contralinea.com.mx/archivo-revista/index.php/2016/07/24/pobreza-lo-que-oculta-el-gobierno/>. Accessed: 2017-03-27.
  - Forbes Staff (2015). "7 datos que muestran la desigualdad extrema en México" in *Forbes Mexico*. Retrieved from <https://www.forbes.com.mx/7-datos-que-muestran-la-desigualdad-extrema-en-mexico/#gs.ucG=IGU>. Accessed: 2017-03-27.
  - Fraser Institute (2012). "¿Ocasiona la minería conflictos sociales?" in *Mining Facts. Realidad Minera*. Retrieved from: <http://www.miningfacts.org>. Accessed: 2017-04-28.
  - García Trejo, A. (2012). "El Wirikuta fest se transforma en un llamado de justicia para México", en *Expansión*. May 27th.
  - Gartman, David (2012), "Converging theories of culture and inequality" in *Theory and Society*, Vol. 41, No. 1, 41-72.

- 
- Garner, Richard L. (1988). "Long-Term Silver Mining Trends in Spanish America: A Comparative Analysis of Peru and Mexico" in *The American Historical Review*. Vol. 93, No. 4 (Oct), 898-935.
  - Gonzáles, G. Susana (2016). Estados Unidos pagaría más aranceles de cancelar el TLCAN in *La Jornada*, published on November, 24. Retrieved from <http://www.jornada.unam.mx/2016/11/24/economia/029n1eco>. Accessed: 2017-04-01.
  - Godoy, Emilio (2015). "La pobreza gana la batalla en México" in *Contralínea. Periodismo de Investigación*. Retrieved from <http://www.contralinea.com.mx/archivo-revista/index.php/2015/08/28/la-pobreza-gana-la-batalla-en-mexico/>. Accessed: 2017-03-27.
  - Gordon Todd & Jeffery R. Webber (2008). "Imperialism and Resistance: Canadian Mining Companies in Latin America" in *Third World Quarterly*, Taylor & Francis Vol. 29:1, 63-87. Retrieved from <http://www.jstor.org/stable/20455026>. Accessed: 05-03-2017.
  - Gordon Todd & Jeffery R. Webber (2016). *Blood of extraction. Canadian Imperialism in Latin America*. Fernwood Publishing. 390pp.
  - Graeber, David (2011). *Debt: The first 5,000 years*. Melville House. 534pp.
  - Gudynas, E. (2013). "Extracciones, extractivismos y extrahecciones. Un marco conceptual sobre la apropiación de recursos naturales" in *Observatorio del Desarrollo*, CLAES, No. 18: 1-17.
  - Gunder Frank, André (1965), *Capitalismo y Subdesarrollo en América Latina*. Retrieved from <http://www.eumed.net/cursecon/textos/>. Accessed: 2017-02-23.
  - Harvey, David (2007). "Neoliberalism as Creative Destruction" in *The Annals of the American Academy of Political and Social Science. NAFTA and Beyond: Alternative Perspectives in the Study of Global Trade and Development*. Sage Publications, Inc. March. Vol. 610, 22-45. Retrieved from <http://www.jstor.org/stable/25097888>. Accessed: 27-03-2017.
  - Heiskel, Tove (2011). "Minería ilegal en el Cerro de San Pedro" in *Agua, ríos y pueblos*. Retrieved from <http://www.aguariosypueblos.org/cerro---de---san---pedro---%C2%B7--mexico>. Accessed: 10-10-2015.
  - Hornborg, Alf (2012). *Global Ecology and Unequal Exchange: Fetishism in a Zero-Sum World*. Routledge Studies in Ecological Economics, 208 pp.
  - Hornborg, Alf. (2016). *Global magic: technologies of appropriation from ancient Rome to Wall Street*. New York, NY: Palgrave Macmillan. 201pp.
  - Jiménez Pérez, Sol. (2014). *Territorialidades contenciosas en México: El caso de la minería*. Master in Geography- Dissertation. Universidad Nacional Autónoma de México, UNAM.
  - Katz Friedrich (1982)1981. "V. Epílogo" in *La Guerra secreta en México. Europa, Estados Unidos y la revolución mexicana*, Primera edición en español. Ediciones Era, 593- 648.

- 
- Lemeiux A. (2004). "Canada's global mining presence" in *Canadian Mineral Yearbook*, Ottawa. Natural Resources Canada, 7.9.
  - Liverman, D., Vilas, S. (2006). "Neoliberalism and Environment" in *Latin American Annual Review of Environmental Resources*, 31: 327-363.
  - Lohmann, Larry (2016). "Expanding the concept of environmental racism" in *Chain Reaction*, Issue 127, August.
  - López Bárcenas, Fco. & Eslava, Galicia M. (2011). *El Mineral o la vida. La legislación minera en México*, COAPI-México, 80pp.
  - López de la Torre, Rafael. (2006). *El respeto a la naturaleza. Legado de los antepasados Wixarika*. [interviews and review]. Acento Editores. Mexico. 66pp.
  - Macías Lagunas, Samantha. (2016) "En México, el mayor número de conflictos mineros de AL: 80 socio-ambientales y 22 laborales" in *Sin Embargo*, August 22th.
  - Maldonado Torres, Nelson (2007), "On the coloniality of being. Contributions to the development of a concept" in *Cultural Studies*, (21)2: 240-270.
  - Martínez-Alier, J. (1991). "Ecology and the poor: a neglected dimension of Latin American History" in *Journal of Latin American Studies*, 23: 621-639.
  - Medrano, David (2015). "Lo que dejó Minera San Xavier" in *El exprés*. San Luis Potosí, May 2nd.
  - Méndez, Enrique (2008). "Denuncian amenazas de represión en SLP a opositores a Minera San Xavier" in *La Jornada*. Sociedad y Justicia. December 12th.
  - Montemayor, Carlos (2010). *La violencia de estado en Mexico. Antes y después de 1968*. Debate. Random House Mondadori, Mexico, 272pp.
  - Morales García, José Eduardo. (2015) *Geografía política y territorialidad en el área natural protegida de Wirikuta*. Master in Geography- Dissertation. Universidad Nacional Autónoma de México, UNAM. Chapters: 2-4.
  - Morán Rodríguez, Liliana E. (2012). "Riqueza minera mexicana, en manos de empresas extranjeras" in *Ciencia UNAM*, DGDC. Mes 10, día 22.
  - North, L., Clark, Timothy David & Viviana, Patroni [Editors] (2006). *Community rights and corporate responsibility. Canadian mining and oil companies in Latin America. Between the Lines*. Toronto, 390pp.
  - Notimex. (2013). "Wirikuta: territorio sagrado por la Unesco, en peligro" in *El Universal*. Cultura. Junio, 25th.
  - Ortega Reyna J. & Pacheco Chávez, V. (2013). "Ethos y colonialidad en América Latina. Un debate hipotético entre Bolívar Echeverría y Aníbal Quijano" in *Dialéctica*, Nueva Época, 37(45---46):34-50.
  - Peña, F. & Herrera, E. (2008). "Vocaciones y riesgos de un territorio en litigio. Actores, representaciones sociales y argumentos frente a Minera San

---

Xavier” en Cecilia Costero (coord.) *Internacionalización económica. Historia y conflicto ambiental en la minería. El caso de Minera San Xavier*. El Colegio de San Luis.

- Páez Varela Alejandro (2009). *La guerra por Juárez. El sangriento corazón de la tragedia nacional*, Editorial Planeta Mexicana, Temas de Hoy, 179pp.
- Palma, Lilian. (2013) "A struggle for sacred land: the case of Wirikuta" in *Civil Resistance*. Open Democracy.net, September 26th.
- Porras Ferreyra, Jaime. (2016). "Justin Trudeau y el lodo de las mineras canadienses en América Latina" in *The New York Times* (Spanish Version), October 7th.
- Quijano, Aníbal (2000). "Colonialidad del poder, eurocentrismo y América Latina" in Edgardo Lander (comp.) *La colonialidad del saber: eurocentrismo y ciencias sociales* in Perspectivas Latinoamericanas. CLACSO, Consejo Latinoamericano de Ciencias Sociales, Buenos Aires, Julio. p. 246.
- Quijano, Aníbal (2014)2010. Colonialidad del poder y clasificación social. Mexico. CLACSO, 285-300.
- Quijano, Anibal. (2000b). "Coloniality of Power, Eurocentrism, and Latin America" in *International Sociology* 15.2, 533-580. Retrieved from <https://www.unc.edu/~aescobar/wan/wanquijano.pdf>. Accessed: 2017-01-31.
- Ramírez, Erika (2009). "Empeora la pobreza en México: CEPAL" in *Contralínea. Periodismo de Investigación*. Retrieved from <http://www.contralinea.com.mx/> Accessed: 2017-03-27.
- Ramírez, Erika (2012). "Mineras pagan a México 1% de lo que extraen" in *Contralínea, Periodismo de Investigación*. Revista No. 274.
- Ramírez, Erika. (2017). "En México, 39 conflictos por minería" in *Contralínea. Periodismo de Investigación*, Mes 2, Día 1. Retrieved from <http://www.contralinea.com.mx/>. Accessed: 2017-05-01.
- Reygadas, P. & O. Reyna (2008). "La batalla por San Luis: ¿El agua o el oro? La disputa argumentativa contra la Minera San Xavier" en *Estudios Demográficos y Urbanos*, 23(2): 299-331.
- Robbins Paul (2012), *Political Ecology*, Second Edition. Wiley-Blackwell, 288pp.
- Rodríguez García, Arturo. (2013). "Mineras canadienses: ejemplares en su país, corruptas en México" in *Proceso*, Reportaje especial, December , Day 19.
- Rodríguez Wallenius, Carlos. (2013). "El México bárbaro de las mineras canadienses y las comunidades rurales" in *El México bárbaro del siglo XXI*. First Edition. UAM-X, Mexico.
- Sánchez Jiménez Arturo (2015). "México, con más desigualdad que otros países: Oxfam" in *La Jornada*. Retrieved from



---

<http://www.jornada.unam.mx/ultimas/2015/06/24/desigualdad-en-mexico-se-refleja-en-53-millones-de-pobres-oxfam-2410.html>. Accessed: 2017-03-27.

- Schaefer, Stacy B; Furst, Peter T. (1996). *People of the peyote. Huichol Indian History, Religion and Survival*. University of New Mexico Press, 560pp.
- Schneider, Eric D. & Kay, James J. (1994) "Life as a Manifestation of the Second Law of Thermodynamics". *Mathematical and Computer Modelling* 19(6-8): 25-48.
- Silva, Letizia (2010). "Implicaciones sociales en la legislación ambiental: el proceso de evaluación de impacto ambiental de Minera San Xavier" in Gian Carlo Delgado (coord.), *Ecología Política de la minería en América Latina*. CEIICH. Mexico, 213-249.
- Solís, Arturo. (2016). "México, el país con más conflictos mineros en América Latina" in *Forbes. México*. Retrieved from: <https://www.forbes.com.mx/mexico-lider-conflictos-mineros-america-latina/>, Accessed: 2017-05-04.
- Svampa, Maristella & Antonelli Mirta, A. (2009). *Minería transnacional, narrativas del desarrollo y resistencias sociales*. Editorial Biblos, Sociedad, Buenos Aires, 319pp.
- T. Klare Michael & Nancy Stein (2009). *Armas y poder en América Latina*, Serie Popular Era, Mexico, 1978, 251pp.
- Torres, Jorge (2016). "Denuncian amenazas y hostigamiento contra integrante de Frente Amplio Opositor a la Minera San Xavier" in *La Jornada*. San Luis, July 29th.
- Turner II, B.L. & Butzer, K.W. (1992) "The Columbian Encounter and Land-Use Change". *Environment* 34(18): 16- 44.
- Uranium Holding Co (2017). *Open Pit/Underground Mining*. Retrieved from <http://www.armz.ru>. Accessed: 2017-05- 13.
- Valadez Rodríguez, Alfredo. (2017). "Minera canadiense desaloja con armas a vecinos de Chalchihuites" in *La Jornada*, Mexico. Thursday, May 4th.
- Vázquez, Ricardo (2005). "What does Mexico import from Canada?" in *Panamerican World*, August 17th.
- Villamayor-Tomas, Sergio (2016). "Wirikuta silver and gold mining in Mexico" in EJOLT. Retrieved from <https://ejatlas.org/conflict/wirikuta-mexico>. Accessed: 2017-05-10.
- Wallerstein, Immanuel (2004). *World-systems analysis. An introduction*, Duke University Press, 108pp.

#### Official Documents

- Constitución Política de los Estados Unidos Mexicanos.
- CEPAL (2016). *La Inversión Extranjera Directa en América Latina y el Caribe*. United Nations, 169pp. Retrieved from: [www.cepal.org/publicaciones](http://www.cepal.org/publicaciones). Accessed: 2017-04-13.
- Diario Oficial de la Federación (2014). *ACUERDO por el que se aprueba el Programa de Desarrollo Minero 2013-2018*. Classif. **DOF: 09/05/2014**. Retrieved from

---

[http://www.dof.gob.mx/nota\\_detalle.php?codigo=5344070&fecha=09/05/2014](http://www.dof.gob.mx/nota_detalle.php?codigo=5344070&fecha=09/05/2014).

Accessed: 2017-01-30.

- EDC. *Doing bussiness in Mexico. A Guide for Canadian Exporters and Investors*. EDC. 42pp. Retrieved from <http://www.cme-mec.ca/download.php?file=h9r2covu.pdf>. Accessed: 2017-05-04
- Mexican Mining Law.
- Minera San Xavier. MSX. (1999). Cerro de San Pedro. San Luis Potosí, México. Compromisos de Minera San Xavier S.A de C.V.
- Secretaría de Desarrollo Social (SEDESOL). (2013). *Catálogo de localidades. Sistema de Apoyo para la Planeación. Resumen Municipal de Cerro de San Pedro*. Retrieved from: <http://www.microrregiones.gob.mx>. Accessed: 2017-05-11.

### Social movements and NGO documents

- ✚ Manifesto (2007). "Pérdida de la soberanía nacional" in *El Universal*. August 29th. Mexico.
- ✚ Acción ciudadana frente a la pobreza (2015). Pobreza y Desigualdad en México. Retrieved from <http://frentealapobreza.mx/wp-content/uploads/2015/05/Pobreza-y-Desigualdad-en-Mexico-Razones-para-actuar-y-para-exigir-Anexo-I.pdf>. Accessed: 2017-03-27.
- ✚ Chavez, Patricio, JMA & Villamayor, Sergio (2016). Cerro San Pedro mine, San Luis Potosi, Mexico in EJOLT. Retrieved from: <https://ejatlas.org/conflict/cerro-san-pedro-mine-san-luis-potosi-mexico>. Accessed: 2017-05-12.
- ✚ Cultural Survival.org (2013). Good News- Mexico: Mining concessions suspended in Wirikuta in Cultural Survival, September 11.
- ✚ FAO (2013). Proyecto Cerro de San Pedro. Retrieved from <http://proyectocerro.blogspot.se/>. Accessed: 20-10-2015.
- ✚ Freshwater Action Network--grassroots influencing on water and sanitation (2012). "Inicia New Gold, Minera San Xavier escalada de represión contra opositores. Mes 2:18. Retrieved from <http://www.freshwateraction.net/es/content/inicia---new---gold---minera---san---xavier---escalada---de---represi%C3%B3n---contra---sus---opositores>. Accesed: 10-25-2015
- ✚ Mijangos Leal, Miguel Ángel (2015). *Guía de las resistencias – Estrategias comunitarias para la vida y en contra de las empresas mineras depredadoras*. Retrieved from [http://www.movimientom4.org/wpcontent/docs/guia\\_de\\_las\\_resistencias\\_comunitaria\\_s.pdf](http://www.movimientom4.org/wpcontent/docs/guia_de_las_resistencias_comunitaria_s.pdf). Accessed: 2016-11-30.
- ✚ NIERIKA (2013). To understand Wirikuta in Multidisciplinary Association for the Preservation of the Indigenous Traditions of the Sacred Plants of the Americas (NIERIKA). May 20th. Retrieved from: <http://nierika.info/english/to-understand-wirikuta/>. Accessed: 2017-05-17.
- ✚ OCMAL (2016). *Conflictos mineros en América Latina: Extracción, Saqueo y Agresión.—Estado de situación en 2015*. Observatorio de Conflictos Mineros de América Latina, OCMAL.

---

✚ OCMAL (2015). *Conflictos mineros en América Latina: Extracción, Saqueo y Agresión.—Estado de situación en 2014*. Observatorio de Conflictos Mineros de América Latina, OCMAL.

✚ REMA. (2016, 2017) *El modelo extractivo y daños de la Minería en México. Presentación General para grupos de trabajo*. Mexico.

#### Official websites

✚ Consejo Regional Wixarica <http://consejoregionalwixarika.org/>

✚ Ejolt. Environmental Justice Organisations, Liabilities and Trade <http://www.ejolt.org/>

✚ Frente Amplio Opositor (FAO). <http://faoantimsx.blogspot.se>

✚ Frente en defensa de Wirikuta <http://www.frenteendefensadewirikuta.org/>

✚ Government of Canada. (2017). Canada-Mexico Relations. A Strategic Partner for Canada. <http://mexico.gc.ca>

✚ Mexico Mining Center <http://mexicominingcenter.com/>

✚ Observatorio de Conflictos Mineros de América Latina <https://www.ocmal.org/>

✚ Profepa (Federal Attorney for Environmental Protection). <https://www.gob.mx/profepa>

✚ Pro México. Trade and Investment <http://www.promexico.mx/>

✚ Pro México. (2017). Mexican mining, digging its way in the world in *Negocios*. Retrieved from: <http://negocios.promexico.gob.mx/english/02-2012/art01.html>. Accessed: 2017-05-04

✚ Salvemos Wirikuta <http://salvemoswirikuta.blogspot.se/>

✚ San Xavier Mining Company

✚ <http://www.newgold.com/operations/cerro---san---pedro/cerro---san---pedro---spanish---site/minera---san--xavier/default.aspx>. Accessed: 23-10-2015.

✚ Statistics Canada. (2017). Foreign direct investment positions at year end. <http://www.statcan.gc.ca>

✚ World Population Review. Population Mexico 2017. <http://worldpopulationreview.com/>

#### Conferences

○ Martínez-Alier, Joan (Conf. 2016), “Environmental conflicts” (Paper presented at *Lucsus*, Lund University, Sweden, February 2nd, 2016.)

○ Moore, Jennifer (Conf. 2016), “Mining Watch Canada in America Latina- Canadian mines in Mexico” (Paper presented at *Coloquio Extractivismo minero: territorio, medio ambiente y sociedad*, Centro de Investigaciones Interdisciplinarias en Ciencias y Humanidades (CEIICH), National Autonomous University of Mexico (UNAM), Mexico City, 25th August, 2016.)

○ Sánchez Salazar, Ma. Teresa (Conf. 2016), “Proyecto de Atlas Minero” (Paper presented at *Coloquio Extractivismo minero: territorio, medio ambiente y sociedad*, Centro de Investigaciones Interdisciplinarias en Ciencias y Humanidades (CEIICH), National Autonomous University of Mexico (UNAM), Mexico City, 25th August, 2016.)

#### Interviews in chronological order

1. Manuel González\*. Activist. (Dic. 2010), La lucha por San Pedro y las bases de la organización I. Field research. Project: Geoeconomics and geopolitics of the capital in a time of economic crisis and hegemonic transition (CEIICH, UNAM-Mexico), Own transcription and partial translation from Spanish.

- 
2. Manuel González\*. Activist. (Dic. 2011), La lucha por San Pedro y las bases de la organización II. Field research. Project: Geoconomics and geopolitics of the capital in a time of economic crisis and hegemonic transition (CEIIH, UNAM-Mexico), Own transcription and partial translation from Spanish.
  3. Pepe Mora.\* Inhabitant. (Dic 2011). La lucha por Wirikuta. Field research. Project: Geoconomics and geopolitics of the capital in a time of economic crisis and hegemonic transition (CEIIH, UNAM-Mexico), Own transcription and partial translation from Spanish.
  4. Casado Izquierdo José María. Academic. (February, 16<sup>th</sup> 2017).
  5. Sánchez Salazar María Teresa. Academic. Area of expertise: Mining industry in Mexico. (February 21<sup>st</sup> 2017).
  6. Ulises Lima\*. Activist. (February 21<sup>st</sup> 2017), Mexican Network for people affected by Mining (REMA) and Moviento M4 (Mesoamerican Movement against the Extractivist Mining Model).
  7. Narrative walk- Interview with Wirikuta's Warakame (February 2017).

*Notes:*

\* Interviewees have been anonymized and original names replaced by aliases.

-Entire transcriptions of the interviews are available upon request. The texts are in Spanish and partially translated to English.

**List of Acronyms**

CIDA Canadian International Development Agency

ECLAC- Economic Commission for Latin America

FAO- Wide Opposition Front

FTAA Free Trade Area of the Americas

FIPAs Foreign Investment Protection Agreements

NGO Non-governmental organisation

PROFEPA- Federal Attorney for Environmental Protection

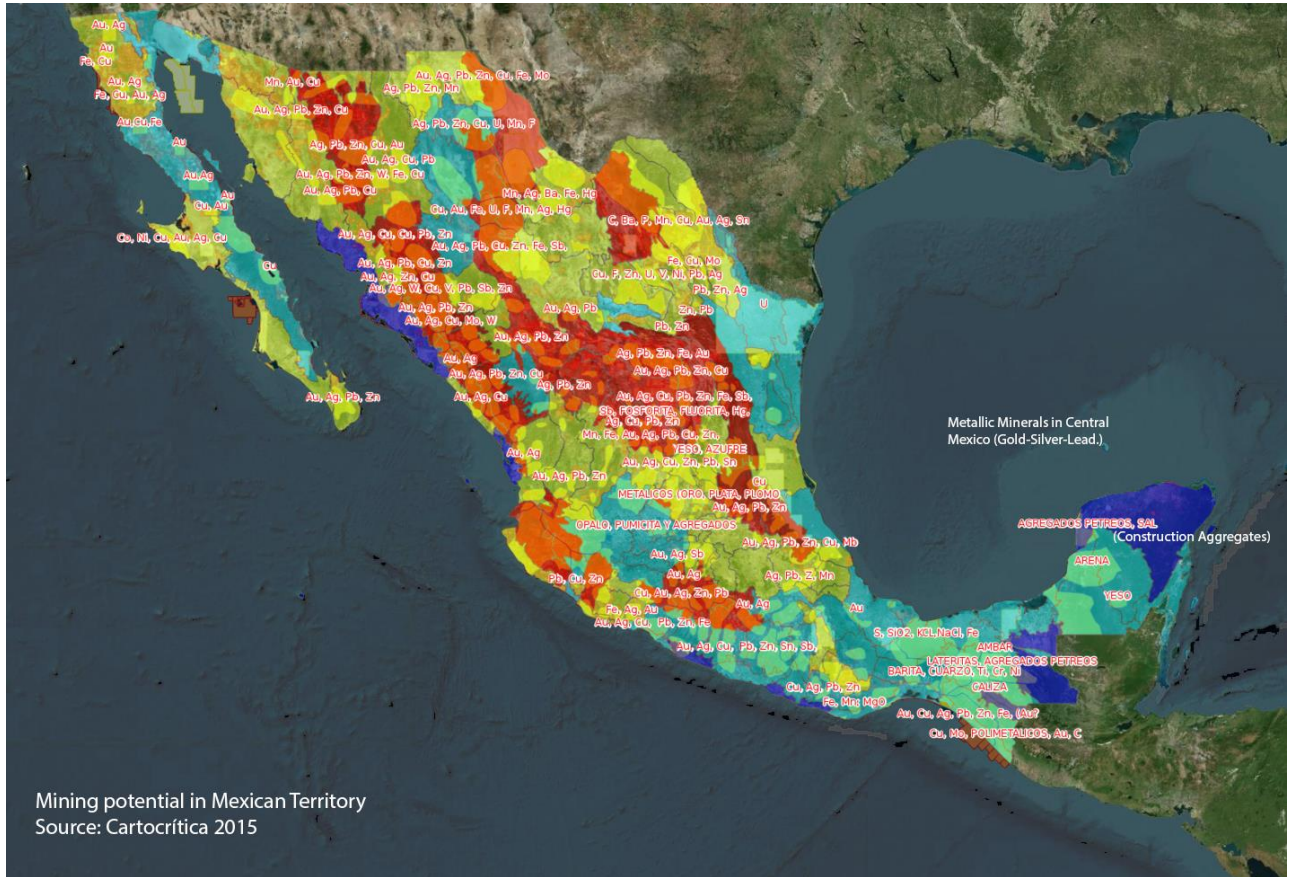
REMA- Mexican Network of People Affected by Mining

SEMARNAT- Mexican Ministry of Environment and Natural Resources

USD- United States Dollar

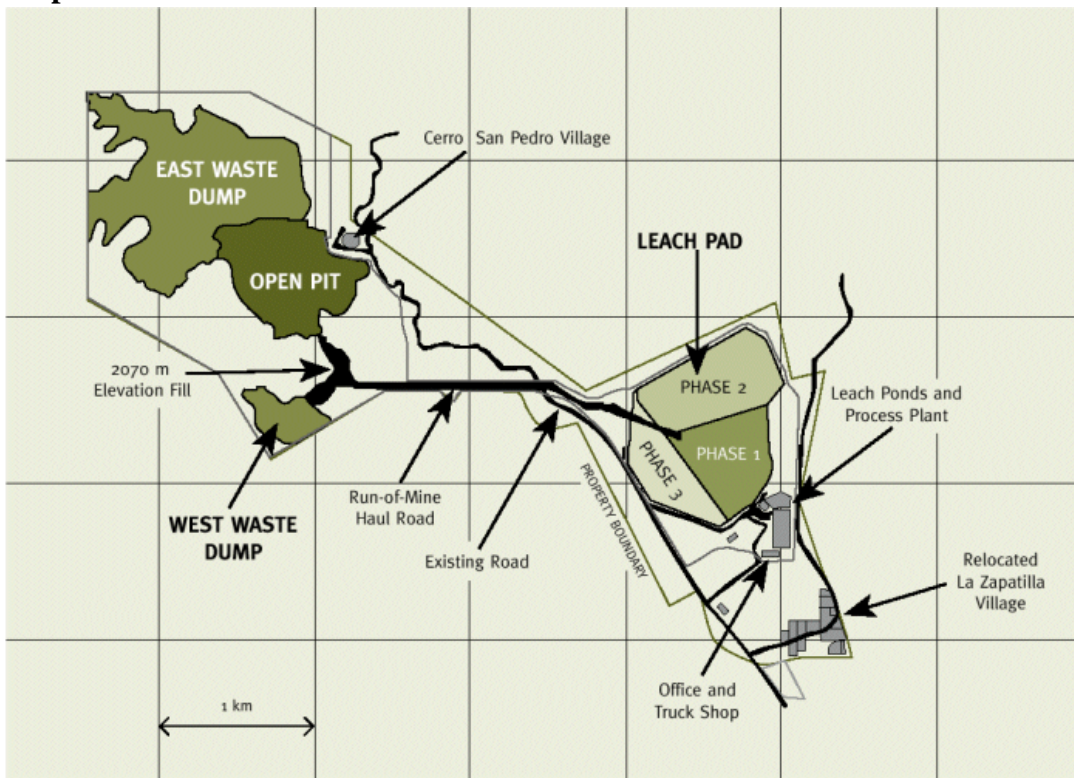
# APPENDIX I. Maps

Map. A. Mineralized regions in Mexico



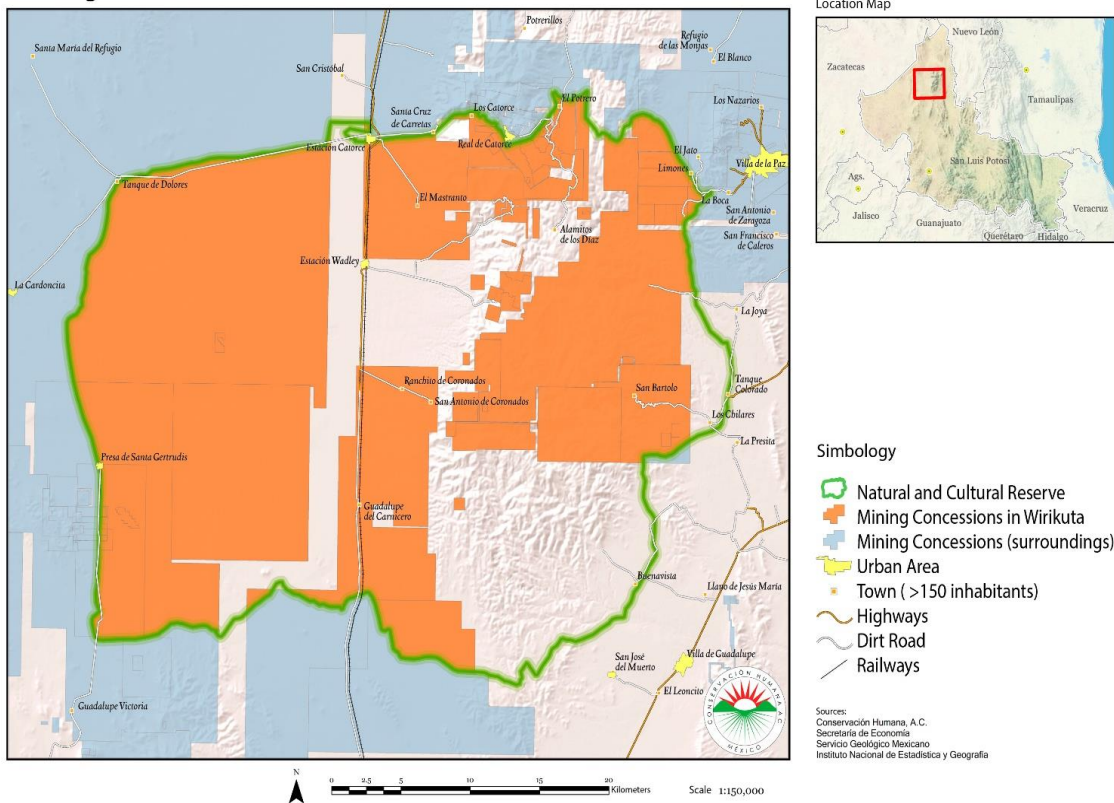
Source: Own elaboration based on Cartocrítica 2015.

**Map. B.** Cerro de San Pedro. Mine location.



Source: Metallica Resources Inc. 2006.

**Map. C.** Wirikuta. Mine location



Source: Own elaboration based on Cartocrítica 2015.

## APPENDIX 2. List of Canadian companies with mining projects in Mexico

Note: 219 out of 345 foreign companies operating in Mexico = 63% of the total.

1. Agave Silver Corp (ahora First Energy Metals Limited)	Canada
2. Agnico-Eagle Mines Limited	Canada
3. Alamos Gold Inc	Canada
4. Alianza Minerals Ltd	Canada
5. Alix Resources Corp	Canada
6. Almaden Minerals Ltd	Canada
7. Almadex Minerals Ltd	Canada
8. Alphamin Resources Corp	Canada
9. Alta Vista Ventures Ltd (Salió Del País)	Canada
10. Amato Exploration Ltd	Canada
11. Americas Silver Corp	Canada
12. Amex Exploration Inc	Canada
13. AmMex Gold Mining Corp	Canada
14. Arcelia Gold Corp	Canada
15. Arco Resources Corp	Canada
16. Arcus Development Group Inc	Canada
17. Argentum Silver Corp	Canada
18. Argonaut Gold Inc	Canada
19. Aura Minerals Inc	Canada
20. Aura Mining Inc	Canada
21. Aura Silver Resources Inc	Canada
22. Auramex Resource Corp	Canada
23. Aurcana Corp	Canada
24. Aurico Gold Inc (ahora Alamos Gold Inc)	Canada
25. Aurion Resources Ltd	Canada
26. Avino Silver & Gold Mines Ltd	Canada
27. Aztec Metals Corp	Canada
28. Bacanora Minerals Ltd	Canada
29. Baja Mining Corp	Canada
30. Bandera Gold Ltd	Canada
31. Bearing Resources Ltd	Canada

32. <b>Bell Copper Corporation</b>	Canada
33. Benz Capital Corp	Canada
34. <b>Big North Graphite Corp (ahora CobalTech Mining Inc)</b>	Canada
35. Blackcomb Minerals Inc	Canada
36. Blackfire Exploration Ltd (Salió Del País)	Canada
37. <b>Bold Ventures Inc</b>	Canada
38. Bowmore Exploration Ltd	Canada
39. Branco Resources, Ltd	Canada
40. <b>Camino Minerals Corp</b>	Canada
41. Canadian Mining Company Inc	Canada
42. <b>Canarc Resources Corp (Salió Del País)</b>	Canada
43. Canasia Industries Corp	Canada
44. <b>Canasil Resources Inc</b>	Canada
45. <b>Candelaria Mining Corp</b>	Canada
46. <b>Candente Gold Corp</b>	Canada
47. <b>Capstone Mining Corp</b>	Canada
48. <b>Catalyst Copper Corp</b>	Canada
49. <b>Caza Gold Corp</b>	Canada
50. <b>Centerra Gold Inc</b>	Canada
51. <b>Chesapeake Gold Corp</b>	Canada
52. Colibri Resource Corp	Canada
53. <b>Comstock Metals Ltd</b>	Canada
54. Continuum Resources Ltd	Canada
55. Copper Creek Gold Corp	Canada
56. <b>Corex Gold Corp</b>	Canada
57. Cortez Gold Corp	Canada
58. Cyprium Mining Corp	Canada
59. D'Ariane Resources Inc	Canada
60. <b>Defiance Silver Corp</b>	Canada
61. <b>Del Toro Silver Corp</b>	Canada
62. ECI Exploration & Mining	Canada
63. <b>eCobalt Solution Inc</b>	Canada
64. Electrum Global Holdings	Canada
65. <b>Endeavour Silver Corp</b>	Canada
66. <b>Ethos Capital Corp</b>	Canada



67. Evrim Metals Corp	Canada
68. EVRIM Resources Corp	Canada
69. Excalibur Resources Ltd	Canada
70. Excellon Resources Inc	Canada
71. Exeter Resource Corporation	Canada
72. First Gold Exploration Inc	Canada
73. First Majestic Silver Corp	Canada
74. First Mexican Gold Corp	Canada
75. First Mining Finance Corp	Canada
76. First Narrows Resources Corp	Canada
77. First Point Minerals Corp	Canada
78. First Quantum Minerals Ltd	Canada
79. Focus Gold Corp	Canada
80. Fortuna Silver Mines Inc	Canada
81. Frontera Copper Corp	Canada
82. Foundation Resources Inc	Canada
83. Galore Resources Inc	Canada
84. Garibaldi Resources Corp	Canada
85. Geologix Explorations Inc	Canada
86. GFM Resources Limited	Canada
87. Gogold Resources Inc	Canada
88. Goldcorp Inc	Canada
89. Golden Goliath Resources Ltd	Canada
90. Golden Predator Mines Corp	Canada
91. Golden Tag Resources Ltd	Canada
92. Goldgroup Mining Inc	Canada
93. Great Panther Silver Ltd	Canada
94. Guerrero Exploration Inc	Canada
95. Guerrero Ventures Inc	Canada
96. Gunpoint Exploration Ltd	Canada
97. Gunpowder Capital Corp	Canada
98. Harbor Mining	China
99. Hawkeye Gold & Diamond Inc	Canada
100. Highvista Gold Inc	Canada
101. Huntmountain Resources	Canada

102.	<b>IDM Mining (Salió Del País)</b>	Canada
103.	<b>Impact Silver Corp</b>	Canada
104.	Innophos Inc	Canada
105.	International Gold Corp	Canada
106.	<b>International Millennium Mining Corp</b>	Canada
107.	Jinchuan Resources Ltd	Canada
108.	<b>Klondike Silver Corp (Salió Del País)</b>	Canada
109.	Kootenay Gold Inc	Canada
110.	<b>Kootenay Silver Inc</b>	Canada
111.	<b>Levon Resources Ltd</b>	Canada
112.	<b>LG International Corp</b>	Corea
113.	<b>Lucky Minerals Inc</b>	Canada
114.	Macmillan Gold Corp	Canada
115.	<b>Mag Silver Corp</b>	Canada
116.	<b>Mammoth Resources Ltd</b>	Canada
117.	<b>Marlin Gold Mining Ltd</b>	Canada
118.	<b>Maya Gold &amp; Silver Inc</b>	Canada
119.	Mayo Gold Explorations Ltd	Canada
120.	<b>Mazorro Resources Inc</b>	Canada
121.	<b>Mega Uranium Ltd</b>	Canada
122.	<b>Mercator Minerals Ltd</b>	Canada
123.	<b>Mexivada Mining Corp</b>	Canada
124.	<b>Millrock Resources Inc</b>	Canada
125.	<b>Minaurum Gold Inc</b>	Canada
126.	Mincore Inc	Canada
127.	<b>Minera Alamos Inc</b>	Canada
128.	<b>Monarca Minerals Inc</b>	Canada
129.	<b>Morro Bay Resources</b>	Canada
130.	<b>Mundoro Capital Inc</b>	Canada
131.	Musgrove Minerals Corp	Canada
132.	Nayarit Gold	Canada
133.	<b>New Gold Inc</b>	Canada
134.	<b>Newmont Mining Corp</b>	Canada
135.	<b>Newstrike Capital Inc</b>	Canada
136.	<b>Noront Resources Ltd</b>	Canada

137.	Northair Silver Corp	Canada
138.	Norther Empire Resources Corp	Canada
139.	NS Gold Corporation	Canada
140.	NSX Silver Inc	Canada
141.	NWM Mining Corporation (New World Metals)	Canada
142.	NWT Uranium Corp	Canada
143.	Ocean Park Ventures Corp	Canada
144.	Oceanus Resources Corp	Canada
145.	Orex Minerals Inc	Canada
146.	Osisko Mining Corporation	Canada
147.	Pacific Comox Resources Ltd	Canada
148.	Paget Minerals Corp	Canada
149.	Palamina Corp	Canada
150.	Pan American Silver Corp	Canada
151.	Parallel Resources Ltd	Canada
152.	Pembroke Mining Corp (Salió Del País)	Canada
153.	Pershimco Resources Inc	Canada
154.	Plata Latina Minerals Corp	Canada
155.	Precipitate Gold Corp	Canada
156.	Premier Gold Mines Ltd	Canada
157.	Premium Exploration Inc	Canada
158.	Primero Mining Corp	Canada
159.	Prospector Consolidated Resources Inc	Canada
160.	Prospero Silver Corp	Canada
161.	Quaterra Resources Inc	Canada
162.	Radius Gold Inc	Canada
163.	Red Tiger Mining Inc	Canada
164.	Remstar Resources Ltd (Salió Del País)	Canada
165.	Riverside Resources Inc	Canada
166.	Rochester Resources Ltd	Canada
167.	Romarco Minerals Inc	Canada
168.	Rome Resources Ltd	Canada
169.	Ross River Minerals Inc	Canada
170.	San Marco Resources Inc	Canada
171.	Sandstorm Gold Ltd	Canada

172.	Santa Fe Metals Corp	Canada
173.	Santacruz Silver Mining Ltd	Canada
174.	Santoy Resources Ltd	Canada
175.	Seafield Resources Ltd	Canada
176.	Serengeti Resources Inc	Canada
177.	Sierra Iron Ore Corporation (ahora es Crystal Lake Mining Corp)	Canada
178.	Sierra Madre Developments Inc	Canada
179.	Sierra Metals Inc	Canada
180.	Silver Predator Corp	Canada
181.	Silver Pursuit Resources Ltd	Canada
182.	Silver Spruce Resources Inc	Canada
183.	Silver Standard Resources	Canada
184.	Silver Sun Resource	Canada
185.	Silver Wheaton Corp	Canada
186.	Skeena Resources Ltd	Canada
187.	Solid Resources Ltd	Canada
188.	Soltera Mining Corp	Canada
189.	Sonoro Metals Corp	Canada
190.	Source Exploration Corp	Canada
191.	Southern Silver Exploration Corp	Canada
192.	Starcore International Mines Ltd	Canada
193.	Stem 7 Capital Inc (antes Metalquest Minerals Inc)	Canada
194.	Stockport Exploration Corp	Canada
195.	Stoneshield Capital Corp	Canada
196.	Stroud Resources Ltd	Canada
197.	Teck Mining Corp	Canada
198.	Telson Resources Inc	Canada
199.	Terra Nova Gold Corp	Canada
200.	Tianjin Binhai Harbor Port Int Trade	China
201.	Tianjin North China Geological Exploration Bureu	China
202.	Timmins Gold Corp	Canada
203.	Torex Gold Resources Inc	Canada
204.	Tosca Mining Corp	Canada
205.	Trimetals Mining Inc (antes High Desert Gold Corporation)	Canada
206.	Tumi Resources Ltd	Canada

207.	UC Resources Ltd	Canada
208.	Vedome Resources Corp	Canada
209.	Victory Resources Corp	Canada
210.	VVC Exploration Corporation	Canada
211.	War Eagle Mining Company Inc	Canada
212.	West Melville Metals Inc	Canada
213.	Westminister Resources Ltd	Canada
214.	Westridge Resources Inc	Canada
215.	Weststar Resources Corp	Canada
216.	Xtierra Inc	Canada
217.	Yamana Gold Inc	Canada
218.	Zeox Corporation	Canada
219.	Zinco Mining Corp	Canada

Source: Own elaboration based on Mexican Ministry of Economy, 2017.

## APPENDIX 3. Data Tables & Graphs

**Table 1: Metallic Mining exports and participation in total exports**

Latin America and the Caribbean (12 countries) Metallic Mining Exports and participation in total exports 2001-2014. \* All numbers are expressed in USA Dollars.

Country	2001		2005		2010		2014	
	Million US dollars	Total (%)	Million US dollars	Total (%)	Million US dollars	Total (%)	Million US dollars	Total (%)
Chile	7 549	40,3	23 280	55,5	44 097	62,0	41 755	54,5
Brazil	4 424	7,6	10 217	8,6	34 452	17,5	31 889	14,2
Peru	3 133	45,9	9 633	56,3	21 468	60,0	19 661	51,1
<b>Mexico</b>	<b>1 031</b>	<b>0,7</b>	<b>2 485</b>	<b>1,2</b>	<b>11 776</b>	<b>3,9</b>	<b>12 964</b>	<b>3,3</b>
Argentina	803	3,0	1 294	3,2	4 735	6,9	3 873	5,7
Bolivia (Plurinational State of)	325	24,0	505	18,1	2 309	33,2	3 799	29,6
Colombia	9	0,1	555	2,6	2 154	5,4	1 622	3,0
Cuba	463	27,8	1 075	46,4	465	16,8	221	9,6
Guatemala	1	0,1	16	0,3	505	6,0	853	7,8
Guyana	179	37,2	113	20,9	459	51,0	420	35,8
Dominican Republic	0	0,0	6	0,1	66	1,4	1 730	17,4
Jamaica	94	7,7	98	6,5	138	10,4	131	9,1

Source: ECLAC, based on TradeMap data base. 2016.

Translated by the author from the original in Spanish

**Table 2: Metallic Mining Tax Revenues.**

Country	As percentage of GDP			As percentage of total fiscal revenues		
	2000-2003	2005-2008	2010-2014	2000-2003	2005-2008	2010-2014
Argentina <sup>c</sup>	-	0,1	0,1	-	0,4	0,4
Bolivia ((Plurinational State of)	0,1	0,7	1,0	0,4	2,0	2,8
Brazil	-	0,2	0,2	0,1	0,5	0,8
Chile	0,8	6,9	3,0	4,0	28,1	13,8
Colombia	0,2	0,5	0,4	0,5	1,5	1,3
Jamaica	0,5	0,6	0,1	2,1	2,1	0,4
<b>Mexico</b>	<b>0,1</b>	<b>0,1</b>	<b>0,2</b>	<b>0,3</b>	<b>0,8</b>	<b>1,0</b>
Peru	0,2	2,1	1,3	1,0	10,6	6,4

Source: ECLAC, based on *Panorama Fiscal de América Latina y el Caribe 2015. Dilemas y espacios de políticas*, Santiago, 2015. (Published in 2016).

Translated by the author from the original in Spanish.

**Table 3: Employment in the mining industry as a percentage of total national employment creation. 2001-2014**

Country	2001-2003	2004-2012	2013	2014
Bolivia (Estado Plurinacional de)	1,2	1,7	2,2	2,4
Chile	1,5	2,2	2,8	3,0
Colombia	1,1	1,1	1,1	1,0
<b>México</b>	<b>...</b>	<b>0,2</b>	<b>...</b>	<b>0,5</b>
Perú	0,7	1,2	1,2	1,2
República Dominicana	0,2	0,3	0,3	0,2

Source: ECLAC, based on CEPALSTAT and official numbers. 2016.

Translated by the author from the original in Spanish.

**Table 4: Value of metallic mining production vs revenues for mining concessions from 2005-2010.** \*All numbers are expressed in MX Pesos

Year	Tons	Production Value	Revenues	Difference	%Paid to the Mexican State
2005	40,697,037	52,131,714,800	394,775,900	51,735,938,900	0.76
2006	43,967,590	78,561,236,300	322,696,600	78,238,539,700	0.41
2007	45,813,099	90,271,718,800	421,572,900	89,850,145,900	0.47
2008	45,910,031	94,018,295,400	1,667,042,800	92,351,252,600	1.77
2009	43,093,364	94,816,874,600	1,781,762,700	93,035,111,900	1.88
2010	47,017,649	142,622,589,400	1,955,566,500	140,667,022,900	1.37
2012		234,095,878.7	3,246,694.4		1.4
<b>Total</b>	<b>266,498,770</b>	<b>552,422,429,300</b>	<b>6,543,417,400</b>	<b>545,879,011,900</b>	<b>1.18</b>

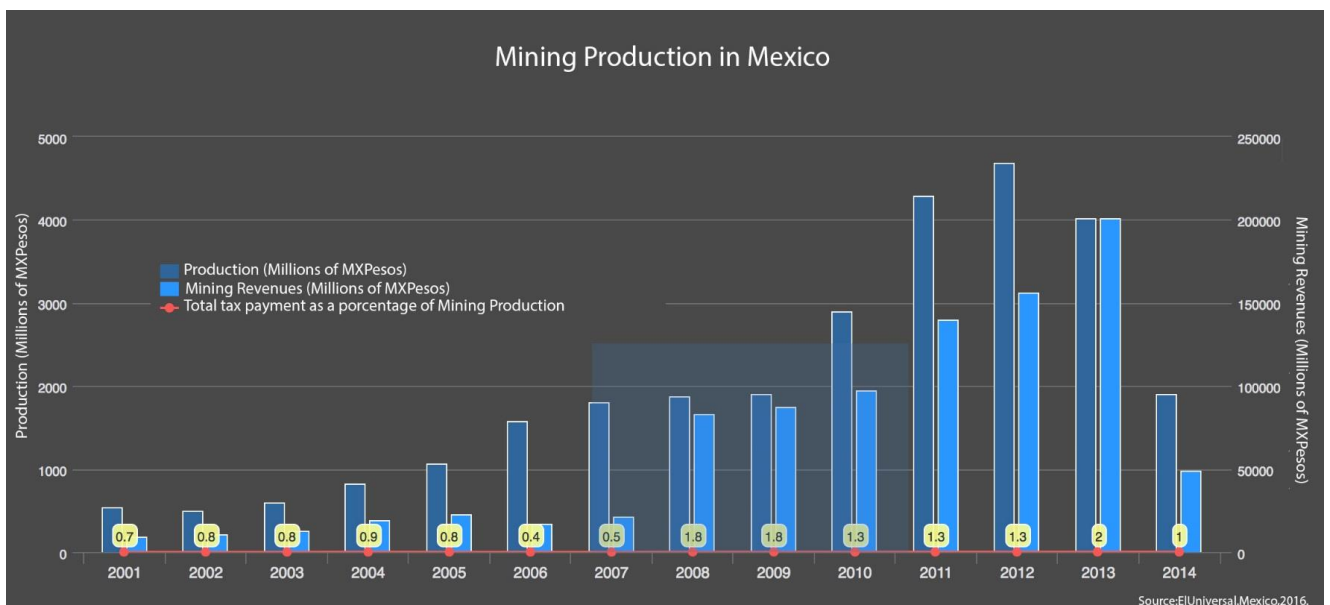
Source: Ramírez, Erika (2012) Based on Informe del resultado de la fiscalización superior de la cuenta pública 2010, elaborated by Auditoría Superior de la Federación (Federal Senior Auditor).

**Table 5: Mining Corporations' Net Profits for old and silver extraction in Mexico (total percentage after taxes) 2005-2010**

Year / Mineral	Gold	Silver
2005	90.6	94.03
2006	95.77	96.7
2007	95.62	96.19
2008	89.39	88.07
2009	91	89.72
2010	94.61	93.26

Source: Ramírez, Erika (2012) Based on Dirección General de Minas (General Mining Management Office).

**Graph 1: Mining Production and Tax Revenues in Mexico 2001-2014**



Source: El Universal Mexico. 2016

Translated by the author from the original in Spanish.

---

# APPENDIX 4. Fieldwork pictures

Copyright: I. Altamirano

Cerro de San Pedro. San Luis Potosí.

Picture 1 & 2 ) Waste rock dumps- Located on the slopes of Cerro de San Pedro town. 2010.



Picture 3 & 4) Landscape degradation and leaching piles. 2011.



Picture 5) Leaching piles, 2017.



Picture 6) Cerro de San Pedro, 2011.





Picture 7) Cerro de San Pedro. Open pit mine. SXMC. 2011.



Picture 8) Militarization in San Luis Capital. 2010.



Picture 9 & 10) Old Municipal house and Ministry of Tourism and Culture are abandoned and falling apart. 2017.



Picture 11) SXMC mine and lixiviation system's view from San Luis Capital. (2.9 km away from the mine)2017.



Picture 12) Fresh Water for cyanidation. 2017



Picture 13) New parking lot and restaurant. 2017.



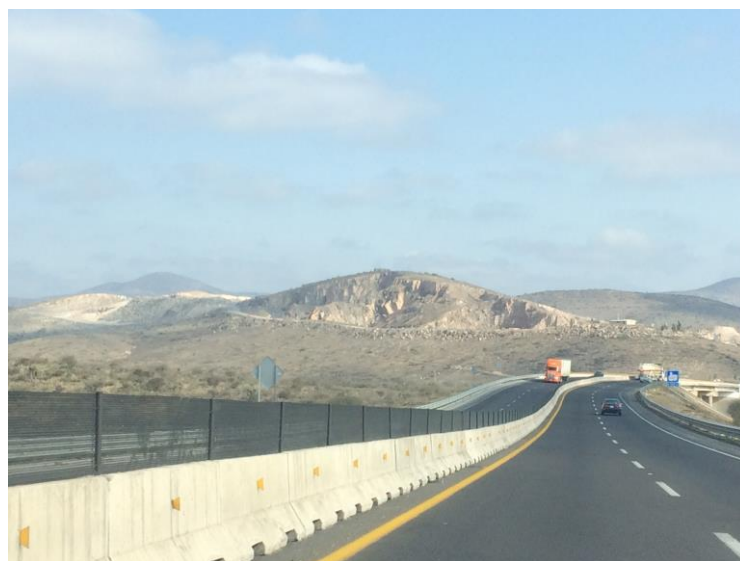
Picture 14) Protest Messages written by the opposition movement. 2011. Picture 15) Colonial painting placed by SXMC. 2017.



Picture 16 & 17) Medical services offered by the mine SXMC. 2011 left / 2017 right.



Picture 18) Multiple perforations. Landscape affected by mining exploration. Highway from San Luis Capita to Real de Catorce (Cerro del Quemado, Wirikuta). 2017.



---

Copyright: I. Altamirano

Cerro del Quemado. Wirikuta. San Luis Potosí.

Picture 19) Cerro del Quemado. Wirikuta. 2017.



Picture 20) Cerro del Quemado. Wirikuta. 2017.



Picture 21) Wixarika hut on top of the mountain. 2017.

