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RESEARCH ARTICLE



Extractivism

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ABSTRACT

This article reconceptualises extractivism as a core mechanism shaping climate-induced (im)mobilities, moving beyond technocratic framings that overlook its embedded socio-ecological and political dimensions. Drawing upon a qualitative case study in Antofagasta, Chile – an epicentre of copper and lithium extraction – we explore how classical, neo-, and green extractivisms generate not only territorial dispossession but also structural (im)mobility traps. In Antofagasta, in-depth interviews reveal the normalization of environmental degradation, precarious labour dependence, and infrastructural abandonment as drivers of immobility. The region's inhabitants – caught between desires for mobility and structural constraints – experience what the authors term “extractivist-based immobilities.” Discourses around “green mining” and technological fixes are met with scepticism, as they obscure persistent inequalities and fail to address the underlying drivers of socio-environmental harm. This article contributes to the climate mobility literature by foregrounding the relational geographies and power asymmetries embedded in extractive regimes. It calls for a politically re-signified understanding of extractivism – one that incorporates ecological, economic, and epistemic justice – as essential to any meaningful transition. Ultimately, it argues that decarbonization without de-extractivisation risks deepening global disparities and re-anchoring vulnerable communities to sacrifice in the name of a greener world.

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1. Introduction

Since its inception, studies on human mobility as a response to climate change have largely focused on migration, displacement and planned relocation (Zickgraf, 2019). Still, the debate has recently evolved to nuanced takes that also consider the variegated ways of climate change-related human mobility, including immobilities, relocation, circular mobilities, and forced displacements, among many others. This body of research, known as *climate (im)mobilities*, has shifted the focus to understanding the more nuanced relation between climate change to existing mobility patterns of everyday life, shaped by the situated socio-historical, material and political conditions taking place in the territories studied (Boas et al., 2022; Kothari & Arnall, 2019).

Moving beyond binary portrayals of populations as either trapped or voluntarily migrating (Ayeb-Karlsson et al., 2018; De Waard et al., 2022), allows to better comprehend a broader spectrum of experiences, including ambivalent immobility, precarious immobility (Transiskus & Gholamzadeh Bazarbash, 2024). It also facilitates understanding the relational struggles captured in frameworks like the ‘(im)mobility cube’ (Tschakert & Neef, 2022), where the climate-related (im)mobilities relate to the lived experiences of moving, staying, and receiving mobile populations upon arrival.

This plurality of movement, which cannot be well captured under the term ‘migration’ (Boas et al., 2022), opens the

possibility to analyse key sociospatial dynamics prevalent in the extractive industries related to climate-change solutions. For example, why people choose to keep living in a highly polluted ‘sacrifice zone’ next to a mining ore; work in a different region from where they live, becoming long-distance commuters; being expelled from the formal to the informal resource-extractive city; and periodically move from one resource periphery to another in a different region or country, attracted by new commodity supercycles (Arias-Loyola et al., 2025; Irarrazaval & Atienza, 2025).

In this context, the concept of *extractivism* emerges as a crucial, albeit often underestimated, analytical lens within conventional climate and mobility discussions. The literature on extractivism proposes a developmental strategy based on the relatively unbounded exploitation of natural goods, with little to no value added, by foreign (extractivism) or national-state (neoextractivism) interests, to promote growth and/or social developmental policies usually at the cost of the human and non-human life from extractive peripheries (Gudynas, 2009; Svampa, 2012). Here, multi-scalar stark power asymmetries between the multinational corporations, national state and the resource peripheries’ inhabitants determine the winners and losers from being plugged into the globalized and networked production of extractive goods (Arias-Loyola et al., 2025; Irarrazaval & Arias-Loyola, 2021).

This also means that the dynamics of (neo)extractivisms shape the (im)mobilities of the people directly and indirectly linked to the exploitation of natural goods, in a way that is different from climate-change affected empirical cases. Under (neo)extractivism, people must deal with the everyday effects and choices of participating – or being forced to participate – in these industries, which are the base for the ongoing energy-transition and climate change policies since natural goods are crucial for such efforts (Dietz, 2024; Gudynas, 2009; Svampa, 2012, 2019).

This article centres on the (im)mobilities under extractivisms in its traditionally associated intensive resource exploitation by foreign actors under free market conditions for exports, in its newer iteration where resource extraction is carried out by the nation-state, and in its most recent rebrand as green (neo)extractivism. We argue this concept offers a crucial but overlooked analytical lens within conventional climate and mobility debates. Extractivism is not an external factor, but a structural process that actively produces geographies of dispossession, eroding habitability and generating complex (im)mobility dynamics. These dynamics are often driven by the global economy, like the current energy transition. This article seeks to re-signify extractivism, understanding it as a process that entwines dispossession, labour precarity, and environmentally induced (im)mobilities. To operationalize this re-signification, we adopt a neo-Gramscian lens (Ford & Newell, 2021; Winkler, 2020). This perspective allows us to analyse not just the material extraction, but the discursive ‘hegemony’ that anchors populations. It explains how narratives of economic necessity and ‘green’ technological fixes manufacture a consent to immobility, even in the face of environmental degradation.

To do so, we draw on a qualitative case study of Chile’s most important mining region, the Antofagasta Region. Its historic relevance as the main copper producer worldwide is well-known, but its recent role in lithium extraction has quickly become central since both are critical elements for global decarbonization. We conducted 30 in-depth interviews with a range of local actors, adopting a critical urban political ecology perspective, while using secondary sources to describe its economic and political geographies. We explore how lived experiences reveal extractivism’s unique mechanisms shaping life, mobility options, and territorial permanence.

The article is structured as follows. First, we review the critical literature on our key topics. Second, we detail the methodology employed. Third, we present our qualitative findings. We highlight how mining dependence erodes habitability. It also generates cycles of labour migration and precarious immobility. Fourth, we discuss these findings in light of theoretical debates. Our results indicate that extractivism produces what we term extractivist-based (im)mobilities. Here, chronic pollution tethers workers to sacrifice zones. Debt-anchored housing and long-distance commuting regimes also play a role. Meanwhile, “green mining” discourses are met with local scepticism. They fail to conceal the model’s underlying contradictions.

2. (Im)mobilities under extractivism

This literature review shows how extractivism is a multidimensional process that actively produces geographies of

dispossession and (im)mobility, including those exacerbated or masked by the climate crisis.

2.1. Defining and framing extractivisms

During the early twenty-first century, and weary of the austerity of the ‘Washington Consensus’ where the neoliberal project was considered as ‘the end of the history’ (Fukuyama, 1992), resource-rich Latin American countries elected a wave of progressive governments (like Lula da Silva in Brazil, Evo Morales in Bolivia and Rafael Correa in Ecuador) (Gudynas, 2009; Svampa, 2012, 2019). These governments, known as the ‘Pink Tide’, sought to overcome underdevelopment through the control of the extractive resources previously exploited by multinational corporations. This period coincided with the ‘Commodity Supercycle’ (2003–2013), during which sustained high prices fostered an expansion of the primary sectors (a ‘reprimarisation’ of the economy), often to the detriment of manufacturing (Cooney, 2016). Such conditions fuelled a new wave of resource nationalism, leading to the (re)nationalization and state control of extractive industries, where the objective was to fund social and redistributive policies to ameliorate poverty and socioeconomic inequalities (Burchardt & Dietz, 2014; Svampa, 2012, 2013).

Analysing these events, social scientist Gudynas (2009) proposed a conceptual framework based on the notions of *extractivismo* (extractivism) and *neoextractivismo* (neoextractivism). Extractivism, according to Gudynas (2009) and others (Acosta, 2013; Burchardt & Dietz, 2014; Riascos, 2014; Svampa, 2012), is the prime political-economic model violently imposed during the colonization of Latin America, characterized by: i) the intensive, private appropriation of natural resources by foreign interests; ii) for large-scale exploitation; iii) mostly for exports; iv) with centralized decision-making processes and stark multiscale power asymmetries; v) with maximum exploitation of labour (through slavery and/or precarious working conditions); and vi) minimal local value-added or captured. This configuration foreshadowed later neoliberal state formations, as the colonial state confined itself to guaranteeing the conditions for the model’s reproduction, primarily through legislation and coercive violence (Acosta, 2013; Svampa, 2013, 2019). This ‘classical’ extractivism heavily depends on foreign direct investment (FDI) and seeks macroeconomic growth, under liberalized market frameworks (Gudynas, 2009; Svampa, 2013).

Gudynas also identified a new form of extractivism emerging from the Pink Tide, labelled as *neoextractivismo*. Rather than challenging the extractivist model, progressive governments reasserted state control over resource industries previously dominated by multinational corporations, using the extractive rents to fund social policies (Gudynas, 2009). In this sense, extractivism and neoextractivism are socioeconomic development projects, but legitimized by different objectives (Acosta, 2013; Burchardt & Dietz, 2014; Svampa, 2012, 2013). Both models were underpinned by the ‘Commodities Consensus’, or the axiom that macroeconomic growth and development would be reached by exploiting natural goods, either by the state or by private multinational firms. Consequently, natural goods were conceived as treasures to

be unearthed rather than as a curse to be lifted (Auty, 1994; Bridge, 2008) and, thus, (neo)extractivism came to be upheld as the sole pathway to development (Bringel & Svampa, 2023; Svampa, 2013).

The current climate crisis and its pressure for a rapid energy transition, has deeply reshaped the landscape where (neo)extractivisms unfold. Historically, the Global North has accumulated wealth as a primary emitter of greenhouse-effect gases and a net importer of extractive resources from the Global South (Jerez et al., 2021; Lang et al., 2024). To maintain its high-consumption lifestyles – and associated high levels of energy use – the Global North has tackled the shift from fossil fuels to renewable energies through an overly simplified project of technical solutions and the ‘decarbonisation’ of production, labelled as the ‘Decarbonisation Consensus’ (Bringel & Svampa, 2023). This approach marginalizes the need to confront the transition’s complexity as a socioeconomic, structural and biophysical issue (Akizu et al., 2017; Nightingale et al., 2020). It also obscures how such solutions heavily depend on the abundant extractive resources from the Global South – such as minerals, water and wood – as well as the large *empty spaces* needed for the location of renewable energy infrastructure.

Henceforth, the decarbonization consensus under the current climate crisis marks the beginning of the *green (neo)extractivism* era (Voskoboynik & Andreucci, 2021). In this framing, ‘green’ refers to the increasing use of renewable energy in production (Dietz, 2024), whereas the prefix ‘neo’ informs whether the extractivist project is primarily driven by the state (neoextractivism) or by free-market forms of modern extractivism. This label strategically conceals the necessary extractive components of the energy transition, since the global division of labour presumes that resource-rich territories must be ‘sacrificed’ for the benefit of the high-energy high-consumption late-capitalist civilization (Akizu et al., 2017; Dietz, 2024; Juskus, 2023).

Furthermore, ‘green (neo)extractivisms’ are legitimized through the idea that resource peripheries are doing their part in tackling the climate crisis by supplying the inputs necessary for the technological solutions underpinning the ecological modernization of production and consumption. By exploiting these natural goods, resource peripheries are also led to believe that they are promoting sustainable macro-economic growth and development for the extractive country and its subnational regions, on the basis of an assumed spillover effect of captured value (Arias-Loyola et al., 2025; Irrázaval & Arias-Loyola, 2021; Shade, 2015; Voskoboynik & Andreucci, 2021).

To fully grasp the persistence of these models despite their evident socio-ecological costs, it is vital to incorporate a neo-Gramscian perspective on energy transitions. From this vantage point, extractivism operates not merely through material coercion or economic necessity, but by establishing a ‘hegemony’ – a cultural and political consensus that frames intensive resource exploitation as the inevitable ‘common sense’ path to national stability and welfare. This hegemonic power acts as a stabilizing force, creating a ‘passive revolution’ where potential resistance is neutralized by integrating technical fixes – such as ‘green’ certification or renewable energy

inputs – without altering the fundamental structure of accumulation. Consequently, the transition to ‘green (neo)extractivism’ functions as a mechanism of regime maintenance; it re-legitimises the sacrifice of territories by equating mining expansion with the moral imperative of fighting climate change, thereby rendering alternative non-extractive futures unimaginable for the local population.

Still, a central weakness of the (neo)extractivism literature is its dichotomous spatial approach. Studies tend towards methodological nationalism or extreme localism. This omits complex, intermediate territorial realities. One solution is to incorporate elements from Critical Urbanism Economic Geography and Political Geography. These disciplines have studied the darker sides of globalized production (Lawreniuk, 2020; Phelps et al., 2018). Critical Urbanism provides a lens for analysing urban and peri-urban dynamics related to extractive industries, such as the expulsion from the formal to the informal city of workers, and the role of urban planning (or its absence) in such urbanizations. Conversely, Economic Geography allows for the study of intermediary cities connecting extractive territories with global production, while Political Geography focuses on the power asymmetries that directly shape the outcomes of (neo)extractivism. All of these are explored in relation to the (im)mobilities they foster next.

2.2. The (im)mobilities of extractivisms

All in all, extractivism, and its different forms, denotes the ensemble of practices, power relations and environmental regimes geared towards large-scale resource extraction for the global accumulation of capital. It is marked by high physical and technological intensity; an export orientation with scant domestic linkages; and corporate – state governance arrangements that externalize environmental and social costs (Gudynas, 2009; Svampa, 2012, 2013, 2019; Voskoboynik & Andreucci, 2021). Within the climate (im)mobility debate, we propose that extractivism is not a backdrop but a driving force: it engenders extractivist immobilities by tethering workers and communities to degraded territories through debt, subsidies or outright dispossession (in informal settlements, for instance); while simultaneously fostering the mobilization of those whose livelihoods collapse and/or of those looking better living conditions (promoting deportation, long-distance commuting and/or job seeking migration). This dynamic unsettles the trapped/voluntary immobility dichotomy. People may remain because of contractual obligations or subsistence ties (coercive immobility); choose to stay despite risk in order to defend territorial networks (ambivalent immobility); or engage in forced pendular mobility that loosens, yet never severs, their attachment to place. Extractivism, thus, forges intertwined geographies of expulsion and anchorage.

To resolve the tension between structural views of extractivism and the nuances of local development, we incorporate the relational turn in Economic Geography, specifically through the Global Production Networks (GPN) framework (Coe & Yeung, 2015). From this relational perspective, extractivism is not merely a unilateral imposition of ‘income displacement,’ but a complex process of ‘strategic coupling’ between global

firms and regional assets. However, in extractive peripheries, this coupling often takes a ‘dark’ form (Phelps et al., 2018). Rather than fostering value capture and development, the relational dynamics between the global mining industry and the local territory produce what Scholvin et al. (2019) term ‘Gateway Cities’ or, more critically, ‘Backdoor Cities’ (Atienza et al., 2021). In the latter, the relationship is defined by a lack of embeddedness and the externalization of costs, creating a functional disconnection that facilitates value extraction while anchoring social and environmental burdens locally. This relational asymmetry is precisely what generates the ‘trap’ of immobility: the territory is globally connected but locally depleted.

Noticeably, Economic Geography also allows us to identify some (im)mobility features in (neo)extractive contexts. First, the fly-in and fly-out of workers from regions different from where the extraction takes place, also known as *long-distance commutation* (LDC). This has been facilitated by the lower transportation costs, which have made building old ‘company towns’, where the company substituted the state and most – if not all – of its functions, more expensive than fly workers from outside the extractive region. (Arias et al., 2014; Phelps et al., 2015). Hence, the traditional enclave formations associated with the company towns have given rise to modern forms of enclaves, where extractive firms build a camp next to the ore or extractive site for long shifts (for example, seven days working and seven days off). Mining is especially known for this, leading to the cities close to the extraction site to shift from a city to live, to a city to take the flight back home (Auty, 1980; Irarrazaval & Atienza, 2025).

Likewise, from a Critical Urbanism lens, the commodity supercycles usually foster internal and international migration from people attracted by the higher wages in some industries, like mining, or by the seasonality of work, like wood. However, some of these industries are intensive in capital instead of

labour. Mining, for example, needs a relatively small labour force to work, meaning that a lot of the immigrants will be kept outside this industry. This, together with pressure by the mining industry and workers for land and second housing, usually leads to noticeably higher cost of living in extractive peripheries. This could forcefully expel labour force from the formal to the informal city, leading to new pressures over the housing markets (Arias-Loyola et al., 2025; Perucich, 2017; Vergara-Perucich & Aguirre-Núñez, 2019).

Drawing on Political Geography, the outcomes of (neo)extractivism could be explained by considering the stark power asymmetries usually found in global extractive production networks. A key concept is that of ‘sacrifice zones’, which are territories deliberately and systematically marginalized by the political metropolis or centre for a supposed ‘greater good’, such as national economic growth (De Souza, 2021; Juskus, 2023; Reinert, 2018). They are distinguished by the intentionality of the decision and the persistence of harm, manifested in chronic pollution, health issues and ecosystem degradation. In these zones, abandonment and exploitation coexist, since resource peripheries are essential for global capitalism’s high-consumption and high-energy productive system to thrive (Arias-Loyola et al., 2025; Reinert, 2018; Svampa, 2019). Sacrifice zones can be grouped into two types: those selected for their resources to host enclave-like activities, and those designated to concentrate environmental burdens to benefit other regions (De Souza, 2021; Juskus, 2023). In both cases, state planning and capitalist logics reproduce uneven geographies of accumulation and risk under the discourse of macroeconomic growth and the promise of sustainable development.

In territories marked by (neo/green) extractivism, the literature documents severe consequences. Widespread water depletion and contamination, a direct result of mining, severely impact traditional livelihoods and ecosystems,

Table 1. Classical extractivism, neoextractivism, and green extractivism.

Dimension	Classical Extractivism	Neoextractivism	Green Extractivism
Predominant period	Twentieth century (rise of neoliberalism and market liberalization)	Twenty-first century (rise of the Pink Tide and commodity supercycle)	Present day (energy transition and climate crisis)
Dominant actors	Foreign private corporations	The state (progressive governments) playing a leading role	Global North states, “green” corporations, and some Southern governments
Role of the state	Subsidiary; ensures legal and social conditions for foreign investment	Centralized; captures rents to finance redistributive and social policies	Ambiguous; promotes the “energy transition” while enabling extractive expansion
Key resources	Oil, copper, coal, gas	Copper, lithium, hydrocarbons, gold	Lithium, copper, “empty” lands for green hydrogen, wind and solar projects
Resource destination	Export with minimal added value	Export to finance public expenditure	Export to meet energy transition demands abroad, especially in the Global North
Ideological legitimation	Development through economic growth and foreign direct investment (FDI)	Development with social justice via state intervention	Sustainable development through ecological modernization and technological solutions
North – South relationship	Classical core – periphery model; structural subordination	Attempt at national autonomy from global capital	Reproduction of green colonialism; South as ecological sacrifice zone
Associated consensus	“Washington Consensus” Gudynas (2009), Svampa (2012)	“Commodities Consensus” (Svampa, 2013)	“Decarbonisation Consensus” (Bringel & Svampa, 2023)
(Im)mobilities (cross-cutting across all)	Long distance commuting, expulsion of workers from the formal to the informal city, commodity prices led internal/external migration, incapacity to leave sacrificed region due to health, cultural or financial issues		

Source: authors based on Gudynas (2009), Burchardt and Dietz (2014), Bringel and Svampa (2023), Svampa (2012, 2013, 2019) and Voskoboynik and Andreucci (2021).

particularly for local and indigenous communities (Giglio, 2021; Liu & Agusdinata, 2020; Perreault, 2013). This environmental dispossession often leads to direct displacement and the expropriation of private and/or ancestral lands (Schiaffini, 2013; Muñoz-Duque et al., 2020). At the same time, a range of mechanisms shape forced (im)mobilities, contingent upon inhabitants' cultural attachments to place, the strength of their social support networks, and their financial capacities, among several other factors (Nightingale et al., 2020). For instance, chronic pollution, land devaluation, and economic exploitation erode household capital and render traditional livelihoods unviable (Arias et al., 2014; Cottle, 2013; Cobs-Muñoz & Westerholt, 2025; Gayo et al., 2022; Greene & Morvant-Roux, 2020). Furthermore, debt and precarious labour markets can anchor populations in degraded environments, creating a state of entrapment (Greene & Morvant-Roux, 2020).

Mobility is a key adaptation strategy under extractivism, spanning short-distance moves by local inhabitants and long-distance migration/commuting by extractive workers (Cundill et al., 2021; Irarrazaval & Atienza, 2025). Yet intersecting drivers of immobility – economic constraints, social attachments, uneven risk exposure, and infrastructural lock-ins – are frequently intensified, and made harder to see, by the contemporary “green” extractive rush. Resistance movements are therefore crucial for contesting these models and rendering harms legible for vulnerable communities (Temper et al., 2020). Table 1 provides the comparative baseline, showing how extractive regimes consistently generate forced immobility or mobility under duress in policy planning debates and everyday survival.

3. Method

This study employs a qualitative critical case study to deconstruct ‘extractivism’ by examining its socio-spatial manifestations in the Antofagasta Region. Antofagasta is the epicentre of Chile’s globally significant copper and lithium production (USGS, 2023) and hosts two of the country’s five official sacrifice zones: Mejillones and Tocopilla (Pizarro et al., 2024). The region is also featured on the National Institute for Human Rights’ Environmental Conflict Map (INDH, 2024), while heavy metal contamination at the Port of Antofagasta generates severe health and environmental impacts in the regional capital (Tapia et al., 2018).

The study’s empirical core comprises 30 in-depth, semi-structured interviews conducted in the Antofagasta Region in January 2023. This moment, following the 2022 constitutional plebiscite, offered a unique window for public reflection on development models and environmental governance, though the interview design allowed for the exploration of broader concerns.

Participants were recruited using purposive and snowball sampling. Initial selection targeted a diversity of profiles based on their relationship to the extractive economy and their residence in different socio-spatial clusters. The heterogeneous sample included miners and non-mining workers, authorities, academics, social leaders, and environmental activists, amongst others, aiming to capture a rich web of

perspectives. Women comprised 57% (N = 17) of the participants.

The interview guide combined closed questions for socio-demographic data with a core of open-ended questions designed to elicit detailed narratives. While initially framed around the constitutional vote, discussions naturally extended to the regional extractive development model, environmental conflicts, pollution, and visions for the territory’s future. The in-person interviews lasted between 45 and 70 min, were audio-recorded with informed consent, and supplemented by fieldnotes.

For this article, the transcribed data were subjected to a rigorous qualitative thematic analysis using ATLAS.ti 23 software. Notably, this is a re-analysis of the material. While the original study focused on electoral behaviour, the present analysis re-examines the data through the critical lens of ‘extractivism’ and its entanglement with ‘climate (im)mobilities’. The coding process focused on identifying and categorizing narrative patterns that illuminate this relationship.

The coding process focused on identifying, categorizing, and interpreting key concepts, themes, and narrative patterns that illuminate: i) *The Lived Experiences of Environmental Degradation*, such as perceptions and normalization of pollution (e.g. dust, water contamination, toxic metals), concerns over health impacts (e.g. cancer), and compromised habitability (e.g. potable water quality issues); ii) *The Economic Dependencies and Entrapment*, related to the narratives reflecting dependency on the mining economy, fears of job loss due to environmental regulations, and perceptions of a lack of viable economic alternatives – factors contributing to precarious immobility; iii) *Dispossession and Unequal Development*, meaning the discourses about wealth extraction without adequate reinvestment or local benefit (e.g. “nothing stays in the region”), and consequent distrust in institutional capacities to manage resources equitably; iv) *the (Im)Mobility Dynamics*, meaning the explicit and implicit references to forced mobility (e.g. relocation of productive spaces), desired mobility (e.g. escape from degraded areas), constrained mobility (e.g. inability to move due to economic or social factors), and the ways in which the extractive landscape itself (e.g. the city as a mining camp) shapes movement and everyday access; and v) *Contradictions and Resistance*, leading to the identification of tensions, ambivalences, and critiques within participants’ narratives regarding the dominant extractivist model, including local perceptions of “green extractivism” discourses (e.g. lithium for batteries, “green mining”).

This analysis moves beyond description to uncover the power dynamics shaping socio-environmental realities and (im)mobility outcomes in Antofagasta. It aims to deconstruct how extractivism is understood, lived, and contested. Drawing on neo-Gramscian perspectives from energy transition scholarship (Ford & Newell, 2021; Husu, 2022; Winkler, 2020), the study analyses hegemonic and counter-hegemonic narratives to politically re-signify the term.

Ethical protocols (Ethical Committee Approval 014-2022, Universidad Católica del Norte, Chile), including informed consent and participant anonymisation, were paramount. While findings are specific to Antofagasta, the rich data offer profound insights into the mechanisms through which

extractivism fundamentally shapes the (im)mobile lives of those living in its shadow.

Finally, to deepen the interpretation of these thematic codes, the study moved beyond descriptive analysis to a critical interrogation of power dynamics. Drawing on neo-Gramscian perspectives from energy transition scholarship (Ford & Newell, 2021; Husu, 2022; Winkler, 2020), we employed a discursive framework to analyse the tension between regime maintenance and resistance. We operationalized hegemonic narratives as those aligning with the ‘common sense’ of the extractive regime – specifically, discourses that frame mining as the sole guarantor of economic stability, normalize ‘sacrifice zones’ as necessary for national development, or present technological fixes (such as ‘green mining’) as sufficient solutions to structural crises. Conversely, we identified counter-hegemonic narratives in instances where participants challenged this consensus through embodied knowledge of contamination, deep skepticism towards state and corporate promises, or the articulation of alternative, non-extractive valuations of territory. This analytical layer allowed us to map how the concept of ‘extractivism’ is politically re-signified in everyday life, revealing the specific discursive mechanisms that either anchor populations to precarious immobility or drive the desire for escape.

3.1. The Antofagasta region

The region is characterized by a ‘toxic legacy’ resulting from decades of regulation-free industrial expansion. Studies have documented high concentrations of heavy metals (arsenic, copper, zinc, and lead) in street dust and sedimentary soils in urban areas (Tapia et al., 2018). Furthermore, epidemiological research has historically linked the region’s drinking water – which was naturally contaminated with arsenic until the installation of treatment plants – to significantly higher mortality rates from lung and bladder cancer compared to the rest of the country (Ferreccio et al., 2000). This ‘environmental saturation’ forms the material backdrop against which the subjective narratives of habitability are constructed.

Antofagasta’s long history of large-scale extraction makes it an ideal context for investigating the entrenched impacts of extractivist development models on human (im)mobilities and habitability. This research, therefore, aims to uncover local perceptions and narratives that reveal how extractivism shapes, constrains, and is contested within a territory marked by significant environmental degradation and complex socio-economic dependencies (Figure 1 illustrates a specific area of the city that spatially represents this claim).

4. Findings

The narratives collected in Antofagasta – the epicentre of copper and lithium mining in Chile (Figure 2), offer a window into the deep and often contradictory realities of life under an entrenched extractivist model. These qualitative testimonies go beyond explaining specific political junctures by shedding light on the mechanisms through which longstanding mining dependence shapes economic and spatial dynamics. As detailed below, these dynamics generate forced (im)mobilities and precarious forms of entrapment, reinforced by a persistent erosion of habitability that normalized socio-spatial inequalities.

4.1. Erosion of habitability and normalized pollution: prelude to (im)mobility

A cross-cutting theme in the interviews is the daily negotiation with severe environmental degradation. This is not merely a backdrop to life in Antofagasta but an active force that compromises the territory’s habitability. However, the analysis reveals that this degradation is not always resisted; rather, it is often subject to a complex process of normalization – a coping mechanism essential for enduring life in a “sacrifice zone”. For instance, when addressing the city’s environmental urgency, participants displayed a cognitive dissonance regarding pollution sources. Two interviewees acknowledged the physical presence of contaminants while simultaneously minimizing their impact or displacing the blame, illustrating a



Figure 1. Industrial sector of “La Negra”, near Antofagasta, cited by multiple interviewees as one of the city’s main sources of pollution.

Source: Author’s own elaboration, based on fieldwork conducted on 8 January 2023.



Figure 2. Map of Chile, the Antofagasta region, and its mining towns.

Source: Own elaboration.

fragmented collective memory of the “Este polvo te mata” (“Dust Kills You”) campaign:

“I’d say dust isn’t really the problem. The lorries have stopped coming through. They’ve made plenty of changes to tackle the dust issue, and it doesn’t bother me ... but, yes, the lorries still come down, and that’s something you can’t control. They’re just random bits of traffic you might run into at any time.” [female professional contractor in large-scale mining]

“In the city centre, we don’t face the environmental problems people up north have with all the rubbish-burning – no, nothing like that here. There’s the ‘El Polvo te Mata’ campaign, led by the current Regional Governor ... so for the centre the real environmental issue is the pollution from the heavy cargo going through the port. That’s the contamination we get downtown, yes.” [male, public official]

These narratives reveal how inhabitants construct a “tolerable” reality to remain immobile in a polluted space. The contractor’s admission that “lorries still come down” contradicts her initial claim that “dust isn’t really the problem,” suggesting an internalized resignation where uncontrollable risks are reclassified as “random bits of traffic.” This resignation leads to active distrust regarding basic resources, specifically drinking water (Figure 3). Despite the technological implementation of desalination, the local population relies on a “bodily archive” of contamination history rather than official safety assurances:

“I have been from Antofagasta for sixty-some years (...) We were always told that the water had a high percentage of arsenic. Therefore, people of my generation have arsenic in our bodies and you will notice that there are white spots on our bodies in different parts.” [male, public official]

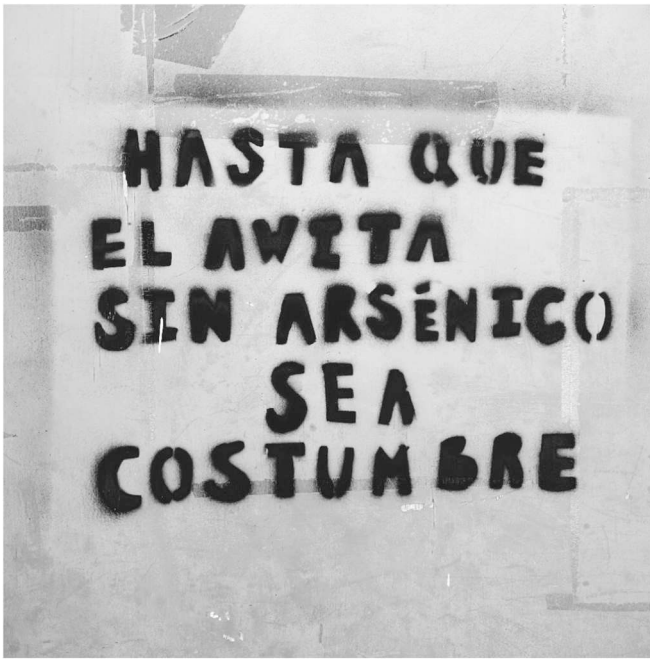


Figure 3. “Until arsenic-free water becomes a habit” – stencil photographed on a wall in the city of Antofagasta.

Source: Author’s own elaboration, based on fieldwork conducted on 8 January 2023.

“If we are spending millions of dollars on installing the biggest desalination plant in South America ... To truly have clean water entering your house, prove it to me!” [male, architect]

Here, the “white spots” on the body serve as somatic evidence that outweighs techno-managerial promises. The architect’s demand to “prove it” highlights a rupture in the social contract. This erosion of habitability acts as a biopolitical pressure: for those with resources, it drives environmental displacement (mobility as escape); for the majority, the normalization of toxic exposure becomes a prerequisite for survival, resulting in a precarious immobility where staying requires accepting a compromised biological existence.

4.2. Mining dependency and blocked alternatives: anchors of precarious (im)mobility

Economic dependency on the mining sector operates not just as a financial reality but as a hegemonic discourse that narrows the horizon of possibilities. This dependency anchors the population to the territory through a logic of “lock-in,” where the preservation of the extractive model is perceived as synonymous with survival, overriding ecological concerns.

While participants generally acknowledge the climate crisis, their support for environmental regulation collapses when it comes into tension with labour stability. The following testimony illustrates how the fear of economic immobility (unemployment) enforces physical immobility in the extractive zone:

“We must all be mindful of environmental care, but it shouldn’t become an obstacle to economic development (...) to ensure job stability for people and productivity for companies.” [male, professional in large-scale mining]

This narrative reflects a successful hegemonic alignment where workers internalize corporate productivity goals as their own

safety net. Furthermore, the analysis reveals a profound epistemic disconnect between local extractive knowledge and global environmental governance. When discussing conservation efforts, such as the protection of the Peruvian Tern (*Sterna lorata*), the friction between abstract biodiversity goals and concrete extractive labour becomes palpable:

“We can extract the ore without polluting – clean, leaving nothing tainted. But they tell me, ‘You can’t, because there’s this bird, the Peruvian tern, you’ve got to protect it.’ I don’t even know the bird; I’ve no idea who the hell this bloody Peruvian tern is!” [male, small-scale mining worker]

This frustration highlights the epistemic violence of “green” regulations imposed from above (or from Santiago, in this case). For the worker, the bird is an invisible obstruction to his livelihood. This disconnect reinforces the “trap”: the worker is bound to the mine because his skills and knowledge are specific to extraction. They cannot “move” towards a green economy because the very language of that transition (biodiversity, conservation) is alien to their lived experience. Thus, the lack of intelligible economic alternatives anchors populations to the mine, perpetuating a cycle in which environmental degradation is the accepted cost of staying put.

4.3. Territorial dispossession and uneven development: perceptions of injustice and abandonment

The subjective experience of living in Antofagasta is deeply marked by a sense of “metabolic rift” – a perception that the region is being drained of its material wealth with nothing returning to sustain local life. This feeling of dispossession challenges the narrative of mining as a driver of regional development and fuels a sense of spatial injustice.

Residents articulate a clear critique of “rent extraction,” describing their home not as a city, but as a site of plunder. The following testimony vividly captures the transition of Antofagasta from a place of dwelling to a “backdoor city” of the global economy:

“We’re just gouging out a hole, ripping out natural resources with no added value for the region. It leaves a raft of impacts – environmental, yes, but social as well – and what’s left behind? The tax take is peanuts, and the little that is collected goes straight off to central government.” [male, former local government official from the region]

This spatial dispossession is compounded by temporal frustration. The state’s abandonment is felt as a theft of time, creating a desperate urgency for development that never materializes. The visceral reaction of a public servant underlines this tension:

“It’s bloody disrespectful to ask me that – I need to see the city moving here and now (bangs the table several times). I need the city to develop today, right this minute; we’ve got all the capability for it, not to keep hanging about.” [male, public servant]

Crucially, this uneven development functions as a mechanism of expulsion within the territory. The high cost of living, driven by the mining “super cycle,” fractures the urban fabric, pushing vulnerable populations from the formal city into informal settlements (*campamentos*). This is not voluntary

migration but a forced displacement driven by the commodification of urban space:

“So, roughly ten years ago, people started coming in from Arica, from up north – and from further south as well – to work, and wages nosedived. They were no longer hired straight by the mining firm but through contractors, so they ended up as cheap labour. Now, an Antofagasta lad who heads up to the mine, leaving his family behind on a seven-and-seven or fourteen-whatever rota ... it just isn’t worth it for six or seven hundred lucas ($\approx$ CLP \$1000 each). When the rent alone is four hundred lucas, plus school fees and food, what’s he got left? Moving into the campamento.” [female, campamento community leader]

This testimony deconstructs the myth of mining wealth. It reveals a tiered mobility system: while resources move frictionlessly to global markets, local workers are caught in a pincer movement of falling wages and rising rents, forcing them into “campamentos” – a spatial manifestation of the dispossession inherent to the extractivist city.

4.4. “Green” extractivism and the technological veil: challenging techno-managerial discourses

In the context of the global energy transition, Antofagasta has become a battleground of narratives. The interviews reveal a sharp divide between hegemonic discourses of “green mining” (promoted by corporate and state actors) and counter-hegemonic critiques from local experts who see through the “technological veil.”

On one side, the corporate narrative of sustainability has successfully permeated the consciousness of some workers, who repeat the promise of a clean transition without questioning the underlying material realities:

“Actually, I was at the opening of the new plant last Wednesday – it’s 100 per cent sustainable. I mean, they haven’t used any freshwater for years. Nor do they take electricity from coal or anything like that; they’ve got their own solar arrays and a wind farm. So no, they don’t use any ... all their energy is renewable, they’re completely sustainable.” [female professional contractor in large-scale mining]

This quote exemplifies the power of some sort of “green” ideology to obscure the violence of extraction; the shift to renewable energy inputs is equated with the sustainability of the extraction process itself. However, this techno-optimism is dismantled by critical local voices who expose the material continuity of extractivism. They argue that “green mining” is an oxymoron that changes the energy source but maintains the toxic methods:

“When you look at how the raw materials for e-mobility are produced, it’s still copper – done exactly the same way as before. No major technological breakthrough at all. At best – sure – the industry says, ‘Now we’re using renewables, now we’re using desalinated water.’ But underneath it’s the same old thing: still sulphuric acid all the way.” [female, academic]

This counter-narrative pierces the “green” branding, revealing that the transition is merely an aesthetic shift in the inputs (sun, wind) while the output (sulphuric acid, waste) remains hazardous. These contesting narratives highlight a critical tension: while techno-managerial discourses attempt to pacify resistance by framing mining as “sustainable,” residents’ lived realities point to a structural continuity of pollution. This suggests that “green extractivism” in Antofagasta serves not to liberate the territory from environmental burden, but to re-legitimise the very model that anchors its population to a toxic future.

The network of narratives visualized in Figure 4 allows us to move beyond a purely economic definition of extractivism. By

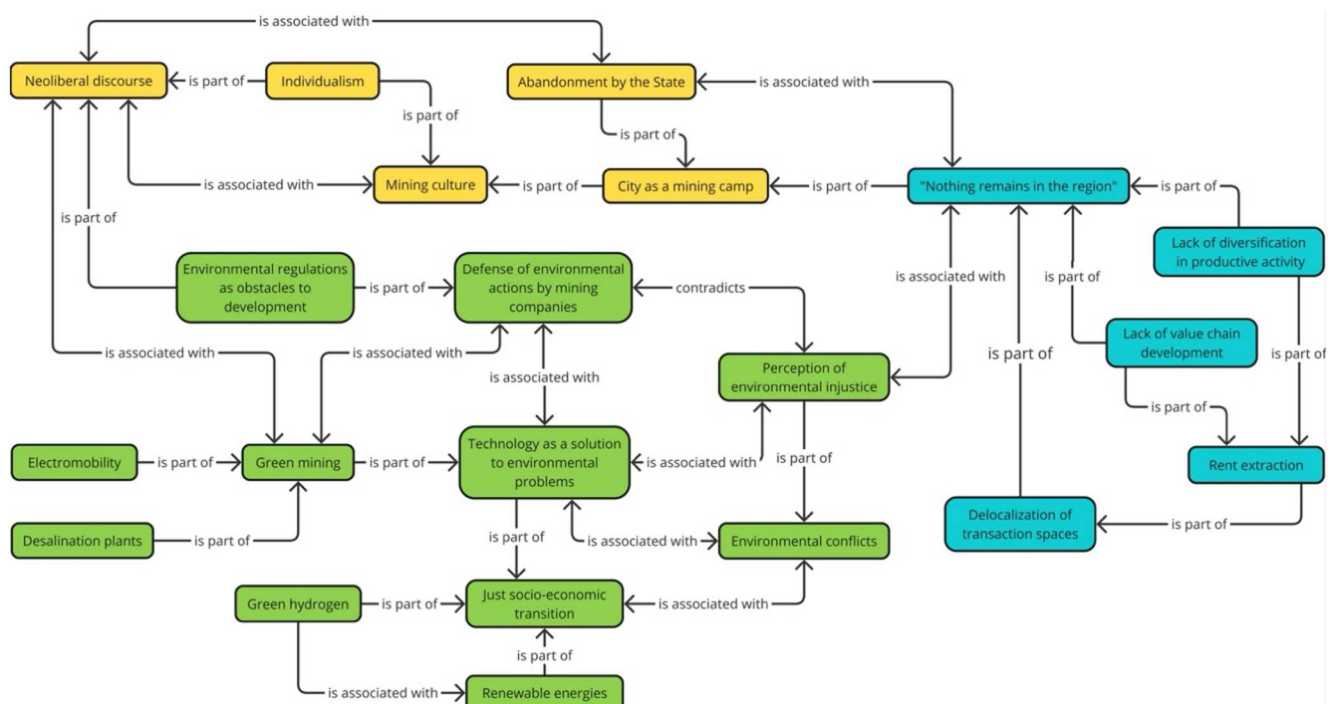


Figure 4. Controversy map for the narratives identified in sections (4.3), territorial dispossession and uneven development, and (4.4) green extractivism and the technological veil. The colours assigned to each concept indicate their thematic framing: light blue denotes discourses on regional mining activity; yellow, discourses involving socio-political imaginaries; and green discourses relating to the environment and sustainability.

tracing the connections between ‘neoliberal discourses,’ ‘technological solutions,’ and ‘territorial abandonment,’ the map reveals extractivism not merely as resource depletion, but as a sociotechnical apparatus of (im)mobility. As the controversies illustrate, environmental discourses revolve around optimistic narratives of a green transition, technological solutions, and sustainability, projecting sweeping visions of progressive change. Socio-political imaginaries encompass notions of territorial opportunity and modernization, including longstanding neoliberal development promises of regional progress and prosperity. In contrast, the regional development grievances cluster highlights lived experiences of abandonment, deep institutional mistrust, and socio-environmental harm stemming from ongoing extractivist practices. The map exposes how these clusters intersect and often clash: imaginaries of progress co-occur with material realities of environmental degradation, and yet grand discourses of territorial opportunity remain starkly disconnected from local perceptions of injustice and neglect. These contradictions and entanglements are compounded by the difficulty of envisioning alternatives beyond extractivism; sustainability ideals are often embraced rhetorically, even as the extractive model continues to dominate on the ground. This tension forms the basis of what we define in the following discussion as ‘extractivist-based (im)mobilities’ – a condition where populations are simultaneously anchored by economic dependency and displaced by ecological degradation.

5. Discussion

This article has sought to critically reassess the term “extractivism” by situating it at the nexus of climate (im)mobilities and challenging the techno-managerial approaches that often dominate its interpretation. The qualitative findings from Antofagasta, when placed in dialogue with the literature, contribute to this re-signification by revealing extractivism not merely as an economic activity, but as a complex socio-ecological and political process that profoundly shapes territories, lives, and the (im)mobility options of their inhabitants.

5.1. From eroded habitability to precarious immobility: empirical evidence from Antofagasta

The literature on climate (im)mobilities has moved towards more nuanced understandings, acknowledging concepts such as “ambivalent immobility” and “precarious immobility” (Transiskus & Gholamzadeh Bazarbash, 2024), as well as psychosocial and wellbeing “traps” generated by forced immobility (Ayeb-Karlsson et al., 2018). Testimonies from Antofagasta illustrate these dynamics starkly. The normalization of pollution – evident in the professional who, while acknowledging regulatory failures, claims that “dust isn’t pollution,” or the official who initially denies pollution in the city centre only to later concede its presence – alongside persistent mistrust in the quality of even desalinated water, are clear indicators of severely eroded habitability. This constant degradation, a hallmark of “sacrifice zones” (Barreda, 2021; Cobs-Muñoz & Westerholt, 2025), not only serves as a latent factor in environmental displacement among those with the means to

leave, but translates into “precarious immobility” for many others. The lack of viable economic alternatives, land devaluation in contaminated areas (Cottle, 2013), and the internalization of environmental risk as “something unmanageable” serve as anchors that trap people in harmful environments, limiting both agency and wellbeing.

5.2. Extractive dependency, dispossession, and the geographies of forced (im)mobility

The literature clearly identifies extractivism as a driver of territorial dispossession and mobility restriction (Giglio, 2021; Perreault, 2013), particularly through the depletion of water resources and land expropriation (Liu & Agusdinata, 2020; Schiaffini, 2013). The findings from Antofagasta strongly echo these claims. The recurring complaint that “we’re gouging out a hole, extracting natural resources (...) and what’s left? Tax revenues are minimal, and what little is generated is sent to central government” is a direct expression of material dispossession and the unjust distribution of generated wealth. The perception of being a “backdoor city” (Atienza et al., 2021) that bears the environmental and social costs while retaining none of the benefits feeds institutional mistrust and disillusionment with development promises.

This dynamic of dispossession and uneven development, coupled with structural dependency on the mining sector, configures complex geographies of (im)mobility. On the one hand, the promise of employment in mining attracts “cycles of labour migration” – as highlighted in the article’s abstract. On the other hand, the lack of productive diversification and the precarious nature of mining employment, subject to commodity price fluctuations (e.g. the “super cycle” of copper), can generate both immobility due to lack of alternatives and forced displacement during economic downturns. The comment by a mining professional about the need to avoid hindering economic development in order to “generate employment stability” reflects this extractive model “lock-in,” where fear of losing livelihoods outweighs other considerations, thereby limiting the capacity to imagine or build alternative futures – and effectively anchoring populations to precarious forms of life and labour.

Finally, this ‘lock-in’ must be read within the broader Chilean constitutional scenario (2022–2023). Although the interviews took place shortly after the rejection of the 2022 proposal – which had promised to enshrine rights of nature and regional autonomy – the subsequent closure of the constitutional cycle in 2023 reinforced the sense of institutional abandonment. For the inhabitants of Antofagasta, the failure to constitutionally alter the extractivist pact serves as the ultimate confirmation of the model’s hegemony. The inability of the political system to process socio-ecological demands leaves the region without an institutional channel for change, effectively transforming political frustration into a form of ‘civic immobility’ that mirrors their territorial entrapment.

5.3. The veil of “green” extractivism and the challenge to techno-managerial discourses

The global energy transition and the intensified demand for “critical elements” such as copper and lithium (Hund et al.,

2023; Srivastava & Kumar, 2022) – both extracted in Antofagasta – raise the issue of “green extractivism” (Dunlap et al., 2024; Ulloa, 2023). This concept, in which ecological sustainability narratives legitimise continued or new forms of extraction, resonates with local discourses. The sometimes uncritical trust that “technology is the solution to environmental problems,” or the promotion of “green mining” linked to electromobility or desalination – without questioning the underlying logic of exploitation – can be seen as a manifestation of this new phase of extractivism.

However, findings from Antofagasta also reveal scepticism and contradictions towards such discourses. Local critiques of inadequate environmental regulations and the insufficient protection efforts by the state and mining companies (evident in survey responses) directly challenge techno-managerial approaches that portray mining development as merely a technical or sustainability management issue. The contradictions in actors’ own narratives (e.g. the miner who prioritizes production while being unaware of the endangered Peruvian tern) highlight the tension between global sustainability narratives and local productive pressures. This underscores the need to move beyond superficial solutions and interrogate the “deeper structural conditions” that tie extractive economies to habitability erosion and the production of unjust (im)mobilities – even under the umbrella of the “green transition.”

5.4. Towards a critical understanding of extractivism for climate (im)mobilities

In light of the discussion and the narrative connections mapped in Figure 3, extractivism – within the context of Antofagasta and its relevance to the climate (im)mobilities glossary – should be understood as a multidimensional process. The ‘Controversy Map’ demonstrates that the tension between hegemonic ‘green’ discourses and the counter-hegemonic experience of ‘abandonment’ structurally produces specific forms of movement and stasis. Therefore, we define this process as one that:

- Actively produces differentiated (im)mobilities: It generates forced displacements through degradation and dispossession; fosters precarious immobility through economic dependency and normalized risk; and conditions labour migration within precarious frameworks.
- Systematically erodes habitability: It compromises health, access to basic resources such as clean water, and general quality of life, creating “sacrifice zones” where life is subordinated to economic growth.
- Operates through continuous dispossession: Not only of natural resources, but also of economic value, local territorial decision-making capacity, and the possibility of imagining non-extractive futures.
- Is sustained by hegemonic (neo-Gramscian) discourses: These normalize environmental harm, present technology as a panacea (Ford & Newell, 2021; Winkler, 2020), and limit community agency – as evidenced by the internalization of certain problems as “unmanageable.”
- Is perversely entangled with the global climate agenda: Through “green extractivism,” territories in the Global

South – such as Antofagasta – are once again sacrificed for the “decarbonisation” of the Global North, perpetuating inequalities and generating new forms of climate-induced (im)mobility in both broad and critical senses.

The findings from Antofagasta demonstrate that extractivism is not merely a backdrop for climate (im)mobilities, but a key driver of them. A critical definition must capture this complexity – recognizing its political nature, its impact on socio-environmental justice, and its role in shaping who moves, who stays, and under what conditions, in a world in crisis.

6. Conclusion

This article has critically unpacked the term *extractivism*. It argues for its centrality in a Critical Climate (Im)Mobilities Glossary. Findings from Antofagasta, Chile, demonstrate this clearly. Extractivism reveals itself as a complex socio-ecological and political process. It actively produces differentiated (im)mobilities not merely through economic constraints, but through a hegemonic consensus. Our analysis reveals that the ‘extractivist trap’ is maintained by a cultural narrative that frames pollution as a necessary trade-off for stability, effectively manufacturing consent for precarious immobility. This shows how mineral-dependent development traps people and places. It traps them within structurally hazardous landscapes. This approach challenges simple techno-managerial narratives. It also exposes the structural conditions linking extraction to social vulnerability and forced (im)mobility.

The main qualitative findings highlight several key points. Mining dependency in Antofagasta contributes to an erosion of habitability. Pollution is normalized as a prelude to precarious immobility. This is reinforced by a lack of economic alternatives. Labour dependency also anchors communities to their territories despite the risks. Feelings of dispossession and uneven development fuel mistrust. Paradoxically, this can spur some forms of mobility as an escape. It may also lead to informal settlements as survival strategies. This occurs in a territory devoid of equitable opportunities. Finally, local scepticism toward green extractivism is common. It exposes the contradictions of a model seeking to reproduce itself under the guise of sustainability.

These findings raise new and important research questions. How do experiences of extractive (im)mobility vary across different contexts? How do commodity price cycles, like the lithium boom, shape these dynamics? We urgently need to investigate *just* energy transition policies. Do they address the (im)mobilities generated by green extractivism? Or do they continue to overlook them in the Global South? Further studies on community agency and resistance are also necessary. This includes research on the construction of viable territorial alternatives. Longitudinal and comparative research across multiple sacrifice zones would be particularly valuable.

A critical understanding of extractivism is indispensable. It is essential for rethinking sustainable development in a world in crisis. Climate mitigation and adaptation policies must address their true costs. This includes the vital energy transition. Policies must internalize the socio-territorial costs and

(im)mobilities induced by extraction. This is required to avoid perpetuating injustice and new forms of maldevelopment. Recognizing extractivist-based immobilities helps identify populations in urgent need of attention. It ensures that no community is left anchored to toxicity. This cannot be done in the name of a greener world. Ultimately, re-signifying extractivism is a crucial step. It moves us towards a development paradigm that centres socio-environmental justice, habitability, and dignity within the global climate agenda.

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