Co-funded by the
Erasmus+ Programme
of the European Union

NARRATIVES OF EXTRACTIVISM: HOW DO THEY SHAPE THE TRANSITION IMAGINARIES IN THE MINING CONTEXTS OF ECUADOR AND PORTUGAL

Master's thesis for obtaining the academic degree

Master of Science

in the study programme Transition, Innovation and Sustsainability Envirnonments

submitted by

Ximena Alejandra Tapia Palacios

Department for Knowledge and Communication Management at University for Continuous Education Krems

Advisor: Dr. Kay Mühlmann

Advisor: Dr. Jorge M. Martins Rosa

Austria – July, 2024

STATUTORY DECLARATION

I, Ximena Alejandra Tapia Palacios hereby declare,

1. that I have written my Master's thesis myself, have not used other sources than the ones stated and moreover have not used any illegal tools or unfair means,

2. that I have not used my Master's thesis or parts thereof as an exam paper in my domestic or any foreign country in any form to this date,

3. that, in case my Master's thesis concerns my employer or any other external cooperation partner, I have fully informed them about title, form and content of the Master's thesis and have his/her permission to include the data and information in my written work.

ACKNOWLEDGEMENTS / DEDICATIONS

I would like to thank my tutors for generously sharing their time and knowledge.

I thank my friends from Transmutante for making this work and all the efforts throughout this master flourish through their love and friendship.

I express my gratitude to my TISE colleagues for being fellow adventurers along this journey and making me part of a greater purpose.

I would like to thank my compañero for his encouragement, insightful perspectives and wise observations, which have enriched this work.

A special thanks to Ricardo and Ximena for nurturing me, and giving me roots and meaning throughout these two years.

ABSTRACT

In the context of a mining extractivism dependance on the availability of raw materials for the energy transition, we observe the consolidation of an alliance between the State and mining companies to provide structures and conditions to ensure it. This implies the expansion of the extractive frontier that requires the creation of sacrifice zones. To implement a type of governance based on extractivism, this alliance elaborates a series of narratives designed to legitimate the values, norms, and social practices that enable its objectives. It is argued that the volume of worldwide extraction is intensifying unequal ecological exchange at multiple scales and exacerbating socio-environmental conflicts, both in the Global North and South. Drawing on the cases of Ecuador and Portugal, we analyze the conflicting narratives that explore extractivism and the expansion of the mining frontier as a shared problematic. These narratives explore the imaginaries of "national development", "sustainability", "energy transition", "territorial governance", as well as the dispute over the discourse and community rights. This work also seeks to map the transitions that are already occurring, with a particular focus on rural areas that are engaged in multiple processes of territorial re-existence and resistance to the advance of mining. We see throughout the paper that these actors, in their anti-hegemonic narrative, propose alternatives that contemplate the construction of radical and post-extractivist transitions as part of a broader process of transformation of culture, economy, territorial governance, and the relationship between humans and Nature.

Keywords: Extractivism, Mining, Energy Transition, Socio-Environmental Conflicts, Lithium, Narratives, Governance, Sacrifice Zones

CONTENTS

NARRATIVES OF EXTRACTIVISM: HOW DO THEY SHAPE THE TRANSITION IMAGINARIES IN THE MINING CONTEXTS OF ECUADOR AND PORTUGAL I

INTRODUCTION 1

Aim and research question 1

Summary of the main argument 3

Structure of the thesis 3

THEORETICAL FRAMEWORK 4

INTRODUCTION: A FIRST LOOK AT TRANSITIONS 4

NORTH-SOUTH/CENTER-PERIPHERY 7

EXTRACTIVISM AND NEOEXTRACTIVISM 10

The contribution of postcolonial theories 10

Characteristics of extractivism 12

Green Extractivism and Energy Transition 14

Green "sacrifice zones" 16

METHODS 19

CASE STUDY SELECTION 19

DATA COLLECTION 21

STAKEHOLDERS 22

DATA ANALYSIS 25

RESULTS 27

PART 1. MINING IN ECUADOR: TRANSITION FROM NEO-EXTRACTIVIST GOVERNANCE TO NEO-LIBERALISM 27

The establishment of mega-mining in Ecuador 27

STATE NARRATIVE 32

Developmentalist imaginary 32

Mining combo: development and energy transition 35

Socio-environmental conflict in Río Blanco 38

The legal-illegal mining dilemma 40

PART 2. PORTUGAL'S TRANSITION TO A LOW-CARBON ECONOMY: THE ESTABLISHMENT OF A NEW COMMODITY/RESOURCE FRONTIER 44

A Brief History of Lithium in Portugal 44

Lithium mining and the energy transition *49*
Portuguese State Narrative *53*
The dispute over information *56*
Coupled human-environmental system of the Barroso region and the impacts of mining. *62*
DISCUSSION **66**
DISCUSSION ON THE DEVELOPMENT NARRATIVE AND SOCIO-ENVIRONMENTAL CONFLICTS 66
ECOLOGICAL-DISTRIBUTIVE DIMENSION OF SOCIO-ENVIRONMENTAL CONFLICTS 68
(NEO)EXTRACTIVIST GOVERNANCE 70
Violence *74*
LOCAL IMPACTS AND SPILLOVER EFFECTS 75
COMMUNITY GOVERNANCE IN THE FACE OF THE EXTRACTIVIST MODEL 77
Imaginaries of re-existence *77*
RE-ASSEMBLING NORTH AND SOUTH TRANSITION IMAGINARIES 79
CONCLUSIONS **80**
REFERENCES **82**

LIST OF TABLES

TABLE 1. TYPE OF SOURCE BY STAKEHOLDER 24

LIST OF FIGURES

FIGURE 1. STRATEGIC MINING PROJECTS IN ECUADOR 31
FIGURE 2. LITHIUM MINING PROJECTS IN PORTUGAL 48
FIGURE 3. MAP OF RELATIONS BETWEEN MINING ACTIVITY AND ENVIRONMENTAL AND SOCIO-CULTURAL CONSEQUENCES 69
FIGURE 4. "LOCAL IMPACTS AND "SPILL OVER EFFECTS" IN ECUADOR AND PORTUGAL 76

Introduction

The imminent ecological crisis, a consequence of centuries of exploitation of nature, has made it clear that the planet's energy and natural resources are limited. It is thus evident that there is no possibility of depending on energy derived from non-renewable sources to perpetuate the reproduction of capital. Faced with this, the industrialized countries of the Global North have promoted a climatic agenda based on a consensus of decarbonization (Bumpus & Liverman, 2010; Parsons, 2023), giving rise to a stage of energy transition that points to a new global boom in the extraction of raw materials. The way in which this energy transition will be carried out at the global scale is currently being decided, as well as the role that the countries of the South and the North will have in the green division of labor and Nature.

The energy transition proposed by the Global North is based on replacing the consumption of fossil fuels with renewable energies. Although these alternative promises to contribute to the urgent task of reducing global carbon dioxide emissions, its implementation has generated new socio-environmental pressures related to securing strategic minerals for the production of renewable technology. The emerging map and the volume of planetary extraction would be intensifying unequal ecological exchange at multiple scales. Industrialized countries seek to expand extraction within their borders, in order to secure the value chain by concentrating the material bases for the energy transition. Meanwhile, Latin America, inserted in the international market as a territory destined for the extraction of raw materials, plays a key role in this growing supply of critical minerals. In this geography of "green" extractivism, states and extractive companies have set their sights on the mineral resources of their countries, arguing that it is an opportunity to extract and commercialize these commodities and move towards a "greener" and "sustainable" global economy (Lang et al., 2023; Walter et al., 2021). This narrative has facilitated the expansion of new commodity frontiers towards countries whose land contains so-called strategic or critical minerals, which are essential for the energy transition.

Aim and research question

Through this research I seek to outline a global approach that brings together critical aspects from the experiences of both the North and the Global South, having extractivism and the expansion of the mining frontier as a common problematic. To this end, I will draw on various political ecology studies that address environmental issues through the lens of social and

ecological-distributive conflict, paying special attention to the power structures that are expressed through narratives. The narratives approach will reveal a complex picture of the arenas in which environmental conflicts occur and their impact on coupled social, environmental, and technological systems (Dunlap & Riquito, 2023; Martinez-Alier, 2002; Riofrancos, 2022; Robbins, 2012). Furthermore, the research link current academic debates on socio-ecological impacts and conflicts around energy transition with research on extractivist economies in Latin America, demonstrating that similar structural conditions are present in other countries.

In this study, I illustrate this phenomenon through the case studies of Portugal and Ecuador, seeking to answer the research question: How do narratives on extractivism shape the coupled human-environmental imaginaries of energy transition, comparing the cases of mining in Portugal and Ecuador?

The objective was to establish the points of connection between the narratives around extractivism framed in the energy transition, and the extractivism of countries historically exporters of natural resources through the identification and description of the main components of the coupled human-environmental imaginaries of the systems: socio-ecological, socio-economical, socio-technical. This would allow us to understand which narratives are highlighted and what are the key differences between the two cases.

In order to develop an integrated understanding of the factors at play in green extractivism, Portugal was chosen as one of the cases, which has entered the mining map largely due to its lithium reserves, which are critical for the production of electric vehicle batteries. Portugal is framed in the narrative as a pivotal player in the race for lithium, also known as "white gold," given that the exploitation of this mineral would ensure the value chain of lithium batteries production in Europe. As the data indicate, the production of electric vehicles and battery storage will require the greatest quantity of minerals for their production (Barbesgaard & Whitmore, 2022).

The second case is Ecuador. A country in the Global South whose economy has historically been primary-exporting. This case is of interest because the transition policies of the Global North, as well as the current energy crisis in Europe, would be pushing even more to exploit natural resources, especially in fragile ecosystems.

In this sense, we are interested in how narratives communicate, legitimize and facilitate the consolidation of values, norms and practices within social systems. The role played by narratives around extractivism defines the discursive and material framing of the governance of the system. Therefore, it is necessary to understand how power relations, asymmetries and struggles constitute the actors: institutions, communities, territories, and nature.

Summary of the main argument

In addressing the situation generated by the current stage of global capitalism, driven by the phenomenon of climate change, we highlight the narratives that come into conflict when mining extractivism is put forward as a solution to the crisis. Through this work, we argue that current policies and imaginaries of transition constructed from power tend to reproduce and exacerbate unequal socio-ecological exchange, as well as propitiating the conditions for the expansion of sacrifice zones.

The conflicting narratives discuss notions of "national development", "sustainability", "energy transition", "territorial governance", as well as the dispute for the control of the discourse, and the struggles for the rights of communities to free, prior and informed consent.

This work is also an effort to map the transitions that are already occurring in a multitude of experiences in communities and territories both in the North and South, with a particular focus on rural areas that are engaged in multiple processes of re-existence and territorial resistance to the advance of mining. We see throughout the work that these actors in their anti-hegemonic narrative propose alternatives that contemplate the construction of radical and post-extractivist transitions as part of a broader process of transformation of culture, economy, territorial governance and the relationship between humans and Nature.

Structure of the thesis

The second chapter offers a theoretical review of the phenomenon of extractivism and its "green" face in the context of the energy transition. The contributions of dependency theory and postcolonial theories are considered in order to explain the multiple matrices of inequalities between the North and the Global South. The concept of sacrifice zones is gradually introduced as a current and relevant notion to understand the process through which the territories affected by mining are going through.

The methodology is the main topic of the third chapter, which also outlines the procedures for data collection and analysis. It provides a more thorough justification for the selection of the Ecuadorian and Portuguese cases.

The fourth chapter comprises two sections, which correspond to the results found in the two case studies.

The first part corresponds to Ecuador. It begins with a historical overview of mining governance and its changes up to the present day. Subsequently, it shows how the narrative of the state is projected as well as the constitution of the alliance between the state and the mining companies. The Rio Blanco case is used as an example to illustrate the agency of the community in the socio-environmental conflicts caused by mining.

In the second part, the case of Portugal is presented. It details the chronology of lithium in the country and its current importance for the European energy transition. It then elaborates on the narrative of the state and mining lobbying. As a last point, it discusses the social system of the Barroso region and the counter-narrative of its communities, affected by lithium mining.

Chapter four presents a discussion between the suggested literature and the results of the two case studies.

The fifth chapter outlines the conclusions of the research.

THEORETICAL FRAMEWORK

Introduction: A first look at transitions

These days, the word "transition" is used quite often, and depending on who defines it and how events are understood, it can indicate different things. Broadly speaking, transitions are used to describe periods of change and ways of being. In order to explain the shift from the feudal system of production to capitalism in Europe, Karl Marx (1804–1899) introduced the notion of transition (Acaroglu, 2020). The transition from dictatorial regimes to democracy in Latin America, from Soviet communism to capitalism in Eastern European countries, or the shifting energy matrices throughout history—from firewood to coal, from coal to fossil fuels, and finally to renewable energies—are examples of lengthy, non-linear processes that sociology

characterizes as involving conflicting actor interests. Each transition is accompanied by questions such as: what paradigms are we trying to change, who will be the key actors and agents of this change, what kind of society can we envision, and what models do we propose for the future.

In the context of a global polycrisis, transitions are embedded in coupled human-nature-technology systems, encompassing ecological, social, political, and economic components (Mühlmann et al., 2023). These components function interdependently, although they are connected. Therefore, it is not possible to understand these components in isolation or from a single discipline because the consequences of the systems' behavior go beyond the dichotomous frameworks of society-nature. In this context, transitions can be conceptualized as accompanied by narratives that help us to make sense of accounts of the past, present and future. Narratives, which possess existential power, are able to guide action and help us to understand what is possible (Meretoja, 2020). Narratives of the present contain descriptions of what future realities could and should be and activate socio-technical imaginaries of transition that will make it possible (Parkkinen & Vikström, 2024). Sociotechnical imaginaries and narratives are mutually constitutive, shaping each other in significant ways. Jasanoff & Kim (2009) emphasize that imaginaries influence the stories that societies tell about their identity, progress, and values.

In this global context of interconnected poly-crisis (ecological, social, political, and economic), Green New Deal (GND) proposals have proliferated in recent years, where visions and imaginaries of transition converge to address the climate crisis and environmental degradation. The European Commission has promoted a climate change strategy that focuses on the promise to make Europe a net-zero emitter of greenhouse gases by 2050 and to promote "equitable and sustainable" economic growth. The basis for this political-discursive framework and many other proposals that have been put forth globally is the urgent need for action that results from the fundamental realization that civilization is facing a crisis, which is manifested in the form of rising sea levels, melting glaciers and polar ice masses, and rising temperatures in the atmosphere. Equally fundamental are the accelerated loss of biodiversity and agro-diversity, erosion, and deforestation, the degradation of arable soils, the loss of water sources, and the socio-cultural devastation of local communities, indigenous peoples and ways of life throughout the planet.

A variety of actors, including community movements, public authorities, private enterprises, and international actors, contribute to the production of imaginaries about transitions. However, as this is a highly complex issue, there are multiple interpretations and competing interests, with the first area of confrontation relating to the understanding of what is at stake. Depending on how the limits of a given problem are conceptualized and established, the response options or solutions that are considered possible and desirable are defined. As Mühlmann posits, "the complexity of coupled systems and the different interests and motives of their respective stakeholders can become erratic or even unpredictable" (2023, p. 32). Thus, the debates on the climate crisis and the measures to be taken to address it have been immersed in power relations inherent to a world system (Wallerstein, 2004), intersected by multiple matrices of inequality. Conversely, prevailing social narratives are shaping the kinds of sociotechnical imaginaries that gain traction.

Numerous academics, particularly those from the Global South, have drawn attention to the issue that, because the focus of international climate change negotiations is primarily on greenhouse gas concentrations and global warming, the only way to address the systemic and multi-scale global crisis we are facing is to reduce the emissions of greenhouse gas particles in the atmosphere rather than considering the necessity of a drastic transformation of the economic and social structures that have made the crisis possible (Lander, 2023). This is not to say that decarbonization efforts are not urgent and necessary, but it is equally imperative to understand that it is not the only transition that is already occurring, nor should it be the only metric we have to understand the extent of anthropogenic damage, nor should responses be limited to this alone.

Narratives play a pivotal role in the legitimization of sociotechnical imaginaries, rendering them both plausible and desirable. The narrative of combating climate change, for instance, supports imaginaries of a green energy transition which drives the development and deployment of renewable technologies along with the strengthening of specific economic practices. These practices are framed as necessary for achieving a desirable and sustainable future (Smith & Tidwell, 2016).

The green energy transition, which aims to reduce carbon emissions and mitigate climate change by shifting from fossil fuels to renewable energy sources, doesn't eliminate the need for

resource extraction. The production of renewable energy technologies, such as solar panels, wind turbines, and electric vehicles, requires significant amounts of minerals and metals, including lithium, cobalt, nickel, and rare earth elements. This demand, while reproducing the social and environmental inequalities inherent to the extractivist model ─ present in the fossil fuel-based energy matrix ─ is also giving rise to new forms of extractivism, often termed "green extractivism".

North-South/Center-Periphery

Since the Industrial Revolution, fossil fuels have played a crucial role as the material basis of modern society, providing the energy necessary for industrialization, market expansion and capital accumulation. The geopolitics of fossil fuels and raw materials has been central to shaping global economic power, as Anthony Giddens (Giddens, 2009) (2009) notes in *The Politics of Climate Change*. He points out that "control over energy resources has been a determining factor in the economic and political hegemony of nations, influencing the dynamics of global power and the structure of capitalism" (Giddens, 2009, p. 62). Likewise, more than 50 years ago in Latin America, the Dependency Theory (DT) recognized the existence of an economic configuration and identified two main groups of countries in the global system: the center and the periphery. In the periphery were all those countries that depended on rents from the export of raw materials, including fossil fuels, and in the center were those industrialized countries that dominated over and at the expense of the peripheral countries (Prebisch, 1981). This dominance relationship signified a particular type of relationship between nations that typified an entire global dynamic of economic, political, cultural, and social power, solidifying the idea that underdevelopment is a state in which extractivism, "enclaves," monoculture, the ethno-racial dispute, and colonialism intersect (Prebisch, 1981). These theories also agreed that underdevelopment was not an early stage in the process of achieving development, as proposed by Rostow (Rostow, 1959) in his theory of growth states, but an inherent consequence of the capitalist system (Spicker et al., 2009). While Growth Theories ignored historically constructed and maintained power relations, DT highlighted them, showing that development and underdevelopment are two different aspects of the same process, two sides of the same coin.

Authors such as Cardoso & Faletto (1979), Frank (1978) and Amin (1974), explained the mechanisms by which economic relations favor the central countries and perpetuate the dependence and underdevelopment of the peripheral ones. The term "periphery" has been used interchangeably with the concept of “Global South”, to designate countries generally located below the southern hemisphere. However, this category includes countries in Africa, the Middle East, Latin America and the Caribbean, as well as much of Asia, many of them located in both the northern and southern hemispheres. Consequently, neither the term "periphery" nor "Global South" is intended to be purely geographical. Rather, they appear to refer to unequal global power relations, imperialism and neocolonialism. They appear as manifold labels, designating spaces historically relegated to the margins of the global economic-political order (Kloß, 2017).

One of the main theses of the DT is that of the “Added value and unequal trade” which explains that the peripheral countries export raw materials and commodities with low added value to the central countries, which in turn export manufactured products with high added value to the peripheral countries. This unequal exchange generates significant economic benefits for the industrialized countries, since access to cheap raw materials would facilitate capital accumulation, allowing reinvestment in technology, infrastructure and education. This accumulation of capital and technological progress further strengthens the economies of the central countries, creating a growing gap between North and South. Prebisch (1981) demonstrated, based on United Nations data, that the exchange between primary products and manufactures led to a loss in the region's terms of trade: the prices of agricultural products and raw materials tended to fall, while the prices of manufactured products tended to stabilize or even rise. Samir Amin (1974), in relation to price and market control, argues that global economic power structures allow developed countries to keep the prices of raw materials artificially low, while the prices of the manufactured products they export remain high. In addition, the dependence on imported technology and external financing to develop the incipient Latin American industry reinforced another equally harmful problem: the indebtedness of the countries, tying them even more to the forces of the markets and international financial institutions, and to the interests of the states of the Global North. In this regard, Sagasti (1981) mentions that imported technologies accentuate the concentration of production and the market, favoring the interests of foreign companies that control the

necessary capital, technical capacity and marketing channels. For his part, Harvey (2005) contributes to the problem of indebtedness and structural adjustment administered by the IMF in Latin America in the 1980s through his concept of "accumulation by dispossession".

Through the Dependency Theory framework, Katz (2018) reviews a number of the characteristics of the contemporary polycrisis scenario and emphasizes that extractivism and primarization are still prominent aspects of the Latin American economy. In the author's view, these are contemporary expressions of underdevelopment generated by the region's subjection to external commodity prices.

The concept of commodities from the perspective of political ecology (Acosta et al., 2020; Svampa, 2015) is relevant to describe the trajectories of re-primarization of Latin American economies (although, as will be seen below, it has also extended to countries of the Global North, such as Portugal), based on the global increase in demand for primary goods, such as oil or minerals, which generate distortions in international prices and significantly increase them (Svampa, 2015). Commodities can be understood as undifferentiated products whose prices are set internationally or as products of global manufacture, availability, and demand, which have an international price range and do not require advanced technology for their manufacture and processing. These can range from bulk raw materials to semi-finished or industrial products (Sinnott et al., 2011). We currently see increasing demand in food products, as well as hydrocarbons (oil and gas), metals, and minerals.

Svampa (2015) explains, through what she calls the "commodity consensus", the emergence of a process of deepening the dynamics of dispossession and exploitation of non-renewable natural resources, which intensifies the dispossession of territories and is accompanied by a logic of occupation. In contrast to the Washington Consensus, which was based on financial systems and processes of flexibilization and privatization typical of the neoliberal doctrine, this one has as its axis the intensive implementation of extractive projects, in which the state plays a role in facilitating not only the exploitation but also the export of natural resources. The author considers that the result of these processes of loss of economic diversification and reorientation of activities towards the primary extractive sector or with low added value, accompanied by land appropriation, displacement of communities, and loss of food sovereignty, among others, is the consolidation of a neo-extractivist style of development.

Extractivism and Neoextractivism

The contribution of postcolonial theories

Considering how postcolonial ideas contribute to Political Ecology could be a useful first step in understanding extractivism as a narrative of development. Among these schools of thought are feminist political ecology, postcolonialism, and the Modernity/Coloniality Research Program (Escobar, 2007), subaltern studies, among others. The core of postcolonial studies is the critical examination of power relations and the consequences of coloniality, as inscribed in the projects of modernity and development. These are organized on the basis of a historical, cultural and epistemological review of modernity, with the aim of challenging the narratives that have been constructed on the basis of European colonialism. Although coloniality is a historical-structural matrix of global subordination that emerged from the conquest and expansion of mercantilism in America since the sixteenth century , its social, cultural, racial, political, ecological and epistemic scope of its consequences didn't end with the processes of independence (Quijano, 2000).

Latin American Political Ecology, as exemplified by authors such as Enrique Leff (2022), Arturo Escobar (2014), Héctor Alimonda (2002), and Joan Martínez-Alier (2003), among others, proposes the opening of a plurality of places of enunciation, past and present, and the questioning of alternative paths and logics in critical relation and resistance with respect to colonial modernity.

The contributions of Héctor Alimonda (2002) examine the diverse array of power relations that have shaped the continent from the colonial period to the present. They also explore the role of the state and its policies in relation to the stratification of subjects and communities, as well as the natures and worldviews that have emerged and evolved over time. In contrast, Bolivian sociologist Silvia Rivera Cusicanqui, through her theoretical-methodological framework reflected in the book *Oprimidos pero No Vencidos* (1984), considers territorial hegemonies and the subalternization of regions to describe the processes of internal colonialism that have been naturalized and legitimized through the deployment of power by local economic-political elites. This is seen as a legacy of unequal relations based on an ethnic-racial system. Additionally, in *Violencias (re) encubiertas en Bolivia* (2010), the author examines the system of gender relations and the role of women in Andean societies.

In contrast, the Argentinian Machado Aráoz (2015) provides a historical and social analysis of extractivism, from the time of the Conquest to modern mega-mining as a false path to development. Aráoz acknowledges that modernity's approach to nature as a resource for exploitation is reflected in extractivism, which is the pinnacle of the colonial economy of capital. Furthermore, mechanisms of unequal appropriation of nature gave rise to the West's constitution as the geopolitical, economic, and cultural hegemonic center of the globe, while its material viability depends on ecological plunder on a worldwide scale. As a result, it fosters an instrumental and anthropocentric understanding of nature and peoples, which causes this logic to permeate both micro and macrosocial behaviors.

In his work, Eduardo Lander offers an explanation of how Latin America (and other parts in the Global South) have been configured as territories that supply raw materials, which are supposedly inexhaustible and available to be appropriated and exploited. These resources are then transferred to the imperial powers in a process that gives rise to the modern/colonial world system, whose division into the Global North and Global South persists to this day. Similarly, Mignolo (2005) presents an analogous argument, suggesting that the exploitation of these resources has led to the formation of a modern/colonial World-System. This leads to the conclusion that there is not only an international division of labour, but also an international division of nature (Lander, 1993). This reinforces the logics of accumulation and dispossession, as previously described, where primary-exporting or commodity-exporting countries are destined to maintain enclave economies.

Two of the most prominent concepts in postcolonial theory, as developed by Aníbal Quijano (2000) and Nelson Maldonado-Torres (2007), are the coloniality of power, knowledge and being. These concepts provide a framework for understanding the ways in which colonialism has shaped and continues to influence social structures, knowledge, and subjective experience. In essence, the coloniality of power can be defined as the perpetuation of exploitative and oppressive structures established during colonialism, which continue to influence contemporary power relations. These structures manifest at both the micro and macro levels of political governance. The concept of coloniality of knowledge examines the ways in which knowledge production and epistemology privilege colonial-Eurocentric regimes of thought, thereby marginalizing other forms of knowledge and erasing or denying their existence. This

encompasses the manner in which educational systems, scientific and academic paradigms privilege and disseminate knowledge produced by and for colonial elites, while devaluing and marginalizing alternative cosmovisions, particularly indigenous and local knowledges. Furthermore, the coloniality of being examines the impact of colonialism on the process of identity formation, language use and subjectivity. The concept of the coloniality of being examines how experiences of racism, discrimination and dehumanization are internalized and reflected in social relations. In addition to the aforementioned three types of coloniality, Alimonda (2002) posits the existence of a fourth: the coloniality of nature. The colonial view of nature renders it subaltern by decoupling the relationality that underlies the thinking and worldview of indigenous and Afro-American communities, who conceive of it as a living, sentient being. The conversion of nature into a subaltern space, stripped of its complexity and fragmented, allows its exploitation and reconfiguration for the use of the regimes of domination.

Characteristics of extractivism

Eduardo Gudynas (2011, 2012), one of the most well-known researchers on extractivism, claims that it has evolved into a social and environmental drama that is present practically everywhere on Earth. Open-pit lithium mining in the northern Portuguese mountains, metal mining in the Andes, and oil drilling in Ecuador's Amazon are a few examples of its enactment.

Extractivism has led to a significant increase in environmental impacts such as deforestation, water pollution, and biodiversity loss, as well as the exacerbation of socio-environmental conflicts. Political ecology refers to these disputes as "ecological distribution conflicts" since they frequently result from the unequal distribution and exploitation of nature (Martinez-Alier, 2003). Their detrimental effects have also had a big social impact, affecting local populations' livelihoods and general well-being. Furthermore, as a result of their intensification, there have been more and more resource extraction-related disasters, including mine collapses, oil spills, and other industrial disasters, particularly in the areas where projects are located. These situations have provoked growing outrage and protest among citizens, who have started social mobilizations against extractivist practices and asking the governments to introduce changes in the policy approach. However, in response to these protests, both governments and extractivist private sectors have adopted strategies to control the opposition, through both violent and subtle

means, by governing and disciplining subjectivities (Aráoz, 2014). In several places, they have harassed and criminalized citizen movements against extractivism, especially those formed by Indigenous and peasant communities, who are often the most affected by these activities.

Despite these problems and the violence associated with them, governments continue to protect and promote extractive activities. This protection, the authors argue, is largely due to the economic dependence of many countries on revenues from the extraction and export of natural resources. Although locally based, extractivism is dependent on the global circulation of capital. It therefore ends up intensifying and deepening the conditions of dependency and colonial subjugation.

We already know that this form of income based on the exploitation and export of raw materials has a long history, especially in the Latin American context, but the volumes of extraction required in the context of globalization and climate change demand values that far exceed the needs of the countries themselves, since they would actually feed energy consumption in other continents. In little more than a decade, a reconfiguration of the governance role of the state, of its development imaginary and of the international demands on it would take place. In this way, the state would be playing an increasingly decisive role in the process of legitimizing the extractive development project, which would give rise to what is defined as neo-extractivism.

Burchart (2014), summarizing Gudynas' ideas, gathers two essential characteristics of the old form of extractivism, namely (1) the crucial role of transnational corporations in the exploitation of raw materials and the appropriation of profits, and (2) the role of the State in maintaining this model in the country. In contrast, the concept of neo-extractivism is situated in the context of the post-neoliberal policies of progressive governments and emerging welfare states. Such states would channel the additional revenues from extractive economic activities into the expansion of social infrastructures that promote development. In this framework, the exploitation of natural resources is geared towards ensuring national development and sovereignty, reducing poverty, increasing social participation, diversifying local economies and ensuring political stability and, of course, growth. Extractivism is thus linked to an imagined and desired national interest.

In this regard, Acosta (2017, p. 26) states that: "There is, in short, no good extractivism and no bad extractivism. Extractivism is what it is: a set of activities of massive extraction of primary resources for export, which within capitalism becomes a fundamental element of the primary-export mode of accumulation. Thus, extractivism, like capitalism, is essentially predatory". For the author, one of the traps of neo-extractivism lies in what Gudynas has already pointed out as one of the weaknesses of dependency theory and other "solutions" to the economy, namely that they lack the fundamental critique of unlimited economic growth as an expression of progress and, on the contrary, repeat the modern Eurocentric epistemic postulates of development.

Gudynas (2011b) mentions that in the past, enclave economies were associated with dependence on foreign trade and trans nationalization, and as something to be overcome in order to achieve another possible development, but today they are promoted as export achievements; there was a time when it was advocated to leave extractivism behind and promote industrialization at the national level, whereas today historical records of raw material exports are celebrated. Consequently, extractivism—as well as its current face, neo-extractivism—are once again emerging as the state's only visible strategy for achieving the desired development. Any discourse contrary to this vision is quickly categorized as a negation of progress, irrational or based on environmental fundamentalism (Svampa 2015).

Green Extractivism and Energy Transition

Capitalism has intensified an unsustainable metabolic profile by accelerating the social metabolism, using less intensive labour and more energy (Toledo, 2013). According to Svampa (Svampa, 2022a, p. 5), from the point of view of the industrialized countries, globalization has created an unsustainable consumption model that, in order to sustain itself, requires an increasing amount of raw materials and energy from the countries of the global South, "increasing the pressure on natural resources and territories and exacerbating the processes of dispossession and criminalization of local populations". In this sense, the critical debate on the Anthropocene invites us to consider a geological era historically produced by civilization, understood as a set of complex and interconnected systems that oppress both humanity and nature. The processes of climate change and the study of social metabolism linked to current discussions of the Anthropocene cannot be understood without considering the colonial dynamics of extraction that began in the colony and continues into the 21st century. Scientists

have named this epoch the Anthropocene (Crutzen & Stoermer, 2013) to emphasise that humanity has become a significant geological force. Jason Moore (2017) calls it the Capitalocene, to stress that it is the logic of capital that is destroying the web of life.

Svampa states that we are facing a dynamic of capital aimed at the "recolonization of nature and dispossession, visible in the process of land grabbing, the destruction of territories, and the displacement of territories" (Svampa, 2022b, p. 561). Similarly, Machado Aráoz explains the relationship between the hyper-industrialisation/technification/artificialisation of life (consumption patterns) demanded by some economies/societies and the hyper-primarization of those other subaltern economies, which requires a continuous expansion, intensification, and deepening of the rates and volumes of extraction of primary natural goods and energy (Aráoz, 2015, p. 284).

We have stopped at a historical overview of the construction of the notion of "center-periphery" because many (if not all) of the geopolitical dynamics that have been structured and entrenched since the fossil fuel boom have not changed, despite the idea of replacing them with renewable energies. The literature shows that while it is true that all countries, both in Europe and Latin America, have defined decarbonization targets linked to the commitments of the Paris Agreement (2015) and the 2030 Agenda for Sustainable Development, and all are promoting renewable energy, the extractivist agenda has expanded to unprecedented levels. According to the World Bank Group's report Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition (2020), the production of minerals such as graphite, lithium and cobalt will need to increase by almost 500% by 2050 to meet the growing demand for clean energy technologies. It is estimated that more than 3 billion tonnes of minerals and metals will be needed to provide the wind, solar, geothermal, and energy storage needed to achieve a sub-2°C future.

Given this scenario, a more specific description of the type of extractivism arising from the demand for raw materials for renewable energy is needed. Thus, the concept of "green extractivism" appears as a way to articulate the critique of activists and scholars who highlight how the capitalist extraction and appropriation of raw materials, natural resources, and labour, especially in the global South, is justified under the pretext of a green technological energy transition. In this context, "green" does not mean that the relationship with nature of this "mode

of production" is environmentally friendly and socially just, but rather a restructuring of trade, energy, and transport that fits into the framework of a "green" economy, according to the imaginaries promoted by the Green Deals of decarbonization of the global North. In this way, resource extraction becomes a means to an end, appearing compatible with the goals of sustainable development and an inevitable part of securing a low-carbon future (Mcmillen Voskoboynik & Andreucci, 2022)

Green extractivism is a correlate of so-called 'green capitalism' and 'green colonialism' that describes a new phase in the relationship between extractivism, particularly mining, and the environment. In this relationship, according to the authors, lithium represents the imaginary of a "technological solution" capable of transforming the climate crisis into a political and economic opportunity for power. From the “periphery”, this imaginary is linked to visions of development and national affirmation that have already existed since the modernization associated with the oil and mineral wealth of the extractivisms described above. Mcmillan Voskoboynik & Andreucci (2022), in their analysis of extraction in the Lithium Triangle, explain how discourses and imaginaries are reconciled, linking the 'green' to the 'national', to 'high technology' and 'prosperity'. Thus, as in neo-extractivism, the green extractive development project is politically legitimized to ensure national economic growth.

Green extractivism also enables us to identify those regions that are inevitably "sacrificed" for the benefit of ecological modernization, extraction, and appropriation of raw materials within the framework of the energy transition.

Green “sacrifice zones”

Lang (2023) notes that the concept of sacrifice zones was initially coined to describe territories annihilated due to nuclear production and testing during the Cold War. However, it has since been expanded to refer to places and spaces with dangerous levels of pollution and ecological degradation, where communities have been sacrificed under the pretext of economic growth and development.

It’s also important to recall that extractivist "land-use planning," as Machado (Aráoz, 2015, p. 14) points out, is not a recent phenomenon.

> “It can be argued that America is being incorporated into the revolutionary forces of the world market as an abysmal peripheral space, colonial territory par excellence. This territory was designed and constituted from the beginning as a mining zone, with extraction as the sole objective of the colonizing action.”

Zógrafos & Christos (2020, p. 545) define two key components of sacrifice zones:

1. Cost shifting: is a practice whereby private companies transfer the harmful consequences and damages of economic production to third parties (inside or outside the economic production circuit) and communities. This can involve the transfer of environmental risks, such as the irreversible contamination of water sources, but also social risks, such as exploitative labour conditions or the displacement of communities.
2. Coloniality: the colonial logic that is embedded in the norms of knowledge and practice inherited from the European colonial order and based on a cognitive order that privileges both the right to material goods and cultural elements associated with "whiteness." This leads us to consider what Mignolo proposed in the coloniality of knowledge. The authors argue that imperial projects have justified their domination by proclaiming the salvation of the colonized through spiritual (Christianity in the Spanish Empire), cultural (civilization in the British and French Empires), and economic (material and institutional development under post-World War II US hegemony) transformation. These projects evaluated the progress of non-Europeans in terms of the standards of whiteness and the privileged European lifestyle. There is a kind of "salvation rhetoric" that is employed to justify sacrifice.

As demonstrated by Bravo (2021), the creation of sacrifice zones is an intentional act on the part of the state, which exercises special modalities of destructive spatial violence and justifies itself by the utilities that would be generated. However, transnational corporations, international organizations, and central governments also play a role in increasing their control and influence over territories (Kingsbury, 2021). In the sacrifice zones, these external entities demand that sectors of the population make an "offering" (*ofrenda*) to achieve a higher good, a universal good, with moral, almost heroic connotations. This is particularly the case when the narrative is that of decarbonization.

From the perspective of productivism and efficiency-based development, other logics of the relationship with the territories that cannot be subsumed to the metrics of capital are devalued and disqualified. A calculation is always made: how much biodiversity can be sacrificed in exchange for a specified quantity of minerals. Those territories that are considered unproductive are treated as wastelands, socially voidable, and stripped of their meanings to be approached as "sacrifice areas" for the sake of selective progress.

Hugo Reinert was among the first to use the idea of sacrifice zones in the framework of green extractivism in his work from 2018. He addresses this issue through the analysis of a conflict between Sami reindeer herders and a government-supported mining project on a Norwegian Arctic fjord. In his study, he describes how the state has placed its bets on the mining project, which has resulted in the sacrifice of the entire Sami tradition of reindeer herding. This has been justified by the state through the argument that the project will generate jobs. In this context, the term 'sacrifice' is understood to imply the destruction of the physical, symbolic, and cultural territory, in many cases to an irreversible extent. The destruction of the environment is not merely a collateral consequence of the pursuit of wealth or value generation; it is an inherent and necessary aspect of this process. This makes the violence involved in such projects invisible and justifiable (Reinert, 2018).

Similarly, Hamouchene (2023) analyzes the Green Hydrogen projects in North Africa and identifies the creation of sacrificial zones as a strategy of imperialist capital in which environmental racism joins energy colonialism.

METHODS

This research employed a qualitative methodology based on the analysis of two case studies: Portugal and Ecuador. According to Yin (2009), research utilizing case study strategies enables the maintenance of a comprehensive and meaningful interpretation of the characteristics of real-life events, while simultaneously facilitating the generalization of theoretical and analytical propositions. However, this contribution does not seek to be a comparative analysis in the strict sense; rather, it explores and discusses narratives and imaginaries that are relevant to debates on extractivism and its effects on coupled human-environmental systems in different contexts.

The rationale behind selecting two countries from distinct geographical regions, namely Europe and Latin America, is to highlight the diverse manifestations of a phenomenon, such as mining extractivism, within specific and distinctive historical, socio-political, economic, cultural, and environmental contexts. In this sense, narrative analysis was selected as an approach that would allow the generation of knowledge from a localized understanding of each case, while also considering the global dimension of their connections. Narratives are powerful tools that enable sense-making by representing accounts of the past, present, and future of complex phenomena (Parkkinen & Vikström, 2024). This approach involves the documentation of the narratives constructed by various levels of actors, with the objective of understanding their historically and politically constructed perspective and the effect their narrative agency has on reality.

Case study selection

In the search for answers to the research question, both cases analyzed in this thesis share, in general terms, relevant characteristics:

i. Both countries have reserves of minerals needed for renewable energy technologies, such as copper and silver (Ecuador), and lithium (Portugal), and the extraction of these minerals has been highly contested to date (Alarcón, 2023; Canelas & Carvalho, 2023).

ii. Local communities and social movements in both countries question current environmental, mining and energy policies and offer counter-narratives to development and energy transition imperatives that rely on natural resource extraction.

iii. In recent years, the governments of both countries have adjusted their plans and policies in response to international demand for critical materials and commodities, which would be driving a governance model associated with extractivism.

At the same time, Ecuador and Portugal differ in terms of the size of their economies and the characteristics of state revenues, their geopolitical position, and their integration into the world market. On the one hand, Ecuador has historically depended on the fossil sector and the export of natural resources. This has meant that the allocation of extractive income has led to the impossibility of diversifying its economy, which translates into dependence on imports of manufactured goods and technology developed abroad. Therefore, Ecuador meets the structural conditions associated with peripheral states (Global South). On the other hand, Portugal has been integrated into the international market from a semi-periphery position. This is how Sousa Santos (1985) defined it, when he explained the abstract and dual character of the Portuguese state in the mid-1980s. Perhaps the most relevant feature of semi-peripheral societies in the European context has been the long effort of the State to reconcile the mismatch between capitalist social relations and ways of production in a social formation still populated by pre-capitalist oriented social relations. This effort has been shared with the economies of countries such as Spain, Ireland and Greece. The author highlights the role of the State in facilitating this transition from a semi-periphery to the center (Global North). Thus, Portugal's entry into the European Union in 1986 would be an important step in achieving this, since it would allow the consolidation of a welfare state. After more than two decades and with many changes in between, one might ask whether Portugal is still in this phase of renegotiation of its position in the global system.

In light of the current circumstances, there is a renewed emphasis on the extraction of critical materials for the purposes of the energy transition. This invites us to consider the position of these countries in the context of the transition and the role of various actors (institutional, private sector, and communities) in the development of extractivism. It appears that the welfare states of the countries of the Global North are creating the conditions to make the most of the opportunities presented by the energy transition (Lehmann & Alarcón, 2023). In recent years, Portugal has invested heavily in the technology and innovation sector, with the support of the state, which has resulted in the strengthening of the public sector and the creation of a highly skilled workforce. Conversely, in Ecuador, the role of the peripheral state in creating regulatory

and institutional frameworks to facilitate or impede extraction is contingent and has depended on the will of governments and the volatility of the international context.

Data collection

The research was developed in the following phases: 1) Collection of documents; 2) Processing and analysis of data and generation of preliminary results; 3) Drafting of the final document. The first research phase, which was conducted between January and April 2024, began with the mapping of stakeholders in the two cases and the delimitation of the observation units. In the case of Portugal, I focused on the two lithium mining projects that are in their early stages of operation. These correspond to "Barroso Lithium Project", whose concessionaire is Savannah Resources; and "Mina de Romano" concessioned to Lusorecursos Portugal Lithium, S.A. Both projects are located in the region of Barroso, in the north of Portugal, and belong to the municipalities of Boticas and Montalegre, respectively.

The selection of analytical units from the Ecuadorian case was more challenging since there is a larger number of mining projects relevant for the purposes of this study. It was decided to place greater emphasis on the Rio Blanco project, located in the rural parish of Molleturo, belonging to the municipality of Cuenca. The project was operated by the company Ecuagoldmining South America S.A. The criteria for the inclusion of this project are the following: it is located in the fragile Andean Paramo ecosystem[1]; the case was known beforehand because it is located in my hometown; it is an emblematic case in the resistance of rural communities against mining extractivism in Ecuador. However, throughout the study, I show the findings around other mining projects considered relevant, such as the Loma Larga, Warintza, Mirador and La Plata projects.

In parallel to the mapping, a design of guiding variables for the study was made based on the research question and the preliminary literature review. In order to have a holistic view of the phenomenon, and grasp on the narratives of each actor, various sources were consulted,

[1] The páramos are ecosystems of the high humid intertropical mountains, located between the upper line of the forest and the tropical glacier snows. They are located at the north of the Andes Mountains, from Venezuela to northern Peru. They are considered strategic ecosystems due to their role in regulating the hydrological cycle, their high diversity of flora and fauna, and their ability to regulate climate and environmental balance by acting as carbon sinks.

including the official websites of the state, mining companies, and community organizations. The document review also provided background information on the socio-political and economic dynamics related to the environmental conflicts of both cases study at different scales (national, regional, and local). Interviews and public statements available in digital media were reviewed. Access to sources constructed from different voices allowed me not only to access different types of information, but also to triangulate information provided by the three stakeholders. The temporal cut of the documents collected starts from 2015 and continued to the present year.

Stakeholders

Ecuador Stakeholders

Macro - State Level

- National State Government
- Ministry of Energy and Non-Renewable Natural Resources
- Vice-Ministry of Mines
- Ministry of Environment, Water and Ecological Transition

Meso - Private Sector

- Chamber of Mines of Ecuador
- Solaris Resources (Project: Mirador)
- Lundin Gold Inc. Ecuador (Project: Fruta del Norte)
- Atico Mining (Project: La Plata)
- Adventus Mining Corporation (Project: El Domo)

Meso – Communities, Civil society organizations, academia

- Confederation of Indigenous Nationalities of Ecuador

- National Anti-Mining Front – FNA
- Collective of Critical Geography
- Observatory of Socio-environmental Conflicts of Ecuador

Portugal Stakeholders

Macro - State level

- National State Government
- Portuguese Environmental Agency (APA)
- State Secretariat of Mines
- Public Ministry
- Boticas Municipal Camera
- Montalegre Municipal Camera

Meso - Private Sector

- Savannah Resources Plc (sole owner of the Barroso Lithium Project, in northern Portugal)
- Lusorecursos Portugal Lithium (concessionaire for the operation of the "Mina do Romano", located in the region of Montalegre, in the north of Portugal).
- Association of Engineers

Meso – Communities, civil society organizations and academia

- Montalegre com Vida, Povo e Natureza do Barroso (PNB)
- Unidos em Defesa de Covas do Barroso (UDCB),
- National Climate Justice Summit (ENCJ).
- QUERCUS - National Association for Nature Conservation

- NOVA School of Science and Technology (FCT NOVA)

In March I was able to participate virtually in the open forums at the National Climate Justice Summit organized by grassroots organizations in defense of Barroso territory. During this event, I was able to conduct direct observation of the interventions of local actors and organizations. Subsequently, I transcripted some of the interventions. After the identification of the relevant actors, a systematic monitoring of publications in the social networks of the collectives and civil society organizations, both from Ecuador and Portugal, was also carried out. A total of 31 documents were collected.

Table 1. Type of source by stakeholder

Stakeholder	**Ecuador**	**Portugal**
State	• Plans, policies and laws related to mining, environment, human rights and the rights of nature • News coverage • Review of interviews and statements of representatives of ministries and presidency in national media.	• Plans, policies and laws related to climate change, energy transition, and mining. • Press coverage on energy policy. • Official statements on concession permits • Statistical data
Private Sector	• Available information on company website • Statistical reports	• Available documents on company website: newsletters, advertising • Summary documents of environmental impact studies • Review of the Conference "Informed Conversations on Lithium" organized by the Order of Engineers in April 2024
Community	• Documents of complaints filed before legal entities (amicus curiae)	• Posts on social networks • Review of local association blogs

	• Local community digital media • Posts in social networks	• Review of independent research on lithium mining projects in Portugal. • Virtual participant observation of the National Climate Justice Summit in March 2024.

Data analysis

The second phase consisted of the input of the collected and transcribed documents into the qualitative analysis platform Atlas.ti, and the creation of codes, thematic categories, and networks of relationships. The data analysis was conducted through the thematic analysis method proposed by Braun & Clarke (Braun & Clarke, 2012). This entailed integrating inductive and deductive research approaches, which fostered ongoing reflection and iterative learning. The deductive analysis employed the literature review and research questions as initial points of reference, establishing a set of predefined concepts that would then be transformed into codes. In addition, the inductive analysis involved a careful examination of the evidence to reveal new concepts or issues, resulting in the creation of new codes grounded in the data.

This approach has six phases: familiarization with the information, generation of initial codes, search for themes, review of themes, definition and naming of themes, and preparation of the final report.

- First, through repeated reading and note taking, I tried to understand the data collected and its depth and breadth.
- In the second phase, the interesting features of the data set were systematically coded, and methodological notes were developed for several of the codes. A total of 122 codes were generated.
- The third phase involved organizing the codes into potential themes.
- The fourth phase involved reviewing, merging, and refining the clusters of codes. This resulted in 16 groups of codes. Upon applying the codes to the corpus of the narratives, many conceptual maps were produced. They were clustered into 7 groups of maps.

- In the fifth phase, these conceptual maps made it possible to relate the units of meaning of the codes to each other, giving rise to thematic blocks.
- In the sixth phase, the themes were defined and transformed into subchapters of each case study.

Some of the relevant networks are included in the chapters on results and discussion and are presented in a dialogue with the theoretical framework. To facilitate the comparison between the case studies, a diagram was constructed to illustrate the local impacts (environmental and social) and spillover effects (Gudynas, 2018). This diagram shows the intertwining between narratives, imaginaries, and the effects they produce in the material and symbolic reality of the coupled systems.

RESULTS

Part 1. Mining in Ecuador: Transition from neo-extractivist governance to neo-liberalism

The establishment of mega-mining in Ecuador

The issue of large-scale mining in Ecuador is a relatively recent phenomenon. Although there have been several mineral deposits exploited since colonial times, such as the Portovelo and Zaruma mines in the province of El Oro, it was not until the beginning of the last decade that the conditions were created for Ecuador to enter international mining markets through the creation of large-scale projects.

Ecuador has been engaged in the export of natural resources and raw materials since the end of the 19th century. The country entered the primary export extractivist mode of economy thanks to cocoa exports in the last quarter of the 19th century. This was followed by the banana boom of the 1950s. As this activity declined, Ecuador attempted to transition towards a form of import-substitution industrialization, a strategy that was considerably less advanced than those employed by other countries in the region. This transition was not accompanied by a complete abandonment of extractive rents. The first oil boom occurred after 1973. From the 1980s until the beginning of the 21st century, a period known as "the great neoliberal night" was established, during which the economy experienced an accelerated reprimarization (Acosta et al., 2020). Following the 1999 crisis, the country's dependence on oil exports intensified, leading to the transition to a dollarized economy. In this context, in order to maintain monetary and exchange rate policy, the economy required oil exports in furtherance of physical dollars.

The insertion of Ecuador into the mining market occurs within the context of Svampa's (2015) Commodity Consensus, which can be divided into two distinct periods: the first, which encompasses the post-neoliberal era under the progressive government of Rafael Correa (2007-2017), and the second, which marks the return of neoliberalism under the administrations of Lenín Moreno (2017-2021), Guillermo Lasso (2021-2023) and Daniel Noboa (2023-present).

In this initial phase, mining was perceived by the state as a means of economic growth and was incorporated into national development plans as a strategic sector under the purview of the central government, as stipulated in Article 133 of the Constitution of the Republic. Sacher &

Acosta (2012, p. 16) state that by the end of 2007, 20% of Ecuador's territory had been granted concessions, equating to 5,629,751 hectares. During this period, the majority of these concessions were granted to junior mining companies, which are exclusively dedicated to exploration (identification of deposits and socially and politically favorable territories for mining).

However, this interest in mining differs from the extractivism of the previous century, particularly due to the prominent role that the state plays in the management of economic policy, particularly with regard to projects of "national interest". Correa's government was framed as a post-neoliberal political programme, proclaiming the creation of an inclusive and participatory democracy, which would restructure Ecuador's political and economic landscape (Chiasson-LeBel, 2016). This also entailed a reorganization of the role of the Ecuadorian state in development and management, with the establishment of new planning institutions, a new Constitution, new ministries and new economic regulations, accompanied by a greater share of oil and mining revenues.

The institutionalization of a neo-developmentalist state was accompanied by policies designed to increase the share of resource rent retained by the state and to channel this rent into development projects and social investment measures (Ickler, 2023). The neo-developmentalist programme, as defined by Clark & García as the transformation of the productive matrix of the economy, essentially through the development of the secondary and tertiary sectors of the economy (Clark & García, 2019), constituted the foundation of the political project during this initial stage. It represented the first step towards the transition of the economy away from its dependence on oil revenues.

Nevertheless, several authors regard the Ecuadorian case as paradigmatic. Although the constitutional recognition of the legal personality of Nature or Pachamama represents a significant step forward in the history of contemporary law (enshrined in the 2007 Constitution), not only in terms of the protection of Nature and the environment, but also in terms of the subjects of rights, the country has seen a deepening of extractivism, particularly mining, oil and agroforestry extractivism.

In 2009, the Mining Law was passed, which, although it overcame some of the errors of the neoliberal legal framework, did not comply with the principles of Human and Nature rights

established in the Constitution and didn't include the fundamental principles of the popular mandates of the social movements and indigenous peoples established in the Constituent Mandate No. 6, also known as the "Mining Mandate." In contrast, the authors posit that the new law merely perpetuated the legal forms for securing mining activity as established in the previous law, which has been identified as the primary catalyst for new conflicts that could potentially result in the transfer of mining concessions (Acosta, et al. 2020).

The government established a number of significant institutions with the objective of encouraging and supporting mining activities. These include the Mining Regulation and Control Agency (ARCOM), the National Mining Company, the National Institute of Geological, Mining and Metallurgical Research, and Ecuador Estratégico, a state agency responsible for investing royalty funds. Furthermore, in order to ensure the material conditions for exploitation, large energy and transport infrastructure works were constructed and financed by public investment. Foreign-owned extractivist companies, primarily Canadian, expressed enthusiasm for the modifications to the legal framework for large-scale mining, indicating that the government is receptive to their interests through its neo-extractivist policies. At this stage, five large-scale mining projects, which represent the gateway to mega-mining in Ecuador, were configured as strategic projects. The following projects have been designated as strategic or first generation: Mirador, Fruta del Norte, San Carlos Panantza, Río Blanco and Loma Larga. All of them are located in southern Ecuador, with the first three situated in the Amazon and the last two in the Andes. Other projects, such as Cascabel, Llurimagua and Ruta del Cobre, have been established as "second generation".

In a second stage of mining development in the country, the country took a turn towards neoliberal economic policy under the government of Lenin Moreno (2017-2021), in which forceful actions were taken to strengthen the extractivist mining economy. In 2019, the president signed the Letter of Intent with the country's commitments for the disbursement of a loan with the International Monetary Fund. This would entail the implementation of a neoliberal adjustment programme with the aim of reducing the state, public investment and the fiscal deficit, as well as the privatization of public companies, and legislative reforms that protect foreign investment (Rosero Alcívar, 2020). On 29 April 2019, the Minister of Energy and Non-Renewable Resources, which merged with the Ministry of Mining, stated that "La minería va

porque va!”[2] Our vote is that it is done in a responsible way." (Jara, 2019). The phrase revealed that the extractive mining policy would be strengthened and that the government would renew its agreement with transnational companies, including international funding agencies.

In light of this, and in the midst of the health crisis caused by the COVID-19 pandemic, the Ministry of Mines carried out the creation of the National Development Plan for the Mining Sector 2020-2030. This plan represents a communication strategy that promotes the advantages of investing in Ecuador in legal, physical, economic and social terms, with the objective of motivating investors. One of the key objectives is the liberalization and granting of tax and commercial benefits to mining companies, as well as the securing of ownership of mining concessions and control of land. Given that this document had not undergone the administrative and legal procedures of pre-legislative engagement processes, its release during the epidemic period was met with considerable surprise by the majority of civil society organizations.

From this period onwards, and in subsequent governments, we observe how the return of neoliberalism has utilized the neo-extractive agreement created by the previous progressive stage and reinforced it through a closer connection with foreign capital and national business. Consequently, certain sectors, which were not present in the past, are beginning to gain prominence. Such is the case of the Chamber of Mines, which is concerned with making the country attractive to investors. In this way, public-private partnership systems have been reinforced on the basis of the assumption that the state is incapable of effectively managing and optimizing resources (Quizphe, 2020). As the author notes, these links were unfolding concurrently with the emergence of socio-environmental conflicts in areas where large-scale mining operations exert pressure. Furthermore, the updating and application of mining policies that seek to consolidate large-scale mining in the country have contributed to the intensification of these conflicts.

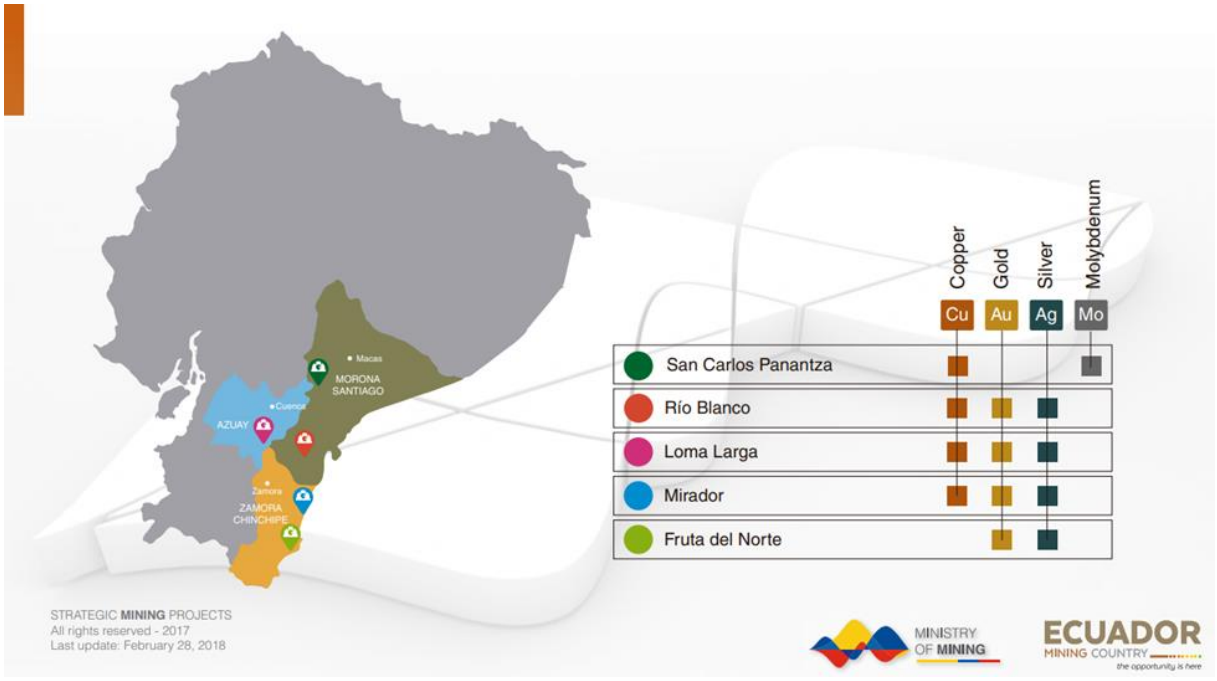
A study conducted by the Monitoring of the Andean Amazon Project (MAAP) revealed that between 2015 and 2021, the Ecuadorian Amazon experienced a 300% increase in the area

[2] The expression "va porque va" can be translated to English as "it's going to happen no matter what". This conveys the sense of determination and inevitability implied in the original phrase.

dedicated to new mining activities, amounting to 5,616 hectares. Furthermore, 46.7% of the mining operations identified within the Ecuadorian Amazon are situated within indigenous territories. Furthermore, by 2021, new mining areas in previously forested areas (889 hectares) had increased to 46%, a value not reached in any previous government period. This finding indicates that mining is already a significant direct cause of deforestation.

In 2018, five projects were defined by the Ministry of Mines as "strategic": San Carlos Panantza, Rio Blanco, Loma Larga, Mirador, Fruta del Norte (Ministerio de Energía y Recursos No Renovables, 2018).

Figure 1. Strategic mining projects in Ecuador



In all cases, socio-environmental conflicts have been identified by the Observatorio de Conflictos Socioambientales del Ecuador (2019) (Observatory of Socio-environmental Conflicts of Ecuador). The majority of these concessions belong to transnational mining companies and are located in ecologically fragile and sensitive areas such as páramos, tropical rainforests and the Amazon rainforest.

Under the mandate of Guillermo Lasso (2021-2023), through Executive Decree No. 754 of 31 May 2023, the president reformed the Regulations to the Organic Environmental Code ("RCODA"), which sought to speed up the legal procedures for granting licenses for investment

projects in different areas, including oil and mining in indigenous territories. However, the Constitutional Court declared the decree "unconstitutional" because the magistrates considered that it violated the human and collective rights of indigenous peoples by conflating concepts of "prior, free and informed consultation", aimed at indigenous nationalities as outlined in the Article 398; and "environmental consultation", referring to the rest of the population (not indigenous) as stipulated in Article 57, numeral 7 of the Constitution. Furthermore, the Court observed that environmental consultation should be regulated through an organic law and not through a regulation, as was initially proposed. The Court also endorsed the criteria of the Confederation of Indigenous Nationalities of Ecuador (CONAIE), which invoked international regulations that establish a procedure of "prior, free and informed consultation" with the communities, with the objective of protecting their territories and cultures.

According to the Mining Sector Bulletin of the Central Bank of Ecuador, from January to September 2022, a total area of 104,728 hectares was under concession for mines and mining projects in the country, distributed across seven provinces. The largest area is located in the Amazonian province of Morona Santiago and corresponds to the first-generation mining project San Carlos Panantza, which encompasses 38,548 hectares. In the results bulletin for the first quarter of 2023, the concessioned area of mines and mining projects was 131,405 hectares. In the latest available bulletin prepared by the Central Bank, the concessioned area was reported to be 124,093 hectares. However, a comparison of these data with those provided by the Vice-Ministry of Mines and collected by the article in the newspaper Primicias (2023) reveals a discrepancy in the concession areas. The latter data indicate that there is a total of 950,528 hectares under concession.

State Narrative

Developmentalist imaginary

On 4 March 2024, an Ecuadorian president participated for the first time in one of the largest transnational mining conferences: the World Exploration and Mining Convention in Toronto, Canada. The President of Ecuador, Daniel Noboa, along with the Ministers of Foreign Affairs, Energy and Mines, and Production, International Trade, Investment and Fisheries (PCIP),

delivered remarks at the meeting. The Ecuadorian government signed six letters of intent to receive 120 million Canadian dollars in financing for investment in industrial mining.

The president stated that: "Mining is an engine of national development, and that is why we are here, thanking you for your support and interest in Ecuador." The PCIP minister added, "We have a dollarized economy and a commercial investment policy of openness to the world. We have natural resources such as water, minerals and agriculture. And we have tax incentives." At this event, the president presented the reforms that the government is adopting to attract investment in mining. It was stated that efforts would be made to reform the Constitution to allow the approval of an investment protection mechanism, "international arbitration between private investors and the government", and the reopening of the mining cadastre to speed up the concession process.

In May of this year, the new Minister of Mines, who was a witness of honor at the signing of the strategic alliance between the National Mining Company (Enami) and the Canadian company Solaris Resources Inc., mentioned that: "We are aware of the political and social challenges that this industry faces. However, we believe that it is an important part of the future of our country and that it can play a role in our development by doing things right." (Primicias, 2024). It can be observed that there are similarities between the discourse on large-scale mining and its link to development held by the current and previous governments. However, there is a notable difference in the context in which this discourse is presented. During the 2007-2017 mandate, the state was a strong regulator in terms of contracts, use of royalties and surpluses. In contrast, during the current mandate, the state is perceived as a guarantor of foreign investment.

In this context, it is pertinent to inquire as to the consequences of the developmentalist narrative espoused by the government and to what extent this narrative reflects the coupled socio-human-environmental system.

Our findings indicate that the primary rationale for the promotion of mining is economic growth, as measured by GDP. This growth is driven by the contribution of mining to exports, foreign investment inflows, and increased employment. This assumption posits that growth is contingent upon an intensive and efficient appropriation of natural resources. Nevertheless, the contribution of the metal mining industry to the GDP growth rate in 2023 is estimated to be

0.3% (provisional value), according to Central Bank data. In terms of employment, data for the third quarter of 2023 indicates that strategic and second-generation mining projects collectively generated a total of 9,495 direct jobs. This figure is considerably below the estimates of the Ministry of Energy, which in 2019 projected that mining projects would collectively generate approximately 32,000 direct jobs. Although mining activities can generate employment, they are not stable, they are not continuous, they are irregular, and hiring policies change according to the type of relationship between the companies and the communities and the origin of the company. Mining operations have the potential to impact aquifers and soils, with the possibility of exacerbating existing issues when combined with other factors (Rebaï & Vélez, 2018). This can result in a decline in agricultural production and livestock farming, which are vital economic activities for local populations. Consequently, the opposite effect is generated, namely a loss of territorial autonomy, which is further reinforced by the insertion of the labor force into precarious and unstable jobs. When the economy of an area is centered on mining activity, this dependence establishes and deepens a condition of labor exclusion for a significant proportion of the population, mainly women. This is because the creation of jobs in the mines favours male-dominated work. This means that the activity of large mining companies offers women very limited and disadvantageous occupational alternatives. Due to low labour demand, women only have the option of working in the fields of general services, cleaning and food, which are linked to highly precarious jobs, such as low wages, lack of social security, instability, labour intensification, among others (Bermúdez Rico et al., 2011).

> "We hope that duly regulated mining projects - which have the respective licenses, therefore the necessary environmental safeguards - are not stopped because this also slows down the development of communities." (Minister of Environment, 2023)

Historical evidence indicates that extractivism does not necessarily lead to the formation of dynamic relationships. There is no guarantee that integrated and synergistic productive linkages will be established, nor that consumption and fiscal linkages in final demand will be created (Acosta et al., 2020). The authors have demonstrated that, since colonial times, primary export economies have consistently exhibited a common characteristic: being an enclave where extractivist territories tend to be isolated from the rest of the economy. Metallic mining has not constituted a significant source of wealth for the country, and it appears that this will remain the case in the future (Albuja & Dávalos, 2013). Furthermore, due to the nature of metallic

mineral markets, mining activities link territories to the dynamics of international financial speculation. This is exemplified by the Fruta del Norte project, in which the junior company Aurelian Cooper sold its mining rights to Kinross in 2008 for USD 960 million without any investment or extraction (Sacher, 2017). A report by the Comptroller General's Office indicates that the government signed the exploitation contract in 2016 despite a series of irregularities (Solíz et al., 2018). In the case of mining, which is situated at the pinnacle of international mining chains, it is not the extraction of materials that is of primary importance; rather, it is the speculative game that dominates international markets (Albuja & Dávalos, 2013).

In contrast, the authors demonstrate that the argument in favour of economic benefits can only be sustained if environmental statistics are distorted, while the economic costs resulting from the negative social and environmental effects of extractives are ignored. Ultimately, the costs are borne by communities, local governments, and society, whether in the present or by passing them on to future generations. The adverse effects of the environmental system are referred to as environmental liabilities. With regard to environmental liabilities, it is important to bear in mind that the impacts of mineral extraction processes contribute to the worsening of certain environmental imbalances on a global scale. These include a decrease in biodiversity, the destruction of the habitat of endemic species, and an increase in emissions due to the large-scale deforestation caused by mineral extraction. Mining has a detrimental impact on the Andean páramo ecosystem, which is particularly vulnerable due to its fragility, low recovery rates and the significant impact it has on the water network, which is comprised of soils, lagoons, rivers, peat bogs, seasonal wetlands and groundwater (González-Martínez et al., 2019).

Mining combo: development and energy transition

The narrative of an energy transition that has become part of the global climate agenda, and which requires a large quantity of minerals for the manufacture of "clean" energy generation technologies, has been seen as an opportunity for mining companies. Mining companies have taken advantage of the state's discursive deployment to position their industry as a key stakeholder in the fight against the climate crisis, stressing the need to intensify the extraction of metals and minerals and move towards a "greener" and more "sustainable" global economy.

> In this ongoing battle against climate change, we can make a significant contribution by providing the raw materials that industrialized countries require to decarbonize their

> footprints, which is considerable. This is an urgent matter, as the world is pressing to stop using fossil fuels and migrate, for example, to electric cars or the use of green hydrogen. The European Union has set a target of 100% electric vehicles by 2030. However, this is an ambitious goal given the current reality of supply and demand for critical minerals such as copper. There is not enough production globally to meet the demand that will be generated in the next 10 years. Copper is one of the minerals that we have in abundance in Ecuador. (President of the Chamber of Mines of Ecuador, 2024).

Indeed, copper has been considered a strategic and critical mineral for the energy transition, as it is useful for electrical engineering, with the highest conductivity after silver. In recent years, Ecuador has encouraged copper mining due to rising copper prices. The Agency for Regulation and Control of Energy and Non-Renewable Natural Resources (ARC) has granted 15 export certificates with a commercial value of USD 300 million for the open-pit mine "Mirador," representing the sale of more than 190,000 tonnes of copper concentrate. The Mirador project was the first large-scale project to enter into operation (initially operated by a Canadian company, today it is operated with Chinese capital). There are 10 major copper mining projects in Ecuador: La Plata, Warintza, Ruta del Cobre, Cascabel, San Carlos Panantza, Mirador, Cangrejos, Loma Larga, Curipamba, Llurimagua, El Domo.

The alliance between the state and mining companies presents large-scale mining activity as a means of achieving two distinct imaginaries: on the one hand, the development of communities through the promise of economic benefits, and on the other, the energy transition of the Global North. However, their narrative fails to acknowledge the fact that the urgency for accelerated growth and development is a consequence of structural conditions of marginalization of rural and indigenous communities that have deprived them of the guarantee of basic rights, such as access to health care, quality education, full employment, and service infrastructure. Companies seek to capitalize on these conditions by presenting themselves as saviors of the community and agents of environmental protection, using a heroic rhetoric to gain legitimacy and influence.

This happens concurrently with the state relinquishing responsibility for rural development to corporate interests, facilitating the vertical integration of campesino peoples into corporate

value chains. An illustrative example can be found in the statement of a representative of the Chamber of Mines in an interview.

> "The younger generation is contemplating migration in highly risky conditions. Why? Because in their cities, in their parishes, in their country there are no opportunities, and we want to reverse this trend, we want mining to be a basis of development for Ecuador while at the same time extracting minerals that are going to be absolutely necessary for this energy transition" (former president of the Chamber of Mines of Ecuador, 2024).

Transferring to the communities the responsibility of sacrificing the territories where the web of life is woven, with the argument of providing critical materials for the North's energy transition, carried out from the corporate modus operandi, reveals that what is established as a priority is not the fight against the climate crisis, but ensuring the reproduction of the extractivist mode of production, which is a sine qua non condition of the capitalist economic matrix. In the process, the Ecuadorian state would not only be sacrificing its natural heritage, but also the environmental 'services' that these regions provide to the global community, such as biodiversity, carbon sinks, and oxygen supply, as Alarcón points out (2023, p. 11). This shows the government's willingness to prioritize national economic growth through extractivist activities to boost the country's economy to the detriment of other valuation languages that in the future would bring better returns, including for the national economy.

In light of the aforementioned arguments, it is important to bring up the crucial role that páramos play in combating the climate crisis and long-term environmental sustainability. This is due to their unique characteristics and ecological functions. In particular, low temperatures, slow decomposition rates, and the accumulation of organic matter allow them to act as highly efficient carbon sinks that would help mitigate the greenhouse effect and global warming (Villa et al., 2019). The ability of páramos to retain water is directly related to their large organic carbon stocks, which contribute to the stability of hydrological cycles. Studies in paramos in Ecuador have recorded large organic carbon stocks. However, these stocks can be rapidly lost if páramos are converted to agricultural or mining land, as this would result in irreversible changes to land use, leading to the immediate release of carbon. If páramos provide essential environmental services, such as the provision of high-quality and quantity of water and the storage of atmospheric carbon, both of which are vital for controlling global warming, why has

the protection and conservation of these ecosystems been allowed to be undermined by mining activity?

The Loma Larga project in the Quimsacocha páramo and the Río Blanco project in the Molleturo parish are two metal mining projects located in páramo areas in the southern province of Azuay.

Socio-environmental conflict in Río Blanco

The Rio Blanco mining concession was established in 1993 under the direction of the Rio Tinto-Zinc Corporation (RTZ), a British enterprise. It subsequently passed into the hands of the San Luis International Minerals Corporation (IMC), a Canadian entity. Since 2012, the concession has been operated by the Chinese company Ecuagoldmining S.A. The concession has an impact of approximately 5,000 hectares in the paramo region of the Cajas Massif, which has been designated a Biosphere Reserve by UNESCO. This area is home to 786 lagoons, which are a source of water for agriculture and human consumption in the province of Azuay. A part of the company's mining concession is situated within the Cajas National Park and the Molleturo-Mollepungo protected forest, which contradicts the popular will expressed in the popular consultation, which prohibits mining in protected areas. Since the start of the project, approximately 72 communities in the region have expressed concern about the potential contamination of water resources due to the effects of the ongoing activity and have demanded the withdrawal of the company and the end of the mining concessions.

In this context, the communities of the Molleturo parish exercised their constitutional right to resistance and undertook action to oppose the presence of the mining company in their territory. In response, the government ordered the presence of special forces to control the social demonstrations, which resulted in the militarization of various parts of the territory. The inhabitants of Río Blanco expressed their concern about the violence exercised by members of the private security forces, employees of the mining company, and the military against the inhabitants. As a consequence of the disproportionate use of force by the state and the mining company, dozens of individuals were subjected to arbitrary detention. Furthermore, the houses of those identified as opponents of mining were also raided. The 2021 report by the Alianza por los Derechos Humanos (Alliance for Human Rights) indicates that the police deployment resulted in brutal repression by the security forces, as well as the detention of five community

members and the criminalization of 43 individuals, who were accused of "sabotage", "attack or resistance" and "organized terrorism".

The Río Blanco project was suspended in 2018 by the Provincial Court. The main argument of the ruling was that the mining company violated the right to free, prior and informed consultation. This achievement was made possible by the sustained resistance of the communities, who consistently denounced the mining activities of the company as a threat to the rights of nature to exist and to be restored. They highlighted the pollution of several water sources and the alteration of the relationship between humans and non-human life in the area.

Similarly, the Loma Larga project, which was granted to the Canadian company Dundee Precious Metals Inc. (formerly INV Metals), was suspended in August 2023 following a ruling by the Court of Justice. This ruling was based on the premise that, as in the Río Blanco case, the right to Free, Prior and Informed consultation, which should have been carried out by the State, had been violated. This entire judicial process was initiated in response to an action for protection filed in 2022 by the Federation of Indigenous and Campesino Organizations of Azuay (FOA). In response to this announcement, the president of the association highlighted the significance of the entity's decision, describing it as a "historic ruling for the defense of water in Ecuador." For decades, we have been engaged in a struggle to eradicate the roots of mining extractivism in Quimsacocha, which is affecting our páramos (Sanchez, 2023).

Quizphe (2020), Astudillo & Vallejo (2020) and others have presented findings in their respective studies that demonstrate the socio-environmental impacts of mining in Río Blanco. At the environmental level, the studies highlight the drying up of bodies of water and the loss of water regulation capacity of the intervened lands. This has a negative impact on public health due to the restricted access to water and the deterioration of the quality of life of the people who depended on these water sources.

At the socio-political level, one of the most significant and visible consequences is the rupture of the social fabric of communities. The emergence of polarization gave way to the geographical division of pro-mining and anti-mining zones, which in turn led to intensified conflict and violence. Likewise, the application of coercive methods by the state and the company has had an atomizing effect on the resistance; many inhabitants of the area have begun to migrate to other areas of the country. With regard to the territorial and economic

transformation, there has been a high degree of displacement and deterritorialization of the community as a result of the land grabbing by the mining company.

The legal-illegal mining dilemma

The communities' sense of victory after the historic legal rulings didn't last long. Inhabitants knew that the threat of illegal mining had already begun to take hold even when the "legal" mining companies were operating. In the absence of a transition plan or guarantees from the state to protect the communities, who were left to face a scenario of socio-economic and environmental deterioration, a second phase of the conflict soon followed.

The community members of the parish of Río Blanco alerted the authorities that since 2020 they had observed the constant presence of people from outside the community entering the mine. However, the communities have stated that no state entity has taken measures to provide protection to nature defenders in the parish of Molleturo or to prevent illegal mining activities in the territory. In response, the inhabitants have organized themselves to patrol the area and protect the zone.

"Here we are organized and we are not going to allow anyone else to come and damage our territory..." "We have consistently advocated for the protection of water, the páramo, and life, and we will not tolerate any encroachment." (Testimony of a Molleturo resident reported in El Mercurio, 2020)

On the night of 17 March 2021, a prominent member of the resistance was killed while on duty to prevent the entry of illegal miners into the community's territories. In their study Quizhpe & Vallejo (2022), the authors sought the opinions of members of the Río Blanco community, who expressed suspicion about the origin of the event. The following is a transcript of a testimony from one of the community members:

> Behind this murder is legal and illegal mining because the companies have always wanted to buy people who are against mining. So I can't get that out of my mind, that mining has something to do with this, because if we analyze the threats he had. He always warned us to take care of ourselves and he also said "I have to take care of myself", but if I have to give my life to defend my water then I will do it. We knew that the mining company was offering money for our heads. The state looks after and

> protects the mining company, that's why it is complicit in this (interview with Rio Blanco community member, 30 April 2021, reported by Quizhpe & Vallejo).

This is not an isolated case; rather, it is part of a long-standing pattern of intimidation and murder of water and land defenders in the face of mining and oil extractivism. However, cases of extreme violence associated with mining in the Río Blanco and Quimsacocha territories, as well as other mining projects, have been increasing in recent years. The murder of a young woman community activist was the third attack with firearms in less than a month against residents and homes in the parish of Molleturo who have confronted illegal and legal mining. The Alianza por los Derechos Humanos (Alliance for Human Rights) issued a statement on the incident.

> "It is of great concern that all the victims of the attacks this month [October, 2022] are women. In light of this, it is imperative that the authorities are made aware of the heightened vulnerability and risk faced by the defenders of Molleturo due to extractivist violence."

A total of 33 social movements for the defense of human rights and nature have signed an urgent public denunciation. In their statement, they are forceful in pointing out the responsibility of the competent state authorities for not complying with their obligations in relation to human rights. This is particularly relevant in light of the fact that in 2021, the Regional Agreement on Access to Information, Public Participation, and Access to Justice in Environmental Matters in Latin America and the Caribbean, also known as the Escazú Agreement, came into force and is now binding. This agreement obliges states to guarantee the protection and promotion of human rights defenders and environmental defenders. The report Situation of Human, Collective and Natural Rights Defenders Ecuador (Alianza por los Derechos Humanos Ecuador, 2021) found that 18 of the 22 documented cases of violence against human rights defenders in the last 10 years were related to extractive industries or the energy sector. The majority of the causes of the conflicts involve the participation of companies that, in complicity with the State, fail to comply with the standards guaranteeing the right to consultation and free, prior and informed consent, as well as the right to environmental consultation. Despite the courts having ruled in favor of the community, the state itself, through its institutions (Ministry of Mines, Mining Control Regulatory Agency, Police), has not respected the ruling. In practical terms, the

conditions of injustice remain unchanged. There have been no efforts to take action to overcome the structures of inequality and vulnerability of the populations.

In contrast, as Acosta et al., (2020) and Quizphe & Vallejo (2022) have observed, the state and the mining companies – who have formed the "Alliance for Responsible Mining" alongside the Chamber of Mines – have constructed a counter-narrative to address the socio-environmental conflicts. This narrative presents the dichotomy of legal (perceived as beneficial) versus illegal (perceived as detrimental) mining. This introduces another interpretative framework for the Río Blanco and Quimsacocha cases, and also challenges the community's decisions made through democratic processes, such as the public consultation which prohibits mining activities in fragile ecosystems. This dilemma has been repeatedly asserted to the point of establishing a quasi-undisputable conjecture: if there is no legal mining, there will be illegal mining.

The state issues permits for legal mining based on existing regulations. In contrast, illegal mining is prohibited and subject to securitization due to its perceived threat as a lucrative business involving the irregular use of natural resources. This is because it can serve as a source of financing for criminal groups and is linked to corruption dynamics (Quizhpe & Vallejo, 2022). Nevertheless, both "legal" and "illegal" mining operations are situated in areas where the state has been absent and where processes of exclusion and marginalization have occurred and are maintained to this day.

Transnational mining companies may be instrumentalizing the damage caused by illegal mining in Ecuador to legitimate their operations and enhance their corporate image. The perception of the threat of mining would be lessened if the discourse that accompanies this activity is backed by a socially legitimized image such as that of private companies. The narrative focuses on the fact that legal mining, while not without its problems, is far less destructive than illegal operations. By presenting themselves as the sole 'sustainable' and legal option and by implementing corporate social responsibility (CSR) programmes, these companies hope to gain government support and social licenses. If the narrative is naturalized in the national imaginary and citizens perceive that they have no alternative, they are more likely to opt for mining that offers minimal operational guarantees.

However, this strategy diverts attention from the negative impacts of legal mining by discursively minimizing the damage, which leads to doubts about the real experiences and needs

of the communities that have already suffered the consequences. This process of deliberate state neglect thus sets in motion subjectivities that make the narrative associated with the dangers of illegal mining work, as if the state's omissions were a kind of disciplinary punishment (Foucault, 1977).

In this context, illegal mining is perceived as a "curse" that can be alleviated through the implementation of "responsible" large-scale mining. In order to perpetuate this narrative, the state-company alliance employs various strategies to discredit the perspective of communities and stigmatize defenders. Thus, those who oppose large-scale mining projects are no longer solely opposed to national development; they are also targeted as accomplices of illegal mining and associated criminal activities.

> When you look at the campaigns for prior consultation in the Loma Larga case, in El Girón, in Azuay, there is a whole movement interested in paralyzing the projects. This is financed by the people behind illegal mining. A vein of gold is like looking for a needle in a haystack. But when you already know where the project is, when you already have an 'X' on the map, that's candy for them. (former Vice Minister of Mines, 2019).

Another element of this strategy focuses on delegitimizing citizen participation tools such as popular consultations, but also prior consultation and environmental consultation.

> This environmental consultation is not a referendum, they are not asking the community if they want or don't want, if they allow or don't allow. What they are asking the community is 'what doubts do you have about the development of this project, come and tell us your concerns, your doubts, and let's finally resolve them together'. It is the Ministry of the Environment, in other words, it is the Ecuadorian state that decides." (Cámara de Minería de Ecuador, 2024).

The primary argument put forth is that local popular consultations cannot be held on matters that fall under the purview of the national government. This argument lacks a legal basis, as neither the Constitution of the Republic nor secondary legislation explicitly states this point. The position of the Chamber of Mines, as illustrated in the above paragraph represents an instrumental interpretation of a legal safeguard that seeks to protect the rights of indigenous peoples from the abuse of power by the extractivist state-company alliance. This interpretation

is also recognized by the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and other international bodies and legislation.

In addition, there is a tendency to minimise and/or deny environmental risks as a means of decoupling the components of the human-environment system in order to justify large-scale mining operations.

> "They have unfoundedly introduced the idea that we have to choose between gold and water, between mining and environmental conservation. That is not necessary in responsible mining. It is not necessary to choose. You can have one and the other". (Chamber of Mines of Ecuador, 2023)
>
> "I'm speaking for Ecuador; one of the undeniable realities is that the vast majority of our rivers are contaminated, and they are contaminated not by responsible mining actions, but by illegal mining." (Chamber of Mines of Ecuador, 2024)

However, it has been well documented that the technologies used to exploit deposits are inherently risky and can lead to contamination and environmental damage, despite efforts to minimize this risk, even in the most industrialized and "sophisticated" type of mining, as is the case in some Global North countries (Palmer et al., 2010). As evidenced by the case of Rio Blanco mining, this activity requires significant quantities of water and frequently contaminates watersheds with heavy metals and chemicals. Acid drainage and other forms of contamination are well-documented effects, and sometimes begin after the company has left and the mine has closed.

Part 2. Portugal's transition to a low-carbon economy: the establishment of a new commodity/resource frontier

A Brief History of Lithium in Portugal

The history of lithium in Portugal can be traced back to the 1990s, when the National Geological Survey began to prioritize inventory and mining research activities and the technological characterization of lithium mineral deposits.

In the initial phase, up until 2000, there was a process of compilation and publication of internal prospecting and research projects. The results of these projects would contribute to the

knowledge and valuation of this resource at the level of the national market. At that time, the use of lithium minerals was destined for the ceramics and glass market. These investigations sought to demonstrate the importance of focusing the national lithium strategy towards the production of concentrates, given their full exploitation potential, which has become increasingly relevant over the years.

In the early 2010s, Portugal faced economic challenges, including budget deficits and balance of payments (BOP) issues, as well as a growing public debt. In 2011, the country received emergency loans amounting to €78 billion in international financing from the EU and the International Monetary Fund (IMF). Of this total, €28 billion was provided by the latter. In accordance with Dorn (2021), public administration reform was accompanied by austerity measures and structural reforms, which included the privatization of enterprises and a transformation of the economy towards export-led growth. In order to facilitate the work of the private sector, including the mining sector, several measures were introduced. The European Commission (2014, p. 65) recommended that the costs and time required to obtain construction permits and licenses for mining and geological exploration be significantly reduced. In accordance with the Commission's recommendations, this also included the simplification of the legal and bureaucratic procedures for mining and geological investments (p. 84). According to Dorn (2021), mining then turns into one of the paths for national recovery.

In 2015 Portugal's government made a shift in its political direction from Center Right (Partido Popular/Partido Social Democrata) to Center Left (Partido Socialista) in a parliamentary agreement with other left-wing parties. In 2016 the newly installed Portuguese government, through the Secretariat of State for Energy, established the 'Working Group on Lithium' (Grupo de Trabalho 'Lítio') with the objective of addressing requests for the allocation of prospecting and research and exploration rights for lithium mineral deposits, in response to the growing global demand for this material and its potential use in batteries for the automotive industry (Grupo de Trabalho «Lítio», 2016). Two years later, the government approved new strategic guidelines for the valorization of lithium mineral potential in Portugal through *Resolution 11/2018* of the Council of Ministers. This aligns with the directives of the European Commission, which in May 2018 released the *Strategic Action Plan for Batteries*. This document places significant emphasis on ensuring the supply chain of raw materials, with a particular focus on lithium. In this sense, Portugal is beginning to be identified as a key player

given its potential in lithium mining. The strategic guidelines promoted by the State were specifically designed to facilitate the advancement of public tenders for activities related to prospecting, research, and exploitation. Additionally, the feasibility of two technological units was assessed: one dedicated to the industrial processing of the raw material, and the other focused on the development of technologies throughout the lithium value chain.

The European Union (EU) was keen to establish a European battery industry to tap into the electric vehicle market whose centerpiece for manufacturing is lithium. The European Battery Alliance (EBA), founded in 2017 and supported by the European Commission and the European Investment Bank, aimed to establish a national battery cell value chain. Alongside this objective are the desires of resource self-sufficiency and decreasing the percentage of import dependency. The European Raw Materials Alliance (ERMA) was established in September 2020 as part of the EBA's strategic action plan, following the 2008 EU Raw Materials Initiative. Lithium was added to the 2020 Critical Raw Materials List in the same month.

The majority of the world's lithium is found in brines in closed basins, with the Atacama salt flat in northern Chile representing a significant source. Riofrancos (2023) explains that hard rock formations, such as spodumene deposits, also contribute to the global lithium supply. Spodumene is not a particularly abundant mineral, but an estimated 14 million tons were discovered in the Boticas district in the municipality of Vila Real in northern Portugal. Thus, the resource deposits in northern Portugal are now of particular relevance to the EBA. Although the Portuguese rock deposits do not have the economic advantages of brine extraction, which costs approximately half as much, they should nevertheless be considered a strategic and geopolitical project in the context of the EBA, with the objective of ensuring national (and in this case EU-wide) resource sovereignty. Under these circumstances, Portugal may play a significant role in the developing European lithium value chain and, consequently, in driving the shift to clean energy, as outlined in the European Green Deal narrative (Marmé, 2019).

Portugal is currently the leading producer of lithium in the European Union and has the largest known reserves in Western Europe, ranking 8th in the world (National Minerals Information Center, 2024). However, the lithium mining industry in Portugal is still in a nascent phase. Currently, the metal is mined in association with quartz and feldspar and is still used in the ceramics industry. In light of this new race for the 'white gold', the Portuguese government is

seeking to position the country at the forefront of global lithium extraction, with the objective of attracting foreign investment to facilitate the establishment of all five stages of the lithium value chain within Portuguese territory. These include extraction, refining, transformation into cells, battery manufacturing, and recycling and reuse of batteries.

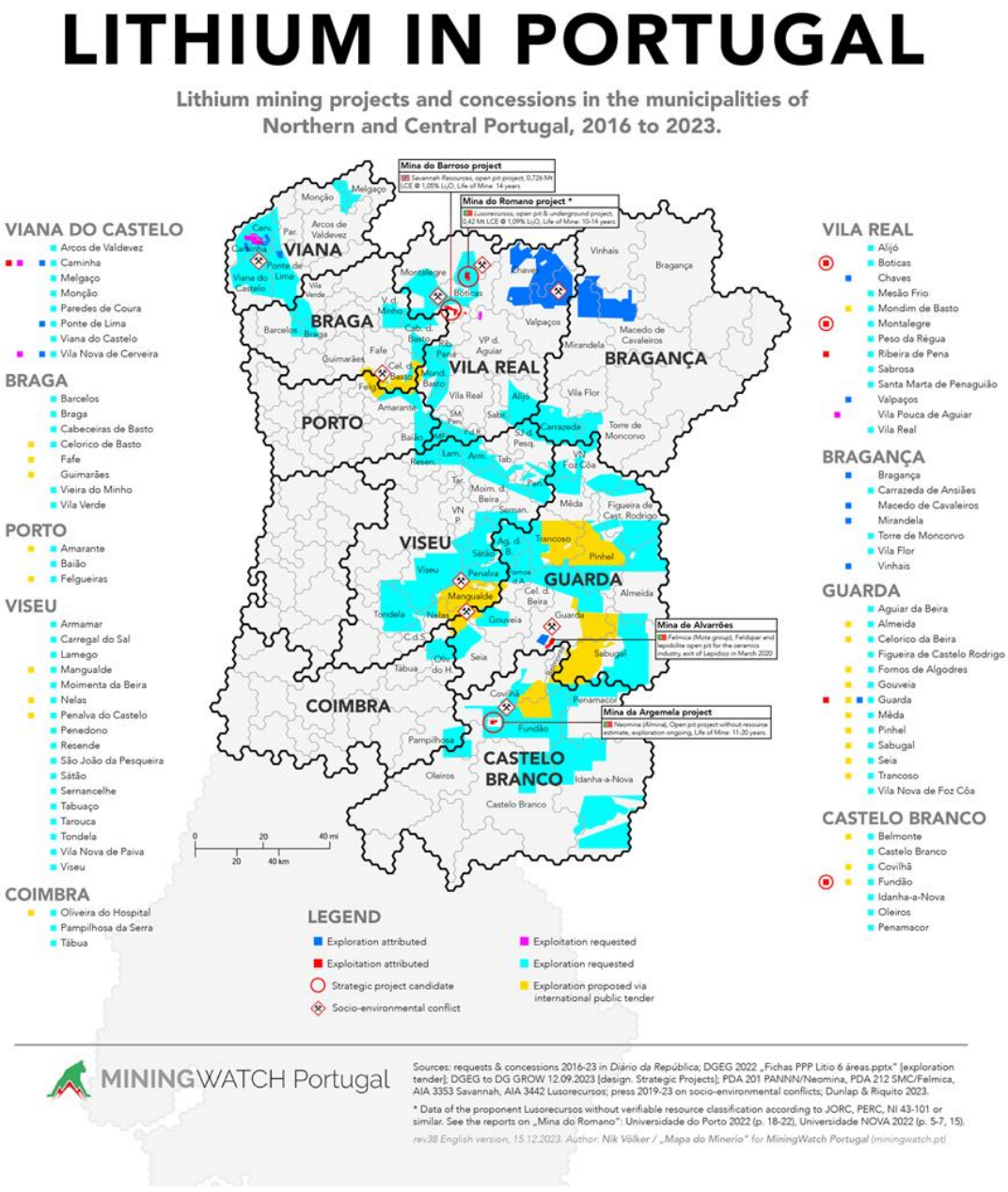
A study conducted by Quercus – National Association for the Conservation of Nature (2019) revealed that, based on a compilation of all applications for the concession of prospecting and research rights for mineral deposits that were made between 2016 and 2019: A total of 93 applications for the concession of prospecting and research rights for mineral deposits were submitted, corresponding to an area of 17,797.92 km², which represents 19.3% of Portugal's territorial area. The most requested minerals were gold and lithium. In 2016 alone, 22 applications for lithium prospecting were registered. Among its conclusions, the study highlights that there is a clear "race" to exploit lithium.

The Directorate General of Energy and Geology (DGEG) has reported that the total area covered by lithium exploration contracts in Portugal is 2,615 ha, while the area covered by lithium prospection contracts is approximately 25,000 ha. In 2022, the government conducted a strategic environmental assessment of the lithium prospecting and research programme (Lithium PPP), which considered eight potential areas and authorized six projects for research and prospecting. SEIXOSO-VIEIROS; MASSUEIME; BLOCO GUARDA-MANGUALDE, BLOCOS N and S; BLOCO GUARDA-MANGUALDE E; BLOCO GUARDA-MANGUALDE W; BLOCO GUARDA-MANGUALDE, BLOCOS N and W. (Direção Geral de Energia e Geologia, 2022). This results in a total area of approximately 1,500 km². It is pertinent to note that the Minas do Barroso, Romano, and Argamela projects were excluded from the international tender and the Strategic Environmental Assessment, as they already have concession contracts. Up to the time of data collection for the present study, it was found that there are a total of 16 projects related to lithium extraction (Direção Geral de Energia e Geologia, 2024).

The Minas de Barroso and Romano projects, which will be covered in this study, are situated in the Barroso region of Northern Portugal and account for around 56% of the number of contracts for the extraction of lithium. These two projects have a 1367.523 h extension.

Figure #, created by the independent mining watch network MiningWatch Portugal, provides data on the state of concessions and mining projects in Northern Portugal between 2016 and 2023.

Figure 2. Lithium mining projects in Portugal



Source. MiningWatch Portugal

Lithium mining and the energy transition

While favourable conditions were being created to accelerate the processes for lithium mining, and the interest of both mining and manufacturing companies was growing, in 2019 the 2050 Carbon Neutrality Roadmap for Portugal (RNC2050): LONG-TERM STRATEGY FOR CARBON NEUTRALITY OF THE PORTUGUESE ECONOMY BY 2050 was issued. This document would serve as the central piece that would allow the creation and stabilization of the socio-technical imaginaries on which the State's narrative is based to carry out its national decarbonization strategy.

The European Climate Act enshrines in the legislation the goals of the European Green Deal, which sets out the objective of Europe reaching climate neutrality by 2050. This entails attaining zero net greenhouse gas emissions, which can be accomplished through the "reduction of emissions, the investment in green technologies, and the protection of the environment". To achieve this goal, EU member states are encouraged to design and implement comprehensive plans that reflect the strategies that the country will implement to ensure compliance. In this context, the Portuguese Ministry of the Environment and Energy Transition developed the RCN2050.

As Carvalho et al., (2022) note, this document allows us to identify several imaginaries of energy transition in Portugal. However, in practice, many of these imaginaries are in conflict because they are often opposed to each other. The output of the RNC2050 is a definition of the possible trajectories of the actors involved, with the objective of delineating technologically feasible and economically viable pathways to achieve carbon neutrality by 2050. It can be agreed with the authors that the RNC2050 can be considered a boundary object (Star, 1989) due to its capacity to represent different interests, to change its meaning according to how it is used, but to always maintain a common identity and provide coherence while at the same time naturalizing itself in the narratives of the actors. Furthermore, it is possible to identify another quality of the RNC2050, namely its normative agency. In this context, the boundary object could be considered to possess the characteristics of a Mandatory Passage Point, as defined by Callon (1984). The RNC2050 not only fulfills the task of establishing the recognition of a common structure, but it will also stabilize the identities of the other actors, i.e., establish which agencies and trajectories will be central and, to use Callon's terminology, which will succeed

in the translation process and which will be silenced. The entities (and their agencies) that become spokespersons for others are those that facilitate the vision of development linked to the decarbonization process and the energy transition as a “socially fair and efficient transition in terms of costs, strengthening the competitiveness of the national economy, promoting job creation, and enhancing co-benefits associated in particular with air quality and human health.” (RNC2025, 2019, p. 8). However, it is important to note that decarbonization would not be the only normative agency defining the trajectory of actors. It is equally important to consider the role of green industrial policy, which could be used to increase geo-economic dominance through control of the supply chain. As Riofrancos (2023) notes, the nexus between “supply chain security” and “sustainable sourcing” are two imperatives that are necessary to achieve these two goals.

RNC2050 (Português, 2018, p. 8) presents a vision of the principal future trends and economic and social transformations that are necessary for the decarbonization of the global economy. These transformations are set out as principles for action that apply to all sectors of the economy and society: (1) The transition to a competitive, circular, resilient and carbon neutral economy; (2) Decarbonization vectors and lines of action; (3) Resilience and climate change adaptation; (4) Research and innovation; (5) Financing conditions; (6) Fair and cohesive transition; (7) Effective conditions for governance and integration of carbon neutrality objectives in all sectors; (8) Engage society, focus on education, information and awareness, increasing individual and collective action (RNC2050, 2019). Once the principles for action have been established, the trajectories of GHG emissions are then detailed, covering all economic sectors. The industrial sector is the most challenging to reduce its emissions, given that 62% of them are associated with the burning of fossil fuels in industrial processes. The following activities and processes are included in this area of the economy: iron and steel, solvents, food, drinks and others, electrical and electronic equipment and pharmaceuticals, chemical, mineral industry (cement, lime, glass, ceramics), pulp and paper (Português, 2018, p. 39). Nevertheless, neither lithium mining nor lithium as a raw material are included within this category of economic activities, despite their pivotal role in the battery supply chain and thus in the extractive materiality of the energy transition.

On the other hand, the National Energy Plan and Climate 2021-2030 (NECP 2030), which was created after the RNC2050 as the most grounded strategy for the national territory and which defines more specifically the guidelines for state and private institutions to achieve the objectives set out in the latter, mentions lithium as a raw material on exactly two occasions. First, to refer to the Strategic guidelines on the exploitation of the potential of lithium minerals in Portugal, approved by Council Regulation No 11/2018 of 31 January 2008, and second, to refer to action measures for Deepening industry-sustainability pull mechanisms:

> "This measure aims to deepen the mechanisms for attracting new productive investment for sustainability, focusing on suppliers of goods and equipment needed to ensure the climate and energy transition and taking advantage of Portugal's comparative advantages in terms of access to low-cost electricity and green hydrogen, and Europe's most extensive lithium reserves, taking advantage of the conditions in Portugal for its operation to develop with a lower environmental footprint. Highlights in this context a focus on the green steel industry, the production of electric and zero-emission vehicles in the battery and hydrogen value chain." (NECP, 2023, p. 95)

This paragraph presents one of the key issues in understanding the kind of transition imaginaries that are enacted through the European climate agenda and embedded by the narrative of the Portuguese state, since it highlights what they call a 'competitive advantage of Portugal' in the access of the raw material lithium for the value chain of electric vehicles.

The imperative need to exploit Portugal's "comparative advantages" is framed in a critical situation that the European Union is facing, as European battery production struggles with an imminent global shortage of key raw materials. Politicians and manufacturers are concerned about supply despite the relative geological abundance. Variation in deposit quality is one explanation (Munk et al., 2016), but also legal frameworks regulating the profitability of lithium and the time between discovery and production may also lag supply compared to demand. Furthermore, China maintains a dominant position in the global battery supply chain, accounting for 50-60% of global lithium consumption over the past five years and 80% of global lithium refining capacity (BNEF, 2020). Additionally, China is home to the sixth largest lithium reserves globally.

Despite policy initiatives dating back to 2008, the EU battery value chain remains heavily dependent on supplies from outside the EU, according to the European Court of Auditors (2023). It is now widely acknowledged that, from 2030 onwards, raw material shortages will affect the business of battery manufacturers. This institutions claim that “this is due to the combined effects of an increase in global demand, mainly driven by the electrification of road transport, and the limitations of the EU's domestic raw material supply, which is characterized by scarcity and rigidity” (European Court of Auditors, 2023, p. 5). According to European Commission estimates in *Critical Raw Materials for Strategic Technologies and Sectors in the EU: A Foresight Study*, the EU civil industry requires up to 30% of the batteries produced globally. This underscores the necessity to enhance cell production capacity within the EU in order to diminish reliance on the Asian market, particularly China. Although the civil market analysis reveals that the quantities required in the EU cannot be met in the coming years, even when the capacities of Asian and European battery manufacturers are combined.

The European Union Regulation on Fundamental or Critical Raw Materials (EU) 2024/1252 has recently been made public. This regulation is designed to guarantee the sustainable supply of so-called critical raw materials and to significantly reduce the EU's dependence on imports supplied by a single country. In order to reduce dependence on third countries for access to critical raw materials, the EU has set the following targets for 2030:

- Extraction in the EU: at least 10% of annual EU consumption is extracted in the EU
- Processed in the EU: at least 40% of annual EU consumption is processed in the EU
- Recycling in the EU: at least 25% of annual EU consumption comes from internal recycling
- External sources: no more than 65% of the Union's annual consumption of each strategic raw material at any relevant processing stage comes from a single third country.

In 2023, the Commission intensified its efforts to address this situation by publishing its proposal for a Critical Raw Materials Law, which further reinforces the legislation. As Riofrancos (2023) points out, the US and EU governments have included lithium on their lists of ‘critical minerals’ due to the potential for shortages and its importance in the energy

transition. However, the term ‘criticality’ is not a permanent condition; rather, it arises as a result of a number of interrelated factors coming together. These include the finding of deposits, the creation of advance technologies for extraction, the government's encouragement of electric vehicles, and the evolution of battery chemistry and recyclability. Under this political economy framework, where lithium has been designated as a "critical mineral" for the transition to renewable energies, the governments of the Global North, in this case the European Union, which have historically outsourced mining to countries in the Global South, have today initiated a process of "offshoring" lithium at an unprecedented pace in order to improve the security of their supply chain.

In this context, the Portuguese government has categorically accepted the extraction of lithium within its territory. In May 2021, the Portuguese government approved Decree-Law No. 30/2021, also known as the Mining Law. This established a new legal framework for the activities of revelation and exploitation of geological resources in Portugal. The law framed its public policy objectives around the European Union's need for a European energy transition. The aforementioned decree-law stipulates that:

> The importance of these resources for the country, specifically those consisting of mineral deposits, justifies that their management be based on a national strategy that ensures that the extractive sector is developed in a competitive manner, with the highest possible economic return for the country, in line with the planning of raw material supply needs and, at the same time, in conjunction with other public policies, namely those promoting energy transition, and with national strategic instruments particularly relevant for sustainable development, such as the National Energy and Climate Plan and the Carbon Neutrality Roadmap.... In the same context, this activity also represents a very important vector for realizing the public policy objectives of the energy transition... (PRESIDÊNCIA DO CONSELHO DE MINISTROS, 2021)

Portuguese State Narrative

Once the state narrative establishes a clear relationship between lithium mining and energy transition, the socio-technical imaginaries that accompany the latter are deployed to highlight the positive aspects of the extractive activity.

The government-driven imaginary stresses that the energy transition is a driver for Portugal's modernization and techno-economic progress, which would help it to consolidate a stronger economic and geopolitical leadership in the region. It assumes as a moral responsibility that its economic policy decisions will allow it to converge, on the one hand, with the Paris Agreement, but also with the extraction volumes defined by the European Union.

> "In Portugal, besides lithium, we have copper and felspar, and it is imperative that we continue investing in the recognition of our minerals and our capacity to contributing to the security of raw materials in Europe" (State Secretary of Energy, 2024).

Carvalho et al. (2022, p. 2417) point out that according to this imaginary, "the energy transition is an opportunity to modernize Portugal", generating positive effects at the level of socio-economic spheres, which could make Portugal a "disruptive force" capable of reversing the disparities between the North and the South of the EU. In this sense, mining stands as an enabler of this imaginary and is therefore seen as an 'opportunity' rather than a mere requirement of the EU's energy and climate frameworks. The state asserts that the country will reap numerous socio-economic benefits by facilitating the infrastructural, social, and economic conditions that will enable the implementation of a socio-technical onshore lithium mining regime.

In order to achieve this, it is necessary to develop a robust state narrative and to ensure the stability of governance in the territories where extraction takes place. The role of the state in the Global North is beginning to exhibit parallels with that played by South American states during the neo-extractivist era of governance. Under this paradigm, state power is deployed to encourage and legitimize extraction, echoing a vision of economic progress framed by a developmentalist narrative.

However, resource governance is not only nationalist, but supra-nationalist. The ambition to dominate the supply chain is in turn backed by the EU, which subsidies and de-risks extractive projects to ensure profitability. Examples of this are the aforementioned EBA and ERMA, which, under a multilateral approach, channel public funds to private entities to build the battery supply chain, including the extraction and processing of raw materials. With a leading role for private companies, more than USD 1 billion has been allocated from the Horizon Europe R&D fund. Savannah Resources, the owner of the Barroso Lithium Project, Portugal's largest lithium

project, is part of three separate Horizon Europe research initiatives, all funded by the European Commission.

The expectations of the state at the supranational level, which are in alignment with those of mining companies, can be broadly defined as ensuring the facilitation of lithium exploration. This can be achieved through the provision of legal security, social legitimacy of mining projects, and agility in processes. The relevant state institutions, such as the Ministry of Environment, the Ministry of Energy, are responsible for issuing environmental and social permits for prospecting and exploitation, as well as subsidies for extraction (including energy, water, and transport infrastructure). Although the state has incorporated mining as a fundamental element for electric mobility into its national development discourse, it has not been able to achieve social legitimacy, especially from the communities whose territories will be affected by the implementation of lithium mining. This is despite the fact the state effort has been translated to a greater or lesser extent in its plans, public policies and legislation, and under the urgency of the Critical Raw Material Act, enacted to streamline bureaucratic procedures for mining companies.

A range of ideas and sentiments in support of extractive activities is on display, along with the institutions and resources of power that serve to accept, support, and legitimize them. The state employs a variety of rhetorical techniques, including the use of factual evidence, such as the investment numbers outlined above, as well as the incorporation of symbolic representations with emotional content. These techniques are employed with the intention of controlling the images and interpretations of the problematics (Gudynas, 2019). The structure of the narratives from the state is based on arguments where fields such as economics, environmental science, and engineering are overlapped, through which it is possible to articulate solutions from a figure of epistemic authority. In the narrative structure, a conglomeration of assumptions is articulated, wherein political beliefs, moral premises, and social expectations are mixed. These are established as normative and causal, since they originate from an actor with the capability of representing other actors, such as the state. Consequently, they are exhibited as objective truths. As in other cases of neo-extractivist governance, the state establishes alliances with private companies, delegating to them a more prominent role: to frame and discursively reinforce the problems, as well as justify the means necessary to achieve certain solutions.

Consequently, a multitude of additional issues and potential solutions are excluded from the scope of the mining state-business alliance's epistemic framework. These exclusions are put into question by the communities in the municipalities of Boticas and Montalegre, who contest the narrative of the state and the mining companies by exposing their inconsistencies.

The dispute over information

On 29 April 2024, a conference entitled ‘Informed Conversations on Lithium in Portugal’ was held in the Portuguese capital, organized by the Engineers’ Order (Ordem dos Engenheiros). The conference brought together representatives from various lithium mining projects in the country, as well as the Energy Secretary of State. The description of the event states that "lithium is a strategic and indispensable raw material for the double transition, not only for the decarbonization of the European energy system, but also (taking into account the potential reserves existing in Portugal and in the European Union) for the geostrategic autonomy of the EU itself." It is pertinent to cite a quote from the state representative's speech, in which she references local opposition to mining.

> "...it's difficult for the average person to understand that an everyday object such as a cell phone or an electric car, for example, has an environmental footprint and so I think this NIMBY (Not in my backyard) effect has a lot to do with this lack of information about what the value chain actually is. But it's inevitable, raw materials are part of our society and economy and we can't, and there's no alternative, we can't envision a society that's different from what we have today." (State Secretary of Energy, 2024).

The CEO of Aurora Lithium also identifies the ‘Not In My Backyard’ (NIMBY) effect as a significant barrier to the implementation of mining projects, which, in turn, hinders the objective of extracting the raw materials essential for the production of electric vehicle batteries.

The term NIMBY is employed to describe the stance of communities who are protesting against mining projects localized within their region. As Burningham et al. (2015) observe, this label is generally imposed from outside the community and carries a strong pejorative connotation. These communities are depicted as irrational, ignorant, selfish, and obstructionist, while policymakers and project developers are portrayed as experts, informed, rational, and altruistic.

The conference reaffirms the legitimacy of the discourse of specific actors, who, through their social and symbolic capital, will determine what information is or is not valid and under what concepts the discourses on development and ‘general interest’ will be constructed. As Palma-Oliveira (2000) notes, to accuse a group or community of exhibiting the NIMBY effect for resisting the implementation of a project decided by an external power, whether private or public, is to ignore the profound variables that come into play in these situations. Furthermore, it triggers a hierarchical structuring of knowledge that, in practice, results in the marginalization, erasure, or distortion of alternative visions. Consequently, the delegitimization of the community perspective would perpetuate the biased assumption that communities are incapable of making informed decisions due to a lack of ‘valid’ information.

Nevertheless, the communities of Boticas and Montalegre have shown the high degree of information they have about the projects and the repercussions that lithium mining will have on environmental and social aspects that the promoters are unaware of or do not publicly disclose. The local communities have provided new relevant data that has demystified the belief held by the state and the companies about their supposed ignorance.

The Municipal Chamber of Montalegre has requested an interdisciplinary team, composed of academics from FCT NOVA (Joanaz de Melo et al., 2022) including external collaborators, to review the “Environmental Impact Study of the Exploration Concession of Lithium Mining Deposits and associated mines – Romano”, prepared by Agri-Pro Ambiente Consultores, S.A. for the company Lusorecursos Portugal Lithium S.A. This was in public consultation since February 2022. The following is a summary of the most relevant findings in the study:

- Mine VS Refinery - Lack of solid reasoning for the location of the refinery and its dimension (refinery capacity greatly exceeds mine's output).
- Lithium deposit - Value of resources not correctly proven/justified, with both technical flaws being recognized and no explanation for the apparent "doubling" of potential resources.
- Impacts of facilities and operations - Major flaws in water, energy and waste balance maps, as well as lack of clarity regarding the industrial processes that are proposed.

- Energy and water optimization - Incomplete energy and water usage analysis, no explanation for the necessity of accessing specific water sources, lack of information regarding both mining and refinery waste flux
- Socio-Economic impact - Simplistic and poor analysis, socio-economic impact of project greatly undervalued, the premise of how the project supports the local sustainable development is not well- founded.
- Water and soil impact - insufficient analysis of impacts of both surface and underground water, as well as the different types of affected soils, namely regarding the possibility of accidental contamination.
- Ecosystem Impact - Even though the information shared allows to guarantee significant ecological impacts, especially on Iberian Wolf, the study analysis is insufficient, and concluded with an undervaluing of the damage that the project would bring.

Secondly, the Covas do Barroso Parish Council (Junta de Freguesia) filed a lawsuit against the Mina do Barroso Project, specifically with regard to the Environmental Impact Assessment (EIA), before the Public Ministry. This entity was pronounced in February 2024, and among its considerations, it states that the Conditional Favorable EIA, granted to Savannah Resources, “is illegal and suffers from several invalidities," accepting the arguments and facts for which the population of the Parish Council and its lawyers have been fighting for. In the case in question, the Public Ministry alleges various irregularities in the administrative act embodied in the EIA, which should lead to its annulment.

In the case in question, the Public Ministry invokes several irregularities in the administrative act embodied in the EIA, which should lead to its annulment. One of the main aspects highlighted is the fact that the expansion of mining activity in the region puts the Barroso Agro-Silvo-Pastoral System at risk and, consequently, leading to its declassification as GIAHS (Important System of World Agricultural Heritage), which violates the international commitments that the Portuguese State assumed with the FAO (Food and Agriculture Organization of the United Nations) to protect, support, and increase the quality of life in the Barroso region, as well as the commitments with local governments. In the same sense, it also

violates the Common Agricultural Policy (CAP) of the European Union and the CAP Strategic Plan 2023-2027 (PEPAC) for Portugal, and clashes with the objectives of the Community funding of the SIPAM program and the financial support investments of the "Baldio do Barroso". According to the Public Ministry, the Favourable Conditional EIA also violates paragraph 1 of Article 17 of Decree-Law 30/2021, of May 7, since it does not allow the development and exploitation of mineral resources in the SIPAM territory, which was considered in previous Strategic Environmental Assessments (SEA), but was not taken into account by the EIA carried out by the company Savannah Resources.

Considering that, by presenting the project as an alteration (expansion) of the existing project at the Barroso mine, the company is distorting the assessment of negative impacts, the Public Ministry argues that it is "a set of new subprojects, which were not analyzed by the EIS, and whose effect, intensity and complexity go far beyond the area to be expanded, which is the area of immediate environmental affectation."

It also highlights that the EIA not only doesn't make a correct assessment of the management of mining waste, but also violates the applicable regime, by stating that it isn't possible to make environmentally feasible the filling of waste dumps with mining waste, since mining waste is classified as hazardous waste and must be subject to the Industrial Emissions Regime for hazardous waste facilities. The Public Ministry's document also stresses that the EIA procedure does not include the environmental impact of the demolition of the new dams that are intended to be built, the environmental impact of the contamination of the water environment (Covas River and groundwater) due to the filling of voids and unsealed waste dumps with mining waste that are hazardous, the risk of accidents and catastrophes posed by these structures, nor the environmental impact of the construction of a new access road outside the mine. It also points out that the EIA does not consider the real impact of the project cumulatively with the Romano Mine, in the municipality of Montalegre, given the proximity and size of both projects.

Another aspect highlighted by the Public Ministry is the fact that the company accepts that China could be the destination of the mineral, which does not solve the problem of external dependence on the supply of lithium from the European Union, adding that "half of the mineral in question is merely estimated, which reflects an uncertainty as to the real use, which was not taken into account by the EIA".

As for the effects on native fauna, the Public Ministry's brief mentions the probability of extinction of the Iberian wolf species, considered in danger of extinction and in an unfavourable conservation status in the area where the project is located, stressing that the planned compensatory minimization measures “are vague and lack demonstration of effectiveness.”. In addition, the EIA omits the substantiation regarding the climatic alterations factor. In other words, it is not made explicit how the mining activity will contribute in terms of emissions. Rather, it only speculates on the effects that the activity will have on “decarbonization”, from a more nominal than scientific judgment.

Finally, the Public Ministry invokes the violation of Annex V and Article 29 of Decree-Law 151-B/2013 of October 31, by lacking elements that would allow the public involved, who have the right to participate in the public consultation, to understand the project and express their opinions and concerns.

These are the main circumstances highlighted by the Public Ministry, which rule out the environmental viability of the project. For all these reasons and in general, this entity joins the position expressed by the Parish Council of Covas do Barroso in the aforementioned judicial process, reinforcing the fight that the population of Covas do Barroso has undertaken against what is the largest lithium prospecting project in Western Europe. The Mayor of Boticas, welcomed the position of the Public Ministry, highlighting that “it shows that the arguments of the population of the Municipality of Boticas and in particular of Covas do Barroso against the Mina do Barroso project are totally legitimate”, stressing that “the Public Ministry has added even more strength to the fight being waged against lithium mining”, among other things because, within the scope of its competencies, it has upheld the illegality of the mine project and has formulated a clear position in the process, supported by thousands of documents”.

As we can see, the epistemic authority of the state and companies is being contested by other stakeholders, including academia, in collaboration with some local governments. This contestation has led to the co-construction of a counter-narrative of the energy transition and the socio-environmental conflict that it is causing. The agency of the communities therefore also comes to consolidate itself as an epistemic authority capable of destabilizing the hegemonic narrative and directing the gaze towards the problems that directly affect them. The socio-environmental conflicts generated by green extractivism, such as lithium mining, are

multidimensional. These conflicts are distributive in economic, ecological, and cultural terms, and they shape systems of environmental injustice in the areas where mining projects are located (Martínez-Alier 2020).

> We were seen in a very negative light. But we didn't say, 'no', just because. We tried from the start to bring in the faculties to understand what was going on there, and before we took the position we have taken, which is known to everyone. We went and tried to listen to and take input from the faculties, from the University of Minho, the University of Coimbra, the New University of Lisbon, the University of Porto, Universal da Beira, the University of Tras os Montes and Alto Minho. Therefore, we were able to contact technicians from all these universities and understand what was at stake, and only after we understood what was at stake was when we took the decision that we would have to fight to the limit of our strength. So, we're not against the energy transition, we just want it to be done fairly. (President of the association "Montalegre Com Vida", 2024)

While elucidating Foucault's theories of power and knowledge, Robbins (2012, p. 70) points out that truth is a product of power, formed through language and serving to uphold social order by appearing natural or taken for granted. Through this case we can see how narratives—language, stories, images, and terminology—forms certain taken-for-granted conceptions of the world and how certain social practices and systems—academia, companies, the market, media—make them "true" or contradict them.

Therefore, the issue is not merely the lack of information, as the State asserts, but rather, in the context of the race for lithium, it has given rise to processes of generalized disinformation and the fabrication of a highly incomplete truth by the power entities. Under these constraints, it is becoming increasingly clear that ensuring the right to due process and free prior and informed consent is of paramount importance.

The communities of Boticas and Montalegre have highlighted the lack of transparency in terms of information and clear mechanisms for public consultation on mining projects from the outset. At the “Encontro Nacional de Justiça Climática” (National Climate Justice Summit - ENJC), attended by representatives of communities and civil society movements against lithium mining, it was repeatedly asserted that there are a series of procedural irregularities that call

into question the social legitimacy of mining projects. In particular, it has been observed that some contracts were signed without an environmental impact report of the projects in question, and that relevant aspects of the socio-environmental consequences of the projects have been omitted in those that have been carried out. Furthermore, public participation has been inadequate, nominal, and non-binding. Additionally, there has been a lack of transparency in the terms in which the concession areas of the land that became the property of the companies were negotiated. Finally, the central state has not responded in a timely manner to requests for communication from local governments and the community.

Trust is a pivotal factor in socio-environmental conflicts that arise from extractivist activities. When the local community distrusts the discourse, promises, and accountability of a company or the public authorities, resistance is likely to emerge. Nevertheless, this distrust has well-documented historical and sociological roots. There is the reproduction of asymmetrical relations between the affected local interests and the project owners against whom resistance arises. These findings corroborate the conclusions of the existing literature on mining resistance movements, which indicates that local communities mobilize in response not only to perceived environmental impacts, but also to the lack of representation and participation in decision-making about their development path (Lauda Rodriguez & Ribeiro, 2019). This evidence indicates that decision-making is conducted in a top-down manner, with a lack of transparency regarding the levels of socio-environmental impacts and the perceived benefits for the community.

Coupled human-environmental system of the Barroso region and the impacts of mining.

The inhabitants of the communities of Boticas and Montalegre have expressed their concern about the potential impacts of lithium mining on biodiversity, hydrological systems, socio-cultural and socio-economic structures. This concern has been expressed from the initial planting of the projects to the present day, where permits have already been granted for the exploitation phase.

The local economy is part of a traditional knowledge system that has been adapted to the needs of humans within the biophysical environment. The local economy is primarily based on small-scale agriculture, livestock (cattle, sheep, and goats), forestry, beekeeping, and tourism. The agrarian-silvo-pastoral system is organized through a complex model of communal land and

water management (Fontes, 2021). Local communities own and manage communal land, which is a form of collective property. Communitarianism, which is strongly related to rural practices of communal living and the necessity of environment adaptation, is one of the most characteristic Barroso values and customs.One example of this type of rural organization can be found in the practice of livestock grazing, which is carried out on a shared basis. The various animal owners engage in these practices in accordance with a set of rules that vary from one village to another. Furthermore, the villagers have developed a system of irrigation, whereby water is sourced from the hills. By using a small dam or reservoir, the concentrated water in the watercourses is redirected into small channels along the hillside while maintaining the contour lines. From there, it drains into the pastures and ends up in another ravine that is situated at a lower altitude. The water that does not infiltrate is returned to the watercourse from which it was originally collected. A distinctive feature of the Barroso area is the persistent existence of a regional food system, which relies on locally produced goods and customary recipes.

The majority of crops are cultivated using rainfall as the sole source of irrigation, with rye and potatoes representing the most significant crops, which are grown in rotation with set-aside. A belt of irrigated crops is maintained in closer proximity to the population and their residences, followed by permanent pastures for hay production and livestock grazing. Rainfed cereal fields and scrub wastelands (which are generally communal lands) are situated at a considerable distance from the populations, where animals graze ((FAO, 2024)

Culturally speaking, the people who live in Barroso have created and preserved systems of social structure, customs, and language that set them apart from most other people in the nation in terms of customs, language, and shared values. This results from a combination of remoteness and geographic conditions, as well as scarce natural resources. As a result, they have developed sustainable economic activities in accordance with the cycles of the land and animals to ensure their coexistence within the ecosystem.

Given the importance of land management, one of the most prevalent concerns has been the appropriation of land by mining companies. The companies' practice of concealing the way in which land is measured, acquired and registered has been denounced. This is particularly evident in the case of common lands where grazing takes place. Villagers allege that community

lands are not only being appropriated, but usurped. This has the effect of disrupting the community land use system.

Mining companies are requesting access to land under the "public utility" concept of lithium extraction. If the State grants this request, the imminent threat of land expropriation will result in the dispossession of communal lands, which will profoundly affect pastoral and forest management practices.

The local economy is safeguarded by the recognition of the agro-silvo-pastoral system of the Barroso region as part of the FAO's typified Agricultural Heritage systems. However, the viability of these modus vivendi is in contradiction with the economic model proposed by the mining companies. Savannah Resources has asserted that the mine will employ more than 200 individuals within the community, and has claimed that these jobs will enhance the value of the community (Savannah, 2024). In contrast, the villagers do not perceive these economic activities as a form of development compatible with their livelihoods.

> The jobs that are promised are false, we know perfectly well that things don't work that way, that the jobs are not the way they claim... No one will stop doing what they do, what they enjoy, to go to work in a mine. For example, I'm a farmer, I will not stop working in agriculture to go work for the mine, because if I dedicate myself to the mine, I abandon agriculture and I will work for the mine, and at the end of 12 years I will go back to agriculture when the land is already destroyed, when everything is already destroyed. (Representative of the Association in Defense of Covas do Barroso, 2024)

The communities have denounced the lack of State investment in local development projects. Historical neglect has led to a lack of opportunities and a deterioration in the living conditions of the people of the interior, and this has exacerbated depopulation processes in the area and internal migration. Companies and the State have taken advantage of these conditions to feed the narrative of mining as an opportunity for economic growth for the region, and as the only possible vision of development.

> The region is classified by the way of life that people have, which is agriculture, tourism and beekeeping. In our opinion, that's the way for the region to develop, that's where we have to go, and not through mining that destroys those kinds of jobs and destroys the

> landscape, which destroys practically everything, because that's not the way we want the Barroso region to develop. (Representative of the Association in Defense of Covas do Barroso, 2024)

In this context, the communities perceive that the State is prioritizing lithium mining over other non-extractivist economic activities, with the criteria being the value that can be extracted from nature. In order to justify this utilitarian vision of nature, the authorities have sought to decouple the complexities of the human-environmental system, both discursively and materially. A process of translation is occurring whereby the system is being transformed into a sum of components that operate in isolation. In this manner, nature is translated into the quantity of raw materials to be extracted, while local economies are valued in terms of their capacity to facilitate capital accumulation.

The lack of legitimacy of the narrative promoted by the state and the companies, which increases community distrust, is related to the progressive imposition of a model that is detrimental to the local socio-environmental system. The extractivist instrumental model, generated from the power instances, transforms nature into commodities and produces simplified realities by subordinating socio-ecological concerns to the imperatives of the market. This results in conflicts between different ways of life based on differing relationships with the natural environment, with each seeking to prevail. This allows us to understand how the Barroso region is undergoing a process of incorporation into the dynamics of extractivist expansion, which is increasing the “commodity frontiers” and erasing (material and discursively) the components of the system, whether economic, cultural or biophysical, that are necessary to justify its “sacrifice”.

"Barroso is a World Agricultural Heritage Site because it is precisely a region that over the centuries, through its people, has maintained its biodiverse heritage, has maintained complex ecologies, and contributes greatly to the stability of the biosphere and to climate stability." (Participant's intervention at the ENJC)

DISCUSSION

This chapter is organized through thematic blocks, where the experiences of the cases studied are put in dialogue and contrasted to show their similarities and differences.

Discussion on the development narrative and socio-environmental conflicts

As previously discussed, the cases of Ecuador and Portugal illustrate the complexity of coupled human-environmental systems, in which the social reproduction of human communities is intricately connected to the territory as well as to the biophysical environment.

The Barroso community is an example of how humans have adapted to coexist with the environment in a harmonious manner. The agro-silvo-pastoral system of Barroso is distinguished by landscapes that have been modified by humans in accordance with a distinctive cultural identity that has influenced the trajectory of local development over generations. This way of living was constructed through a close and mutually beneficial relationship with the natural environment, which has resulted in the sustainable use of resources and high levels of biodiversity and environmental quality. Similarly, in the rural communities of Rio Blanco and Quimsacocha, the populations propose economic models based on what one could consider alternative models of development that diverge from the state-centric developmentalism that has dominated the region in recent decades. These alternative models have a historical basis that precedes the colonial era, as evidenced by traditional practices such as the *minga*[3], craftsmanship, self-sufficient agriculture, and animal care. These differential notions of development are primarily based on a change in the vision of nature and the relationship between humans and non-humans. Rather than viewing these entities as mere "natural resources," they are regarded as intrinsic components of life.

Some representatives of the Barroso community have proposed the State to foster ancestral knowledge with the aim of safeguarding the heritage. This proposal is not solely motivated by a conservationist perspective; rather, it is driven by the desire to strengthen the resilience of the system through the boost of techno-social innovation. This resilience is necessary to prevent the non-extractivist modes of economy from becoming unviable. Therefore, when discussing

[3]Minga is a word in the indigenous Kichwa language, which refers to the collective work for the general welfare of the group

the concept of development and the imaginary of transition, the inhabitants of Barroso don't envision a development solely economic-growth oriented, but rather a transition towards a coherent and sustainable development in accordance with their ways of living. This implies that the notion of transition, as well as that of development and sustainability, are socially and collectively constructed. Bebbington (2013) emphasizes the constructivist component of these concepts to show that many of the processes where development and transition imaginaries are constructed are quite distant from the place where natural resources are extracted. They are constructed in exclusionary spheres of power, and they reinforce the views of epistemic authorities about what is to be sustained, about the nature of what can and should be sacrificed to facilitate certain capital dynamics, and about the distribution of the costs and benefits associated with these sacrifices. Thus, different societies, social groups, and communities shape different perspectives about what is to be sustained and what is to be sacrificed.

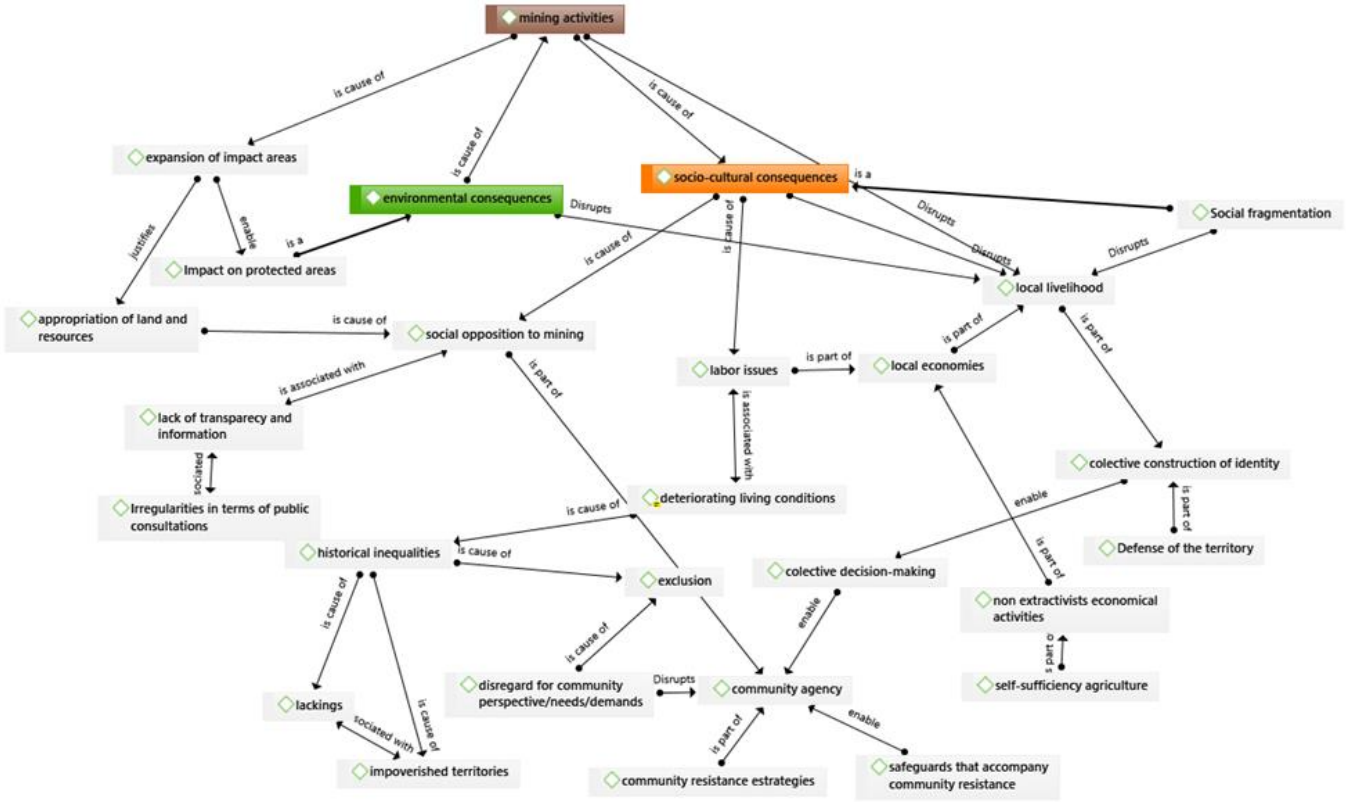
An examination of the narratives of both states reveals that the classical notion of developmentalism is still present. In Ecuador, the historical link between development and primary-export extractivism has not yet enabled the consolidation of a transition to other sectors of the economy and/or alternative models of development. In contrast, Portugal has a more diversified economy and a strengthened secondary and tertiary sector. Nevertheless, the influence of the international economic agenda and markets (especially in relation to commodity prices) has a significant impact on the definition of priorities and the paths to be taken as nations. The problem arises when national institutions tend to see development from a very different point of view and a different *language of valuation* than that of the communities (Martinez-Alier, 2003). Such conversations also involve debates about who should establish the imaginaries of development and transition that ultimately dictate policies and public policy processes at the national level. These debates bring to the fore the questions of who represents the "informed" population and who opposes development because of a NIMBY effect; who has more right to speak out and who has less. This discussion is not just about technical or scientific knowledge but also about the legitimacy of social actors in the arena of political power relations, which will determine which groups will have greater influence in these debates and, therefore, on the construction of future imaginaries.

Ecological-distributive dimension of socio-environmental conflicts

Following the thread of what has already been said, we can approach the extractivist conflict from an ecological-distributive dimension. With regard to the ecological-distributive dimension, we see that in both cases there are unequal ecological distributions of the externalities of mining activities (such as, for instance, wastes, discharges, pollution, and deforestation) across different social groups. These distributions occur in accordance with specific criteria, including economic status, ethnicity, class, or gender. The maldistribution can be attributed to a range of structural, social, cultural, and economic dynamics that contribute to the creation and perpetuation of inequalities. Schlosberg (2007) posits that the lack of recognition and participation of certain social groups plays a pivotal role in the emergence of unequal distributions of environmental impacts, which in turn affects their capacities and agency, thereby contributing to the development of environmental conflicts. Consequently, inequality, or maldistribution, serves as the foundation for all environmental justice conflicts.

Figure 3. shows the socio-cultural and environmental variables that are affected by mining. Regarding the environmental component, we see that in both cases, the extractive frontier is expanding into areas of fragile ecosystems. The alteration of these ecosystems by high-impact anthropogenic activities, such as mining, will endangers their existence. In Ecuador, we observed this problem in the projects located in the Amazonia, rainforests and the páramos; and in Portugal, in the Sierra doe Barroso. This expansion has already resulted in negative environmental effects during the prospecting phase. In Portugal, the inhabitants have reported alterations to the landscape due to the removal of rocks, noise pollution caused by heavy machinery, and high levels of dust in the environment. In Ecuador, the Río Blanco project has been linked to alterations in water sources and soil degradation. The Mirador project, situated in the Amazon and Andean mountain range, has been associated with deforestation, air pollution, the loss of landscapes, river pollution, and the depletion of soil nutrients.

Figure 3. Map of relations between mining activity and environmental and socio-cultural consequences



Local communities are the ones who assume the environmental and social liabilities that are normally not accounted for in extractivist projects. Hence, it is not possible to imagine any possible local development without taking into account and addressing the comprehensive reparation of these negative effects. On the contrary, mining companies have received preferential treatment, expressed through incentives and subsidies (more or less hidden), such as electricity and water supply, state investment in infrastructure, such as the construction of roads and ports; and, specifically in Portugal, in the channeling of investment in development and innovation for lithium mining projects. In addition to unequal distribution, we also find appropriation strategies of ecological resources, natural goods, and environmental services. In both Portugal and Ecuador, disputes over land ownership and the political authority to make decisions regarding its use are central to the dynamics of conflict surrounding mining. The question at hand is whether the utilization of resources should be determined by the populations

living in these territories or whether it should be guided by what other social processes have come to define as national priorities for development.

> "They want to decarbonize the cities, with this transition. To depollute or decarbonize the cities, they want to somehow destroy this interior, destroy this region that has fewer people and less decision-making power. So somehow, where is this justice?" (representative of the community of Montalegre - Portugal, 2024)

The concept of territory encompasses a multitude of dimensions, including its production, appropriation, occupation, historical development, and the ways in which its relations have been constructed. The production of territory is not isolated from the dynamics of politics and power. Therefore, when we talk about territorial production, we also talk about territorial governance (A. J. Bebbington & Bury, 2009). In the framework of neo-extractivist governance, sacrifice zones are a sine qua non condition. Although there may be moments in which there is a co-production of the territory, where the agency of social actors acts as a counterweight to power, in these case studies we see that such co-production has been hindered. The authority of the State for the governance of the territory ends up being imposed despite irregularities in the due processes. Nevertheless, we can see the communities constantly striving for a more egalitarian distribution of power and a greater degree of agency in territorial governance through participatory mechanisms. For instance, in Ecuador, the claim of unconstitutionality of mining projects for not respecting free, prior, and informed consultation resulted in the suspension of such projects. Similarly, in Portugal, the people of Barroso succeeded in getting the Public Ministry to defend the nullity of the Savannah company's Environmental Impact Statement granted by the APA.

(Neo)extractivist governance

In the context of extractivist mining governance, the narrative of the state-company alliance is becoming increasingly consolidated, with observable effects on decision-making in the territories. A number of mechanisms have been identified that facilitate this process, including mining lobbying and the use of corporate social technologies.

In the event known as the Sector Development Association of Canada (PDAC) in Toronto, Ecuador has been invited in the 2016, 2017 and 2018 editions. At the 2018 PDAC, the Minister

of Mines, led the panel "Ecuador Mining Country. The Opportunity is Present" where she promoted the country's "attractiveness" for mining investment, its "comparative advantages" and its "sustainable growth conditions," emphasizing "legal security.". This entails reforming and making the existing regulatory framework more flexible to guarantee foreign direct investment (FDI) that allows mining companies to acquire concessions and ensure territorial control for the development of their activities. At the same time, it must be ensured that the state guarantees them the management and control of the social conflict that derives from their execution. In the same year, at the same event, three representatives from Portugal presented "Lithium Opportunities in Portugal." The Ministry of Economy, the State Secretariat of Energy, the General Directorate of Energy and Geology (DGEG7), and the National Laboratory of Energy and Geology (LNEG) have created documents that identify eight potential areas for lithium extraction throughout the country and demonstrate the technical feasibility of production.

It is noteworthy that in both cases, the notion of "opportunity" emerges, which can be understood as a collective hope that evokes the promise of a developmentalism that is linked to the most recent crises, as an immediate past to be reversed. However, the promise requires both hope and epistemic content, which serve as pacts of trust to regulate the imaginary projections of the promising future that the extractive model would bring. The discourse of sustainable development and the labels of "responsible mining" (in Ecuador) and "green mining" (in Portugal) seek to influence social perceptions and apprehensions of mining in progress. The aim is to construct a framework of perceptions and a domain of positive representations of large-scale mining as an enterprise, industry, and social actor. This framework seeks to replicate, maintain, and reinforce the denial of negative local mining experiences.

Several processes occur in parallel. On the one hand, the recent and not yet overcome local memories of poverty and its exclusions are deployed in the discourse of both the state and the mining companies. In the imaginary of Ecuador, these are portrayed under the metaphors of "backward country" and "underdevelopment.". In Portugal, the precarious local conditions are emphasized, such as rural depopulation and agricultural stagnation. They are contrasted with mining revenue rates as the main arguments for the implementation of mining operations and the delegation of territorial governance to companies.

Secondly, mining companies utilize a range of "soft" technologies of social pacification, which they refer to as Corporate Social Responsibility (CSR). CSR forms part of a broader strategy of "cultural change" which is designed to improve the poor reputation of the mining industry and address the growing opposition and conflicts related to mining. Dunlap & Riquito (2023) views this as part of a wider set of "counterinsurgency techniques" which are employed with the intention of delegitimizing resistance. One of the defining characteristics of CSR is the emphasis that companies place on "transparency." This implies that the state has the capacity to act as a guarantor and controller, thereby assuming a co-responsible role with the mining industry. In many instances, however, companies assume the role that the state should fulfill by making promises of social development, such as the construction of schools, hospitals, community workshops, and so forth. These integrated strategies, in conjunction with substantial advertising expenditures in local media outlets, stage the performances of corporate responsibility and its public affections to be seen and remembered (Antonelli, 2009). These actions seek to create a positive image of the companies and show local communities as benefiting from mining, despite the impending inequalities. The mining industry employs visual representations that obfuscate the negative environmental impacts and the materiality of the destruction process. Instead, these representations highlight restored landscapes and future biodiversity projects. Images of sophisticated machinery and technology in mining areas celebrate the human capacity to exert control over the natural environment. In the case of lithium mining, the representation of the electric car as the ultimate goal of the extraction process and the transformation of the raw material is a recurring theme. These visual representations portray mining as a beneficial activity in the long term and as the pinnacle of technological progress, glorifying the power and scale of the mining activity. The use of iconographic rhetoric by companies serves to legitimize their activities and enhance their image. This is achieved through the use of visual strategies and narratives that conceal the true socio-environmental impacts of their operations while promoting a positive and philanthropic vision of the industry.

Likewise, inclusionary control processes take place, as corporate social technologies to "manufacture the consensus" of the communities (Dunlap, 2023). There are multiple mechanisms, ranging from compensation schemes and donations to social investment projects, etc. When Leifsen (2020, p. 2) analyzes the case of the Mirador project in the southern

Ecuadorian Amazon, he highlights how companies "make local society intelligible to the needs and conditions of the neo-extractive economy" by making certain socio-natural relations visible and hiding others. Inclusionary control is a common practice in the mining industry, and is also visible in "green" mining. The case of Barroso illustrates how companies tend to account for and recognize only certain aspects of the coupled human-environmental system in their brochures and environmental impact studies. Consequently, these aspects are subject to a language of monetary valuation that instrumentalizes and then translates them into damage compensation systems (in the case of environmental damage) or social investment (for example, the proposals to consume locally produced meat in the cafeteria of the mining company). Nevertheless, this implies a reduction in the complexity of the system and a very restricted incorporation of the intervened reality (Leibsen, 2020). The objective is to create the illusion that the communities are involved in decision-making processes, for instance, through forums or open information sessions for the community, or even through preliminary non-binding nominal consultations that will not influence the course of action decided by the state-company alliance. As evidenced by the following quote from the website of the Canadian mining company that holds the concession for the Warintza copper project, the participation process, which is a legal requirement in Ecuador, is contingent upon the company's discretion.

> The Citizen Participation Process (PPC) is a mechanism of dialogue, participation and consultation through which the population is informed of the possible socio-environmental impacts of a project, work or activity, with the aim of collecting the opinions and observations of the population living in the area of direct influence of the Project and incorporating those that are technically and economically viable into the Environmental Studies. (Solaris Resources, 2024)

One might posit that Leibsen's concept of incorporation by non-recognition is analogous to a specific form of exclusion, which renders communities susceptible to being perceived as socially voidable and sacrificial spaces. This exclusion, particularly in the case of Ecuador, has a significant element of colonial violence, which has resulted in the systematic denial of the existence of rural and indigenous populations and their identity. In this context, it is evident that identities, ways of life, and rural and indigenous socio-natures are instrumentalized, romanticized, and stripped of meaning so that remnants of these are functional to the mining

"green washing" practices. This functional duality between sacrificial and capitalizable zones is mentioned by Antonelli (2009) as the exploitation of "the maps of desire".

Local communities have been particularly vulnerable to the practices of "inclusion control" and "incorporation by non-recognition", which companies employ to obtain social licenses for mining operations. This has led to alterations in community relations, which have resulted in disputes over the acceptance or rejection of projects becoming a routine aspect of daily life and encroaching upon collective, familial, and neighborhood spaces. Quizphe (2020) details the way in which the mining company has played a preponderant role in the fragmentation and rupture of the social fabric in Río Blanco, remarking that the strategies deployed have rewritten the social history of these communities, configuring a new framework of social relations. This has resulted in the individualization of the interests of the inhabitants, which has broken the notion of community. In the case of Portugal, there is no documentation showing that there has been a process of rupture of the community fabric. However, disjunctions have been identified among the inhabitants of Barroso regarding the irregular acquisition of community land by the mining companies.

Violence

However, if the dialogic model, symbolic policies and corporate social narratives are not enough to achieve social acceptance; if democratic processes are not docile and governance is not enough, the State, which still maintains the monopoly of "legitimate" violence within this hegemonic alliance, is preparing to dispose the use of force. The deployment of police and military violence has been specifically evidenced in the Ecuadorian case. The perspectives that fall outside the narrative become a subaltern locus, whose stigma justifies the establishment of material and symbolic violence.

> “[This locus] is configured, as reverses of the advocating interlocution, where conflicts and dissent are interwoven and signified as antagonistic forces, between friend/enemy, regulated by hatred and its segregations: "intolerance", violence, discrimination and fragmentation between "neighbors of the same communities", generators of "internal refugees": it is the empty and available place of the new barbarian" (Antonelli, 2009, p. 97).

Coercive techniques accompany the construction of a discourse of the "internal enemy." These techniques consist of processes of punishment and persecution of individuals and collectivities through the application of microbiopolitical devices, rupture of the social fabric of the communities adjacent to the mining projects, and processes of deterritorialization through the implementation of dispossession cartographies.

In the case of Portugal, it is worth noting the phenomenon of bureaucratic violence. This form of violence occurs when disinformation is disseminated and transparency in the processes is impeded. One can observe instances of bureaucratic violence in the practice of "burning time," which hinders the possibility of taking legal action against non-compliance with environmental, administrative, or labor laws. This is a strategy employed by authorities to dissuade communities from taking action, as the consequences of such actions are often insignificant in reality. Bureaucratic violence is also expressed through taking advantage of legal loopholes, and granting preferential treatment to mining companies by waterdown laws, fast-track procedures, fast permitting by limiting public consultation periods, and shortening the time citizens have for a fair trial to defend their rights.

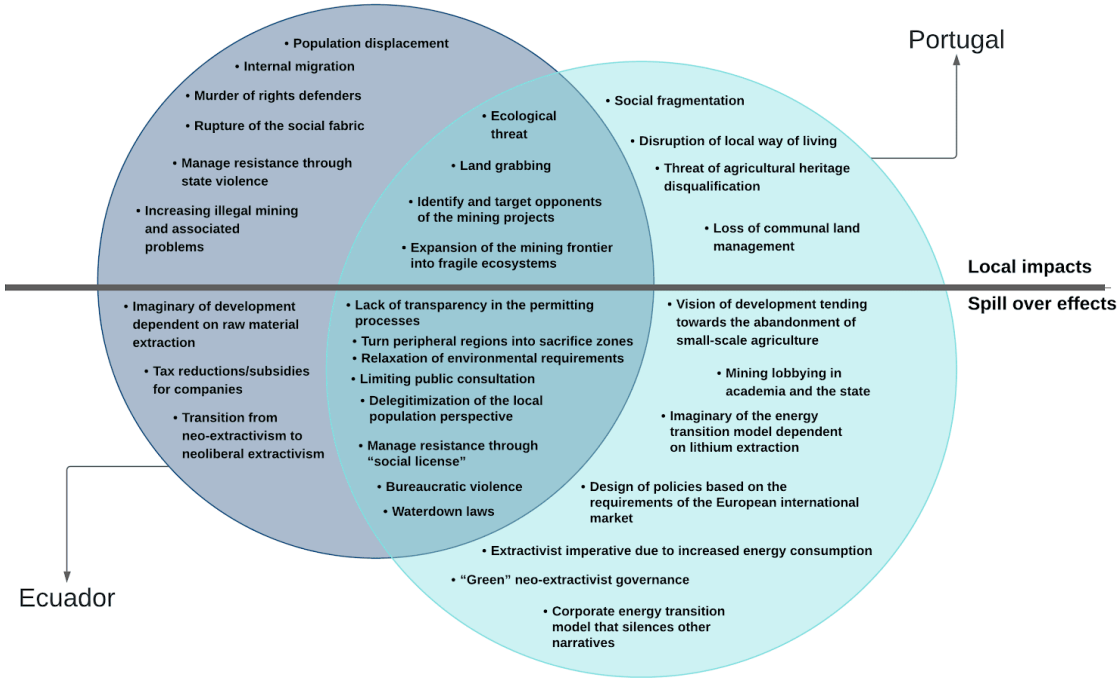
Local impacts and spillover effects

In this section, we take up the proposal developed by Eduardo Gudynas (2018) to expose the main local impacts and spillover effects in the cases studied. This entry allows us to address the complex dimension of the scope of mining extractivism.

The author explains that extractivism always has a local dimension, since the extraction of natural resources is anchored to specific places. However, they are also linked to global dynamics, since this extraction constitutes the first step in a worldwide marketing and production chain. In this chain, prices and demand are determined globally, following the rules and structures of international governance. In this sense, local impacts are a broad set of negative effects that can be environmental and social and that are perceptible in the territories adjacent to mining. In contrast, there are the spillover effects, which correspond to another level of consequences that are typically overlooked. However, in the author's opinion, they are even more serious than the local impacts because they involve changes or modifications in public policies, in the imaginaries and concepts that sustain them, and that are transformed as a

consequence of extractivism. As a result, public policies, such as environmental, labor, health, and so forth, are modified to accommodate extractivism. This, in turn, generates consequences that "spill over" into all national policies and imaginaries. Consequently, they extend beyond the local context and can serve as the foundation for new conflicts. One might posit that spillover effects, whether greater or lesser in extent, serve as a reflection of the effects of the dominant narrative at various levels of the coupled human-environmental system. There are numerous interconnections between these spillovers, which have the potential to influence the ways in which the economy, justice, democracy, and environmental relations are understood. Examples of spillover effects include measures of labor precariousness, flexibilization of environmental requirements, de-territorialization, reductions in corporate taxation, violation of rights and harassment of leaders, impediments to public consultations, and others.

Figure 4. "Local impacts and "Spill over effects" in Ecuador and Portugal



Community governance in the face of the extractivist model

Communities are not monolithic, so neither are community responses and strategies in the face of the expansion of the extractive mining frontier. As previously discussed in the chapter on results, the dispute over information, the creation of common meanings, and socio-technical imaginaries demonstrate that the socio-environmental conflict is crossed by both material and symbolic dimensions. In order to address the challenges posed by the expansion of the extractive mining frontier, communities have developed sustained processes of information production from various fronts and in coordination with different stakeholders. The documentation of the conflicts, the mapping of socio-environmental impacts, the testimonies of the inhabitants, and other forms of data collection have allowed the communities to create a database that they can rely on to strengthen their position against mining activity and to discuss the epistemic authority of the state-corporate alliance, both at the media level and in legal litigation. In both instances, social movements advocating for human and environmental rights have provided support to the communities engaged in the struggle.

In the case of Ecuador, we highlight the role of the Confederación de Nacionales Indígenas and Confederación de Nacionalidades Indígenas de la Amazonia Ecuatoriana, which bring together organizations and representatives of indigenous peoples throughout the country, as well as popular anti-mining organizations such as the Frente Nacional Antiminero (National Anti-Mining Front). Other significant social organizations have been identified: Colectivo de Geografía Crítica, Frente Antiminero Pacto por la Vida, Mancomunidad del Chocó Andino, Red de Jóvenes del Chocó Andino, Frente de Resistencia Norte por el Agua y la Vida, Juntas en defensa del agua, Juntas de defensa del campesinado, among others. In Portugal, the following organizations were identified: Associação de Combate à Precariedade - Precários Inflexíveis, , Empregos para o Clima, Montalegre Com Vida, Quercus, UMAR, Unidos em Defesa de Covas do Barroso, XR Portugal, ZERO, Associação Dunas Livres, Associação Unidos pela Natureza, GEOTA, GPSA - Preservação da Serra da Argemela, MiningWatch Portugal/Observatório Ibérico da Mineração, Movimento SOS Serra d'Arga, among others.

Imaginaries of re-existence

In order to stop the sacrificial narrative of the territories, the communities have proposed processes of re-existence. Self-identification appears as a necessary step from which people

recognize themselves. In both cases, this identification is enacted in line with the opposition to the commodification of nature, to the naturalization of the language of valuation and market narratives, and the notions of property and possessive individualism. But it goes far beyond opposition. Re-existence requires transcending modernity/coloniality, present in the extractivist economies implemented in Ecuador and Portugal. In this way, “communities of life” and political communities are created; processes of community reconstruction are generated, reinvigorating or reconstituting cooperative ties and the weaving of care networks. For example, in Barroso communities, we see how participatory dialogue processes have been generated between communities, as well as the strengthening of care networks for the defense of the territory. Community assemblies have been established and are held periodically to decide on issues related to territorial defense actions. According to testimonies, these assemblies are becoming increasingly popular and this contributes to the unity of communal ties. Similarly, the continuous presence of people from the community on the land has helped to impede the expansion of the mining company, thereby demonstrating the political role of the body-territory in resisting extractivism. In the Ecuadorian case, women's resistance is of particular significance for the development of these new languages of valuation, which connect the reproduction of life with the defense of territories and water. In the context of extractivist violence and gender-based oppression, women have been compelled to organize in order to survive and resist (Aliaga-Monroy, 2019, p. 89). Since 2020, more than 40 women of the indigenous Kichwa people have formed an organization to defend their territory and expel mining in the Ecuadorian Amazon. This organization, Yuturi Warmi, is the first indigenous guard led by women in the region. Its primary objective is the physical surveillance of the territory, but it also aims to protect culture, ancestry, language, education, and health. The political proposals created by women in these spaces not only respond to the environmental violence they suffer, but also highlight the existence of alternatives to the hegemonic extractivist development model. This requires collective efforts to protect the material and symbolic conditions that enable the production of the commons, ensuring the reproduction of common life, both human and non-human.

Re-assembling North and South transition imaginaries

The concept of transition for the Andean Kichwa peoples of Ecuador is known as "tukuna," which can be translated as "to change and transform," as well as "to become and be capable of something." The concept makes us rethink the times of transition, recognizing that time is not unique, linear or homogeneous. The times of the peoples of Abya Yala[4] differ from modern times that seek to possess, buy, sell, and appropriate time, bodies and natural cycles (Yánez & Moreno, 2023, p. 131). The destruction of the planet is due to the constant acceleration of all aspects of modern life. For the Barroso communities, thinking about an energy transition implies precisely questioning the acceleration of energy consumption and production levels, as well as economic growth. It is evident that this transition to clean energy cannot be a corporate transition (Svampa, 2023); it cannot go hand in hand with the expansion of the extractive industries of raw materials and the manufacture of electric vehicles, let alone with the narratives that make them appear as the only path to decarbonization. The belief that it is possible to grow infinitely and be “green” at the same time is being debated, because it suggests that one could continue to wear down the planet, the land, the air, and the water and sacrifice territories without suffering the consequences of that wear and tear. This narrative of exploitation of nature is the same narrative that has brought us to the current crisis, so it is not possible to talk about transition without it being a transition based on climate justice and socio-ecological transformation. If the type of transition is restricted, the possibilities for transformation are also reduced.

Another point that stands in the counter-narrative of the Barroso community, and is a prominent topic in the literature on ecological transition from the Global South is the problem of reducing the socio-ecological complexities of the global crisis to a climate issue. This reduction is intentional and effective because by decoupling the components of the system and excluding from the matrix those that cannot be submitted and controlled, its governance becomes easier.

> This narrative once again allows us to quantify and measure what needs to be done. So, once again, it makes us see nature in a quantifiable, measurable way, which makes it

[4] Abya Yala has become a universal concept for Indigenous Peoples, a self-designation that conveys a sense of unity and belonging as a counterpoint to the name that the colonizers gave to the continent "America." It has been configured as part of a process of political-identity construction, part of this process of decolonization of thought. It originates from the Panañema Kuna culture, meaning "land in full maturity."

> easier to turn into numbers, and therefore into targets, and therefore for the capitalist companies themselves to say "ok, we're going to do this by 2050, that's 6%, that's X years" etc. And it ignores the fact that everything is interconnected... We cannot solve social, ecological and environmental climate phenomena that are highly complex through a technical or technological solution, ignoring how much it would wear down the earth and the planet elsewhere. (ENCJ Participant)

The communities, through their rejection of mining and extractivism, emphasize that the decarbonization of the economy must lead to an integral change, both the productive, consumption, and distribution matrix. As well as to change the system of social relations of exploitation and inequality and strengthen the link of reproduction of life, through correspondence, complementarity, and reciprocity. This implies dismantling the narrative of the anthropocentric and colonial material matrix that have justified the dispossession of populations and sacrifice zones. For this, it is imperative to understand the human being as part of a larger network of relationships and not as the center.

CONCLUSIONS

It was feasible to accomplish the goals of the study by finding common ground and also contrasts regarding the use of extractivism narratives in the contexts of Ecuador and Portugal. The chosen mining projects served as a means of describing the elements of the coupled human-environmental systems.

In the context of a mining extractivism dependent on the availability of raw materials for the energy transition, we observe the consolidation of the alliance between state and mining companies with the objective of providing structures and enabling conditions to ensure it. This implies the expansion of the extractive frontier that demands the creation of sacrifice zones. For the implementation of a type of governance based on extractivism, this alliance elaborates a series of narratives that would ensure the legitimacy of the values, norms, and social practices that enable its objectives. The specific objectives vary from case to case. In the European Union, it is of paramount importance to exert control over the supply chain for the production of lithium batteries in order to enhance its market advantage. Consequently, the territories under which lithium is located in Portugal must be integrated into this governance. Conversely, the historically primary-exporting State of Ecuador, having ceased to participate actively in the

extractive rent and currently operating under a neoliberal model, seeks to guarantee the interests of the market for the extraction of raw materials through foreign investment. The rhetoric of underdevelopment is augmented by the moral imperative of providing the raw materials necessary for the countries of the North to achieve their decarbonization goals.

To justify the sacrifice of mining expansion zones, two main narratives are deployed from the alliance, which aim to reduce the risk of extractive projects to ensure profitability, while boosting their environmental and social credentials. The first consists of converting and subordinating relations, natures, humans and non-humans, and ways of life into empty, unproductive and socially disposable spaces. To this end, structural and historical inequalities are instrumentalized as an argument to justify the implementation of mining as the activity par excellence that would bring development and sustainability to communities.

Secondly, the mining industry, which seeks to position itself as the "savior" agent that makes the transition possible, makes use of social technologies to “manufacture consent”. This, while granting legitimacy, would also operate as a counterinsurgency tool to evade responsibility for environmental liabilities and local impacts, thereby discrediting the dissent of affected communities.

The alliance between the state and the mining company allows for the use of coercive techniques, ranging from the use of force to more subtle forms of control, such as bureaucratic violence and "inclusionary control." This has the effect of fragmenting the social fabric of communities, resulting in forced displacement and a deterioration of living conditions. However, the less visible but more insidious effects of this alliance are the spillover effects, which modify imaginaries and amplify the space-time consequences of extractivism.

In Portugal and Ecuador, communities whose territories have been incorporated into the dynamics of extractivist governance have rejected the dominant narrative that frames mining as a solution for local development and decarbonization. Instead, communities in the Barroso region of Portugal, as well as Amazonian and Andean indigenous and rural communities in Ecuador, have constructed counter-narratives of re-existence to confront dispossession and the deepening of social and territorial inequalities. Their strategies are grounded in localized practices of social reproduction, where interdependent relationships are generated between humans and non-humans. The mining narrative imposed by those in power threatens to sacrifice

the ways of life and governance of human communities that are intimately linked to the territory and the natural environment. Therefore, the counter-narrative of these communities upholds the need for true gender, ethnic, ecological, and ontological redistributive justice.

The communities' counter-narrative draws attention to the incoherence of the dominant narrative by highlighting how, under the corporate energy transition's rhetoric, increasing the volume of primary natural and energy goods extracted would be justified. This would not be containing the civilizational crisis, but rather escalating it by upholding unsustainable consumption models. This creates new zones of sacrifice in the North while reproducing the historical dispossession of the people of the global South. Consequently, it is impossible to discuss a just transition without challenging the extractivist paradigm's pillars and the power structures that feed off of them, such as capitalism, patriarchy, and colonialism.

REFERENCES

Acaroglu, O. (2020). *Rethinking Marxist Approaches to Transition*. Brill. https://brill.com/display/title/58376

Acosta, A. (2017). Post-Extractivism: From Discourse to Practice—Reflections for Action. *International Development Policy | Revue Internationale de Politique de Développement*, *9*, Article 9. https://doi.org/10.4000/poldev.2356

Acosta, A., Cajas Guijarro, J., Hurtado Caicedo, F., & Sacher Freslon, W. (2020). *El festín minero del siglo XXI: ¿Del ocaso petrolero a una pandemia megaminera?* Editorial Abya - Yala.

Alarcón, P. (2023). Old and new challenges of the energy transition: Insights from South America. *South African Journal of International Affairs*, *0*(0), 1–16. https://doi.org/10.1080/10220461.2023.2221227

Albuja, V., & Dávalos, P. (2013). Extractivismo y posneoliberalismo: El caso de Ecuador. *Estudios Críticos Del Desarrollo*, *3*(4), 83–112.

Aliaga-Monroy, C. (2019). Nuestros cuerpos, nuestros territorios: Luchas de mujeres, feminismos emergentes y defensa de los territorios en Bolivia. In K. Gabbert & M. Lang (Eds.), *¿Cómo se sostiene la vida en América Latina? Feminismos y re-existencias en tiempos de oscuridad* (pp. 87–98).

Alianza por los Derechos Humanos. (2021). *Situación de personas defensoras de derechos humanos, colectivos y de la naturaleza en Ecuador: Retos y desafíos en la construcción de sistemas integrales y diferenciados para su protección* (p. 80). Alianza por los Derechos Humanos.

Alimonda, H. (2002). *Ecología política: Naturaleza, sociedad y utopía*. CLACSO-Consejo Latinoamericano de Ciencias Sociales.

Amin, S. (1974). *Accumulation on a world scale: A critique of the theory of underdevelopment* (B. Pearce, Trans.). Monthly Review Press. http://catdir.loc.gov/catdir/enhancements/fy0902/72092028-b.html

Antonelli, M. A. (2009). Minería transnacional, narrativas del desarrollo y resistencias sociales. In M. Svampa & M. A. Antonelli (Eds.), *Memoria Académica* (1st ed., p. 320). Biblos.

António Carvalho, Mariana Riquito, Vera Ferreira. (2022). *Sociotechnical imaginaries of energy transition: The case of the Portuguese Roadmap for Carbon Neutrality 2050*. *8*, 2413–2423. https://doi.org/10.1016/j.egyr.2022.01.138

Aráoz, H. M. (2014). *Extractivismo y "Consenso Social": Expropiación – consumo y fabricación de subjetividades (capitalistas) en contextos neocoloniales*.

Aráoz, H. M. (2015). Ecología política de los regímenes extractivistas. De reconfiguraciones imperiales y re-ex-sistencias decoloniales en nuestra América. *Bajo el Volcán*, *15*(23), 11–51.

Astudillo Salazar, A. E., & Vallejo Llerena, E. C. (2020). The thirst for gold will leave us without water: Transnational gold mining in hydric recharge ecosystems (Ecuador). *Relaciones Internacionales Madrid*, *45*, 385–390.

Barbesgaard, M., & Whitmore, A. (2022). *Smoke and Minerals: How the mining industry plans to profit from the energy transition*. Transnational Institute.

Bebbington, A. (Ed.). (2013). *Social Conflict, Economic Development and Extractive Industry: Evidence from South America*. Routledge. https://doi.org/10.1093/cdj/bst026

Bebbington, A. J., & Bury, J. T. (2009). Institutional challenges for mining and sustainability in Peru. *Proceedings of the National Academy of Sciences of the United States of America*, *106*(41), 17296–17301. https://doi.org/10.1073/pnas.0906057106

Bermúdez Rico, R. E., Rodríguez, T., & Roa Avedaño, T. (2011). *Mujer y Minería. Ámbitos de análisis e impactos de la minería en la vida de las mujeres Enfoque de derechos y perspectiva de género* (pp. 1–31). CENSAT Agua Viva.

Bnamericas. (2023, October 15). *BNamericas - Ministro del Ambiente de Ecuador: "Se puede ...* BNamericas.com. https://www.bnamericas.com/es/entrevistas/ministro-del-ambiente-de-ecuador-se-puede-hacer-una-mineria-responsable

Bnamericas. (2024, November 3). *BNamericas—¿Podrá Ecuador aprovechar sus recursos de co...* BNamericas.com. https://www.bnamericas.com/es/entrevistas/podra-ecuador-aprovechar-sus-recursos-de-cobre-para-contribuir-a-la-transicion-energetica

BNEF. (2020). EVO Report 2020 | BloombergNEF | Bloomberg Finance LP. *BloombergNEF*. https://professional.edit.cirrus.bloomberg.com/bnef/electric-vehicle-outlook-2020/

Braun, V., & Clarke, V. (2012). Thematic analysis. In *APA handbook of research methods in psychology, Vol 2: Research designs: Quantitative, qualitative, neuropsychological, and biological* (pp. 57–71). American Psychological Association. https://doi.org/10.1037/13620-004

Bravo, E. (2021). *Zonas de Sacrificio en América Latina, vulneración de los derechos humanos y la naturaleza* (p. 1/96). Acción Ecológica, Oficina de Derechos de la Naturaleza, Centro de Documentación e Información Bolivia (CEDIB), GRAIN, Observatorio de Ecología Política de Venezuela, Instituto de Salud Socioambiental de la Facultad de Ciencias Médicas de la Universidad Nacional de Rosario, Oilwatch, OCMAL, RALLT, RECOMA.

Bumpus, A. G., & Liverman, D. (2010). Carbon colonialism? Offsets, greenhouse gas reductions, and sustainable development. In *Global Political Ecology* (pp. 203–224). Taylor and Francis. http://www.scopus.com/inward/record.url?scp=84967566356&partnerID=8YFLogxK

Burchardt, H.-J., & Dietz, K. (2014). (Neo-)extractivism – a new challenge for development theory from Latin America. *Third World Quarterly*, *35*(3), 468–486. https://doi.org/10.1080/01436597.2014.893488

Burningham, K., Barnett, J., & Walker, G. (2015). An Array of Deficits: Unpacking NIMBY Discourses in Wind Energy Developers' Conceptualizations of Their Local Opponents. *Society & Natural Resources*, *28*(3), 246–260. https://doi.org/10.1080/08941920.2014.933923

Callon, M. (1984). Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of St Brieuc Bay. *The Sociological Review*, *32*(1_suppl), 196–233. https://doi.org/10.1111/j.1467-954X.1984.tb00113.x

Canelas, J., & Carvalho, A. (2023). The dark side of the energy transition: Extractivist violence, energy (in)justice and lithium mining in Portugal. *Energy Research & Social Science*, *100*, 103096. https://doi.org/10.1016/j.erss.2023.103096

Cardoso, F. H., & Faletto, E. (1979). *Dependency and Development in Latin America* (M. M. Urquidi, Trans.). Universiry of California Press.

Chiasson-LeBel, T. (2016). Neo-extractivism in Venezuela and Ecuador: A weapon of class conflict. *The Extractive Industries and Society*, *3*(4), 888–901. https://doi.org/10.1016/j.exis.2016.10.006

Clark, P., & García, J. (2019). Left Populism, State Building, Class Compromise, and Social Conflict in Ecuador's Citizens' Revolution. *Latin American Perspectives*, *46*(1), 230–246. https://doi.org/10.1177/0094582X18807723

Crutzen, P. J., & Stoermer, E. F. (2013). "The 'Anthropocene'" (2000). In *"The 'Anthropocene'" (2000)* (pp. 479–490). Yale University Press. https://doi.org/10.12987/9780300188479-041

Direção Geral de Energia e Geologia, D. (2022). *Depósitos Minerais (Minas)*. https://www.dgeg.gov.pt/pt/areas-setoriais/geologia/depositos-minerais-minas/

Direção Geral de Energia e Geologia, D. (2024). *Depósitos Minerais (Minas)*. https://www.dgeg.gov.pt/pt/areas-setoriais/geologia/depositos-minerais-minas/

Dorn, F. (2021). Inequalities in resource-based global production networks: Resistance to lithium mining in Argentina (Jujuy) and Portugal (Região Norte). *Journal Für Entwicklungspolitik: JEP*, *37*, 70–91. https://doi.org/10.20446/JEP-2414-3197-37-4-70

Dunlap, A. (2023). The green economy as counterinsurgency, or the ontological power affirming permanent ecological catastrophe. *Environmental Science & Policy*, *139*, 39–50. https://doi.org/10.1016/j.envsci.2022.10.008

Dunlap, A., & Riquito, M. (2023). Social warfare for lithium extraction? Open-pit lithium mining, counterinsurgency tactics and enforcing green extractivism in northern Portugal. *Energy Research & Social Science*, *95*, 102912. https://doi.org/10.1016/j.erss.2022.102912

El Mercurio. (2020, November 30). *La presencia de mineros ilegales en Río Blanco causa preocupación—Diario El Mercurio*. https://elmercurio.com.ec/2020/11/30/mineria-ilegal-rio-blanco/

Escobar, A. (2007). Worlds and Knowledges Otherwise1: The Latin American modernity/coloniality research program. *Cultural Studies*, *21*(2–3), 179–210. https://doi.org/10.1080/09502380601162506

Escobar, A. (2014). *Sentipensar con la tierra: Nuevas lecturas sobre desarrollo, territorio y diferencia* (Primera edición). Ediciones Unaula.

European Comission. (2014). *The Economic Adjustment Programme for Portugal 2011-2014*. Directorate-General for Economic and Financial Affairs Unit Communication and interinstitutional relations.

European Court of Auditors. (2023). *Special report 15/2023: The EU's industrial policy on batteries – New strategic impetus needed*. European Court of Auditors. http://www.eca.europa.eu/es/publications/sr-2023-15

FAO. (2024). *Informações Detalhadas | Globally Important Agricultural Heritage Systems (GIAHS) | Food and Agriculture Organization of the United Nations | GIAHS | Food and Agriculture Organization of the United Nations*. https://www.fao.org/giahs/giahsaroundtheworld/designated-sites/europe-and-central-asia/barroso-agro-slyvo-pastoral-system/detailed-information/pt/

Fontes, A. (2021). *Memórias do Barroso*. Áncora Editora.

Foucault, M., 1926-1984. (1977). *Discipline and punish: The birth of the prison* (First American edition). Pantheon Books. https://search.library.wisc.edu/catalog/999495361202121

Frank, A. G. (1978). *Dependent Accumulation and Underdevelopment*. Palgrave Macmillan UK. https://doi.org/10.1007/978-1-349-16014-3

Giddens, A. (2009). *The politics of climate change*. Cambridge ; Malden, MA : Polity, 2009. https://search.library.wisc.edu/catalog/9910089848002121

González-Martínez, M. D., Huguet, C., Pearse, J., McIntyre, N., & Camacho, L. A. (2019). Assessment of potential contamination of Paramo soil and downstream water supplies in a coal-mining region of Colombia. *Applied Geochemistry*, *108*, 104382. https://doi.org/10.1016/j.apgeochem.2019.104382

Grupo de Trabalho «Lítio». (2016). *Relatório do Grupo de Trabalho «Lítio»*. Secretário de Estado da Energia.

Gudynas, E. (2011a). *Alcances y contenidos de las transiciones al Post-Extractivismo*. http://repositorio.flacsoandes.edu.ec/handle/10469/3583

Gudynas, E. (2011b). Debates sobre el desarrollo y sus alternativas en América Latina: Una breve guía heterodoxa. In M. Lang & D. Mokrani (Eds.), *Más allá del desarrollo* (pp. 21–53). Fundación Rosa Luxemburgo.

Gudynas, E. (2012). Desarrollo, extractivismo y postextractivismo. *Seminario Andino: Transiciones, Postextractivismo y Alternativas al Extractivismo En Los Países Andinos, Lima*, *16*, 17.

Gudynas, E. (2018). Extractivisms: Tendencies and consequences. In *Reframing Latin American Development*. Routledge.

Gudynas, E. (2019). Hasta la última gota Las narrativas que sostienen a los extractivismos. *RevIISE - Revista de Ciencias Sociales y Humanas, Universidad Nacional de San Juan*, *13*(13), 15–31.

Harvey, D., & Harvey, D. (2005). *The New Imperialism*. Oxford University Press.

Ickler, J. (2023). Green energy transitions and the temptation of natural resource rents: Experiences from Ecuador. *South African Journal of International Affairs*, *30*(2), 279–295. https://doi.org/10.1080/10220461.2023.2221219

Jara, M. (2019). *'La minería en Ecuador va porque va', dice el Ministro de Hidrocarburos*. El Comercio. https://www.elcomercio.com/actualidad/negocios/mineria-ecuador-ministro-hidrocarburos-waorani.html

Jasanoff, S., & Kim, S.-H. (2009). Containing the Atom: Sociotechnical Imaginaries and Nuclear Power in the United States and South Korea. *Minerva*, *47*(2), 119–146. https://doi.org/10.1007/s11024-009-9124-4

Joanaz de Melo, J., Sá, C., Petrucci, F., Galvão, A., & Sanches, A. (2022). *Parecer sobre o estudo de impacte ambiental da mina do Romano* (p. 28). NOVA School of Science & Technology.

Katz, C. I. (2018). América Latina desde la teoría de la dependencia. *Centro de Estudios Para Análisis Financiero*, *24*, 1–17.

Kingsbury, D. (2021). 'Green' Extractivism and the Limits of Energy Transitions: Lithium, Sacrifice, and Maldevelopment in the Americas. *Georgetown Journal of International Affairs*. https://gjia.georgetown.edu/2021/07/20/green-extractivism-and-the-limits-of-energy-transitions-lithium-sacrifice-and-maldevelopment-in-the-americas/

Kloß, S. T. (2017). The Global South as Subversive Practice: Challenges and Potentials of a Heuristic Concept. *The Global South*, *11*(2), 1–17. https://doi.org/10.2979/globalsouth.11.2.01

Lander, E. (1993). *La colonialidad del saber: Eurocentrismo y ciencias sociales. Perspectivas latinoamericanas*. Consejo Latinoamericano de Ciencias Sociales, CLACSO. https://dialnet.unirioja.es/servlet/libro?codigo=791344

Lander, E. (2023). La transición energética corporativa-colonial. In G. I. García Parra (Ed.), *Transiciones Justa. Una agenda de cambios para América Latina y el Caribe* (1st ed., pp. 13–34). CLACSO; OXFAM.

Lang, M., Bringel, B., & Manahan, M. A. (2023). *Más allá del colonialismo verde: Justicia global y geopolítica de las transiciones ecosociales*. CLASCO-Latin American Council of Social Sciences. http://hdl.handle.net/1854/LU-01HMXZ884HXAKVWGD1K7XRMKH2

Lauda Rodriguez, Z. L., & Ribeiro, W. C. (2019). Risco, princípio da precaução e justiça ambiental em conflitos por mineração. *Desenvolvimento e Meio Ambiente*, *51*. https://doi.org/10.5380/dma.v51i0.59821

Leff, E. (2022). *Racionalidad ambiental: La reapropiación social de la naturaleza*. Siglo XXI Editores México.

Lehmann, R., & Alarcón, P. (2023). Rosa Leh mann, Pedro Alarcón 'Just Transition' in the Global South: Mission Impossible? The Perils of the Transition in Mexico and Ecuador. *Journal Für Entwicklungspolitik, XXXIX*, 37–61.

Leifsen, E. (2020). The socionature that neo-extractivism can see: Practicing redistribution and compensation around large-scale mining in the Southern Ecuadorian Amazon. *Political Geography*, *82*, 102249. https://doi.org/10.1016/j.polgeo.2020.102249

Machado Aráoz, H. (2015). ECOLOGÍA POLÍTICA DE LOS REGÍMENES EXTRACTIVISTAS. DE RECONFIGURACIONES IMPERIALES Y RE-EX-SISTENCIAS DECOLONIALES EN NUESTRA AMÉRICA. *BAJO EL VOLCÁN. REVISTA DEL POSGRADO DE SOCIOLOGÍA. BUAP*, *16*(23), 11–51. https://doi.org/10.32399/ICSYH.bvbuap.2954-4300.2015.16.23.554

Maldonado-Torres, N. (2007). On the Coloniality of Being: Contributions to the development of a conceptFootnote11. Sections of this essay were presented in talks at the John Hope Franklin Center at Duke University on 5 November 2003 and in the Critical Theory and Decolonization Conference at Duke University and the University of North Carolina, Chapel Hill on 30 May 2004. *Cultural Studies*, *21*(2–3), 240–270. https://doi.org/10.1080/09502380601162548

Marmé, P. (2019, January). Lítio, o Petróleo Branco. *Watts On*. https://welectric.pt/2019/01/08/7908/

Martinez-Alier, J. (2002). *The Environmentalism of the Poor*. https://www.elgaronline.com/monobook/9781840649093.xml

Martinez-Alier, J. (2003). *The Environmentalism of the Poor: A Study of Ecological Conflicts and Valuation*. Edward Elgar Pub.

Mcmillen Voskoboynik, D., & Andreucci, D. (2022). Greening extractivism: Environmental discourses and resource governance in the 'Lithium Triangle.' *Environment and Planning E: Nature and Space*, *5*(2), 787–809. https://doi.org/10.1177/25148486211006345

Meretoja, H. (2020). A dialogics of counter-narratives. In *Routledge Handbook of Counter-Narratives*. Routledge.

Mignolo, W. (2005). *The idea of Latin America*. Malden, MA ; Oxford : Blackwell Pub., 2005. https://search.library.wisc.edu/catalog/999960959602121

Ministerio de Energía y Recursos No Renovables. (2018). *Plan Nacional de Desarrollo Minero 2020-2030* (p. 226). Viceministerio de Minas.

Moore, J. W. (2017). The Capitalocene, Part I: On the nature and origins of our ecological crisis. *The Journal of Peasant Studies*, *44*(3), Article 3. https://doi.org/10.1080/03066150.2016.1235036

Mühlmann, K., Satalkina, L., & Steiner, G. (2023). Dealing with Complexity and Digitalization from a Modern Communication Perspective: How Universities can become Centres for Empowerment. In S. Pietrzykowsk, & K. Mühlmann (Eds.), *Fostering Digital Skills and Competencies in Higher Education* (pp. 29–45).

Munk, L. A., Hynek, S. A., Bradley, D. C., Boutt, D., Labay, K., & Jochens, H. (2016). Lithium Brines: A Global Perspective. In P. L. Verplanck & M. W. Hitzman (Eds.), *Rare Earth and Critical Elements in Ore Deposits* (Vol. 18, p. 0). Society of Economic Geologists. https://doi.org/10.5382/Rev.18.14

National Minerals Information Center. (2024). *Mineral commodity summaries 2024*. U.S. Geological Survey Mineral Commodity Summaries 2024. https://doi.org/10.3133/mcs2024

NECP. (2023). *National Energy Plan and Climate 2021-2030* (p. 238). Republica de Portugal.

Observatorio de Conflictos Socioambientales del Ecuador. (2019, March 24). *Minería – Observatorio de Conflictos Socioambientales del Ecuador*. https://www.observatoriosocioambiental.info/2019/03/24/mineria/

Palma-Oliveira, J. M. (2000). A new theory for the explanation of the NIMBY effect. *Foresight and Precaution*, 1167–1171.

Palmer, M. A., Bernhardt, E. S., Schlesinger, W. H., Eshleman, K. N., Foufoula-Georgiou, E., Hendryx, M. S., Lemly, A. D., Likens, G. E., Loucks, O. L., Power, M. E., White, P. S., & Wilcock, P. R. (2010). Mountaintop Mining Consequences. *Science*, *327*(5962), 148–149. https://doi.org/10.1126/science.1180543

Parkkinen, M., & Vikström, S. (2024). Alternative policy narratives of the future of climate change: Analyzing Finland's energy and climate strategy and news reports. *Review of Policy Research*, *n/a*(n/a), 1–19. https://doi.org/10.1111/ropr.12602

Parsons, L. (2023). *Carbon Colonialism. How rich countries export climate breakdown*. Manchester University Press. https://manchesteruniversitypress.co.uk/9781526169181

Português, G. (2018). Roteiro para a Neutralidade Carbónica 2050. *Estratégia de Longo Prazo Para a Neutralidade Carbónica Da Economia Portuguesa Em 2050*, *2050*, 9–24.

Prebisch, R. (1981). *Capitalismo periférico: Crisis y transformación*. Fondo de Cultura Económica. https://hdl.handle.net/11362/42073

PRESIDÊNCIA DO CONSELHO DE MINISTROS. (2021, July 5). *Decreto-Lei n.º 30/2021*. PRESIDÊNCIA DO CONSELHO DE MINISTROS.

Primicias. (2023, March 14). 249 concesiones a gran escala esperan convertirse en minas. *Primicias*. https://www.primicias.ec/noticias/economia/concesiones-mineria-exploracion-ecuador/

Primicias. (2024, July 5). Minera canadiense Solaris Resources comenzará nuevas exploraciones en la Amazonía de Ecuador. *Primicias*. https://www.primicias.ec/noticias/economia/minera-canadiense-solaris-exploracion-morona-santiago-enami/

Quijano, A. (2000). Coloniality of Power and Eurocentrism in Latin America. *International Sociology*, *15*(2), 215–232. https://doi.org/10.1177/0268580900015002005

Quillupangui, S. (2019, March 19). *Henry Troya: 'Para algunos es más lucrativo dejar la minería en la ilegalidad.'* El Comercio. https://www.elcomercio.com/actualidad/seguridad/henry-troya-lucro-mineria-ilegal.html

Quizhpe, C., & Vallejo, I. (2022). Procesos de juridificación y defensa del agua en el sur andino del Ecuador. *Íconos - Revista de Ciencias Sociales*, *72*, Article 72. https://doi.org/10.17141/iconos.72.2022.5033

Quizphe, C. (2020). *La commoditización de las subjetividades: La minería en la provincia del Azuay, Ecuador y los casos de los proyectos Río Blanco y Loma Larga*. Facultad Latinoamericana de Ciencias Sociales, FLACSO.

Rebaï, N., & Vélez, J. A. A. (2018). Trajectories of Vulnerability of Rural Territories in the Ecuadorian Andes: A Comparative Analysis. *Journal of Alpine Research | Revue de Géographie Alpine*, *106–3*, Article 106–3. https://doi.org/10.4000/rga.4969

Reinert, H. (2018). Notes from a Projected Sacrifice Zone. *ACME: An International Journal for Critical Geographies*, *17*(2), Article 2. https://doi.org/10.14288/acme.v17i2.1592

Riofrancos, T. (2022). Shifting Mining From the Global South Misses the Point of Climate Justice. *Foreign Policy*. https://foreignpolicy.com/2022/02/07/renewable-energy-transition-critical-minerals-mining-onshoring-lithium-evs-climate-justice/

Riofrancos, T. (2023). The Security–Sustainability Nexus: Lithium Onshoring in the Global North. *Global Environmental Politics*, *23*(1), 20–41. https://doi.org/10.1162/glep_a_00668

Rivera Cusicanqui, S. (1984). *Oprimidos pero no vencidos: Luchas del campesinado aymara y qhechwa de Bolivia, 1900-1980*. HISBOL.

Rivera Cusicanqui, S. (2010). *Violencias (re) encubiertas en Bolivia*. Editorial Piedra Rota.

RNC2050. (2019). *ROADMAP FOR CARBON NEUTRALITY 2050 (RNC2050). LONG-TERM STRATEGY FOR CARBON NEUTRALITY OF THE PORTUGUESE ECONOMY BY 2050*. Ministry of Environment and Energy Transition.

Robbins, P. (2012). *Political ecology: A critical introduction* (2nd ed). J. Wiley & Sons. https://search.ebscohost.com/login.aspx?direct=true&scope=site&db=nlebk&db=nlabk&AN=413405

Rosero Alcívar, J. (2020). El regreso de Ecuador al neoliberalismo: Entre la ortodoxia y heterodoxia de su relación financiera con el Fondo Monetario Internacional. *Revista de Relaciones Internacionales de La UNAM*, *137*. https://www.revistas.unam.mx/index.php/rri/article/view/76201

Rostow, W. W. (1959). The Stages of Economic Growth. *The Economic History Review*, *12*(1), 1–16. https://doi.org/10.2307/2591077

Sacher, W. (2017). *Ofensiva megaminera china en los Andes: Acumulación por desposesión en el Ecuador de la "Revolución Ciudadana."* Editorial Abya - Yala.

Sacher, W., & Acosta, A. (2012). *La minería a gran escala en Ecuador. Análisis y datos estadísticos sobre la minería industrial en el Ecuador* (Abya Yala).

Sagasti, F. R. (1981). *El factor tecnológico en la teoría del desarrollo económico* (1st ed., Vol. 94). El Colegio de Mexico. https://doi.org/10.2307/j.ctv6mtcmp

Sanchez, C. (2023, August 30). Se suspende el proyecto minero Loma Larga. *El Mercurio*. https://elmercurio.com.ec/2023/08/30/suspende-proyecto-loma-larga/

Santos, P. (2019). *Levantamento dos pedidos de prospeção e pesquisa de depósitos Lítio 2016-2019*. QUERCUS. https://alertalitio.quercus.pt/wp-content/uploads/2019/07/01-Levantamento-litio.pdf

Savannah. (2024). *Update on Key Project Workstreams—Savannah Resources Plc*. https://www.savannahresources.com/investors/rns-feed/rns-announcements/?rid=4494560

Schlosberg, D. (2007). *Defining Environmental Justice: Theories, Movements, and Nature*. Oxford University Press. https://doi.org/10.1093/acprof:oso/9780199286294.001.0001

Sinnott, E., Nash, J., & De la Torre, A. (2011, June 22). *Natural resources in Latin America and the Caribbean: Beyond booms and busts? : Los recursos naturales en America Latina y el Caribe : mas alla de bonanzas y crisis?* [Text/HTML]. World Bank. https://documentos.bancomundial.org/es/publication/documents-reports/documentdetail/886561468016814131/Los-recursos-naturales-en-America-Latina-y-el-Caribe-mas-alla-de-bonanzas-y-crisis

Smith, J. M., & Tidwell, A. S. (2016). The everyday lives of energy transitions: Contested sociotechnical imaginaries in the American West. *Social Studies of Science*, *46*(3), 327–350. https://doi.org/10.1177/0306312716644534

Solaris Resources. (2024). *Solaris Resources: Citizen Participation Process*. Citizen Participation Process in the Warintza Project. https://www.solarisresources.com/sustainability/environmental/citizen-participation-process/

Solíz, M. F., Yépez, A., & Sacher, W. (2018). *Fruta del Norte La manzana de la discordia. Monitoreo comunitario participativo y memoria colectiva en la comunidad de El Zarza* (1st ed.). Ediciones La Tierra.

Sousa Santos, B. de. (1985). Estado e Sociedade na Semiperiferia do Sistema Mundial: O Caso Português. *Análise Social*, 869–901.

Spicker, P., Alvarez, S., & Gordon, D. (2009). *Pobreza: Un glosario internacional* (1st ed.). CLACSO.

Star, S. L. (1989). The Structure of Ill-Structured Solutions: Boundary Objects and Heterogeneous Distributed Problem Solving. *Distributed Artificial Intelligence*.

Svampa, M. (2015). Commodities Consensus: Neoextractivism and Enclosure of the Commons in Latin America. *South Atlantic Quarterly*, *114*(1), 65–82. https://doi.org/10.1215/00382876-2831290

Svampa, M. (2022a). Dilemas de la transición ecosocial desde América Latina. *Documentos de trabajo (Fundación Carolina): Segunda época*, *Extra 12*, 1.

Svampa, M. (2022b). Neoextractivismo. In C. Pereda (Ed.), *Diccionario de Injusticias* (pp. 560–666). Siglo XXI Editores.

Svampa, M. (2023). Transición energética corporativa. El triángulo sudamericano del litio como caso testigo. In M. Lang, B. Bringel, & M. A. Manahan (Eds.), *Más allá del colonialismo verde: Justicia global y geopolítica de las transiciones ecosociales* (pp. 69–84). CLACSO.

Toledo, V. M. (2013). El metabolismo social: Una nueva teoría socioecológica. *Relaciones. Estudios de Historia y Sociedad*, *XXXIV*(136), 41–71.

Villa, J. A., Mejía, G. M., Velásquez, D., Botero, A., Acosta, S. A., Marulanda, J. M., Osorno, A. M., & Bohrer, G. (2019). Carbon sequestration and methane emissions along a microtopographic gradient in a tropical Andean peatland. *Science of The Total Environment*, *654*, 651–661. https://doi.org/10.1016/j.scitotenv.2018.11.109

Wallerstein, I. (2004). *World-Systems Analysis: An Introduction*. Duke University Press. https://doi.org/10.2307/j.ctv11smzx1

Walter, M., Deniau, Y., Herrera, V., & Bernat, H. C. (2021). *Mapeo de resistencias frente a los impactos y discursos de la minería para la transición energética en las Américas*. EJAtlas/MiningWatch Canada.

World Bank. (2020). *Climate-Smart Mining Initiative Overview* [Text/HTML]. World Bank Group. https://www.worldbank.org/en/programs/climate-smart-mining/overview

Yánez, I., & Moreno, C. (2023). Acumulación y desposesión por descarbonización. In M. Lang, B. Bringel, & M. A. Manahan (Eds.), *Más allá del colonialismo verde: Justicia global y geopolítica de las transiciones ecosociales*. CLACSO.

Yin, R. K. (2009). *Case Study Research: Design and Methods*. SAGE.

Zografos, C., & Robbins, P. (2020). Green Sacrifice Zones, or Why a Green New Deal Cannot Ignore the Cost Shifts of Just Transitions. *One Earth*, *3*(5), 543–546. https://doi.org/10.1016/j.oneear.2020.10.012