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# **“Green are Fields, Not Mines”: The Case of Lithium Mining and Resistance in Serbia**

## **Abstract**

This research is concerned with the emerging lithium extractivist frontier in Serbia. In 2004, a new mineral *jadarite* was discovered by the multinational mining company Rio Tinto, and it was found to be unusually rich in lithium and boron. Since then, more lithium deposits have been discovered in Serbia, with companies seeking to extract the element that is one of the essential components for batteries in electric vehicles (EVs) as well as for renewable energy storage. It is thus central to the electrification of the transport and energy systems and for the green transition more broadly. The Jadar Project, led by Rio Tinto, was set to become the biggest lithium mine in Europe, with the planned start of construction in early 2022. Nevertheless, the project drew widespread resistance from locals, with escalating protests and thousands of people blocking roads towards the end of 2021, ultimately leading to the official cancellation of the lithium mining project in January 2022. Through ethnographic fieldwork and in-depth interviews, this research examines the attitudes of locals and activists to lithium mining in Serbia. With a particular focus on the materiality of lithium as a “green” element, the spatiality of Serbia as a European periphery and the temporality of the Anthropocene as a state of emergency, this research seeks to address the largely neglected forms of harm that the global demand for lithium holds. The lithium mining initiatives in Serbia thus become key sites of contestation of what a sustainable future holds and present a fundamental challenge to the hegemonic view on sustainability that is based on mining and extractivism.

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In loving memory of my parents Ljiljana and Djordje Djukanović.

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## List of Abbreviations

BiH	Bosnia and Herzegovina
EIA	Environmental Impact Assessment
EV	Electric vehicle
HBS/HBF	Heinrich Böll Stiftung/Foundation
IDP	Internally displaced person
IEA	International Energy Agency
LIB	Lithium-ion battery
MGSI	Ministry of Construction, Transport and Infrastructure ( <i>Ministarstvo građevinarstva, saobraćaja i infrastruktura</i> )
Mt	Megatonne, equivalent to 1 million tonnes, or 1 billion kilograms
REE	Rare-earth elements
RTS	Radio Television of Serbia ( <i>Radio-televizija Srbije</i> )
SEOS	Association of Ecological Organisations of Serbia ( <i>Savez ekoloških organizacija Srbije</i> )
SNS	Serbian Progressive Party ( <i>Srpska napredna stranka</i> )
UK	United Kingdom
US	United States
WWI	World War I
WWII	World War II

# Introduction

In 2004, a new mineral was discovered in a rural part of western Serbia, close to the borders with Bosnia and Herzegovina, by Rio Tinto, an Anglo-Australian multinational mining company. The mineral was named *jadarite* after the local river Jadar (pronounced “yadar”), which flows through the valley. Jadarite was found to have an “unusually high volume” of lithium (Kesler et al. 2012) and an “ideal composition” as it also contains borates (Tabelin et al. 2021). Following a series of exploration drills and economic assessments, the company committed \$2.4 billion in July 2021 to develop what would become Europe's largest lithium mine and one of the biggest lithium greenfield mines in the world (Rio Tinto 2022b). Yet, the project drew widespread resistance from the local population. Following a series of mass protests and blockades of roads and bridges across the country between November 2021 and January 2022, the Serbian government revoked Rio Tinto’s mining licences on 20th January 2022 (Sekularac 2022).

Lithium is an essential component of batteries that are necessary for the electrification of transport and energy systems and “green transition” more broadly. The extractivist project is consequently constructed as saving the environment rather than destroying it. The global demand for lithium is already vastly outstripping the supply (Tabelin et al. 2021), and the importance of lithium rises not only in the context of the ongoing climate and environmental crisis. The war in Ukraine highlighted the EU’s recent emphasis on energy security and sovereignty, considering China's 79% market share of the global lithium-ion battery (LIB) production (Placek 2022). In the European context, this deepens the need for a more “local” supply of lithium, such as from Serbia. The geopolitical importance of the lithium mine, which, according to some estimates, could supply 90% of Europe’s present lithium needs (Paul 2022), thus cannot be overstated.

Despite the Jadar Project being officially cancelled at the time of writing this thesis, its future remains uncertain. Locals report that the company continues to operate in the area and worry the project might be reinstated. In April 2022, the re-elected president Aleksandar Vučić called the cancellation of the Jadar Project a “mistake” only four days after the elections (Danas 2022b). In May 2022, Simon Thompson, the then-Chair and non-executive director of Rio Tinto, reportedly told the shareholders at the company’s AGM that “[w]e very much hope that

we will be able to discuss all of the options with the government of Serbia now the elections are out of the way” (Paul 2022). Moreover, additional lithium deposits continue to be discovered across the country as various companies seek to extract the element. What remains is the question of how the country is to manage (or not) its newly discovered lithium resources. Focusing on the case of jadarite in Serbia, therefore, provides an opportunity to think about how resistance to extractivist projects disrupts the temporality of those projects and what happens after they are put on hold while possibly (re)materialising and resurfacing in the future.

This research aims to understand the unique timeframe of the resistance to lithium mining leading to the cancellation of the Jadar Project before the construction of any lithium mine in the country could have begun. It focuses on the space for national decision-making opening at a range of different scales, including through the elections, and being contested. It explores different expectations invoked by various actors and different geographies of the future (as well as the past) imagined. Despite its significance, the anti-lithium mining movement in Serbia has not received sufficient attention. Yet, the new lithium mining initiative on the “doorsteps of Europe” as framed by Rio Tinto (2022b) becomes a key site of contestation of different understandings of what constitutes a sustainable future in the Anthropocene.

In this thesis, I seek to explore these contestations and address the largely neglected forms of harm that the global demand for lithium holds as the efforts to move from fossil fuels intensify. The key aim of the project is therefore to *explore and understand the geopolitics of extractivism of lithium in Serbia*. That is, I ask:

What forms of the geopolitics of extractivism emerge around the efforts to mine lithium in Serbia? How do these forms manifest themselves?

These research questions are pursued through ethnographic research. Drawing on the material gathered during my fieldwork, I frame my approach to the geopolitics of extractivism in terms of three interrelated themes: materiality, spatiality, and temporality. Each of the three components runs through the entire thesis as they are intimately intertwined and co-constituted. Their separation into the literature review and three chapters of the discussion nevertheless foregrounds the critical issues through which I address my research questions. While these categories are broad and loose, it is through the openness they provide that the question of lithium mining in Serbia can be addressed.

## *Thesis structure*

First, I embed this research within the existing scholarship on extractivism and geopolitics in the literature review. I introduce the literature on extractivism as a new but growing concept that seeks to interrogate extractivism as a dominant modality of capitalist development based on resource exploitation. I then introduce literature on lithium mining and focus on green extractivism as extractivism of the so-called “green” or “transition” minerals. This research seeks to contribute to the existing scholarship by bringing the literature on extractivism together with critical geopolitics scholarship, with a particular focus on materialities, spatialities, and temporalities. I then outline the methods employed in order to answer my research questions. I describe my ethnographic fieldwork and conducting interviews. I address the critique of ethnography as an extractive method and explain that my methodology subscribes to the critical, political, decolonial and feminist ethnography practice. Such practice is also reflective of the researcher’s positionality, and I outline my position between an insider and an outsider.

In the first substantive chapter, I focus on how the materialities of lithium and jadarite influence and determine the extractivist projects in Serbia. Firstly, I describe the discovery of the new mineral jadarite with a focus on its physical and chemical properties and the significance of the discovery. Second, I focus on the process of the local community learning about the mining project and organising themselves in response. Thirdly, I centre the exploration drills both as a way of establishing the presence of lithium for the mining companies and as sites of contestation through which the mining initiatives materialise for locals due to concerns about water and soil pollution. Finally, I focus on the role of the local knowledge, science, and expertise in delegitimising the lithium mining projects on environmental protection grounds, contesting the vision of lithium mining as “green” and seeking to demonstrate that the exploration drills have already polluted the local environment.

In the second chapter, I explore how the spatialities of Serbia, as a southeast European state but not a member of the EU, manifest themselves through lithium mining projects with geopolitical and historical specificities. First, I describe the sites of the past, history, and heritage and their importance for locals and activists. Second, I describe how most of the locals opposing the mining project are farmers, viewing the space as a source of livelihood in the sense of providing them with jobs and, more literally, sustaining them through food, both of

which are jeopardised by lithium mining. Third, I describe the historical and present spatialities manifest through the sentiments of becoming a new colony and a sacrifice zone. Finally, I describe how these sentiments led to the transformation of the movement onto the national level, mobilising thousands of people - what ultimately led to the cancellation of the Jadar Project.

In the final chapter, I focus on the temporalities of modernity, progress, development, and sustainability in the Anthropocene. First, I describe the current political situation in Serbia and contrast the insistence on progress and economic growth of the ruling party with a sense of stagnation and impossibility of change. Second, I focus on the question of abandonment and ruination through the prism of the houses that some locals sold to Rio Tinto during the land acquisition process for the construction of the mine, opening the question of rural development. Third, I outline the alternative developments beyond and after extractivism proposed by locals and activists in opposition to the mining project, focusing on small-scale organic farming over mining. Finally, I describe how these alternatives challenge the hegemonic understanding of sustainability based on continuous lithium extractivism and open the possibilities of imagining different futures.

# Literature Review

## Geopolitics of Extractivism

In order to explore the geopolitics of extractivism emerging around the lithium mining efforts in Serbia, it is necessary first to explain what is understood by extractivism. Extractivism as a concept originates from Latin America, where scholars have been concerned with making sense of the long histories of exploitation of raw materials by imperialist and colonial powers (Petras and Veltmeyer 2017; Acosta 2013; Aráoz 2013; Gudynas 2009, 2010, 2011, 2012; Bunker 1988). Such work has brought attention to the depletion of raw materials, natural resources, biodiversity, and social relations resulting from unequal and exploitative geopolitical and property relations (Obeng-Odoom 2021) between the colonial powers and colonised territories, centres and peripheries, both historically and at present. However, while describing historical processes, extractivism as an academic concept is relatively young (Chagnon et al. 2022). More recently, there has been a rise in the literature on extractivism in the English language, with the concept expanding both geographically and theoretically. Geographically, attention is growing toward African (Ayelazuno 2014), Arctic (Kröger 2016, 2019; Wilson and Stammler 2016) and post-Soviet spaces (Ocaklı et al. 2021). Theoretically, the concept is expanding to include agrarian extractivism (McKay et al. 2021), financial extractivism (de los Reyes 2022; Gago and Mezzandra 2017), digital extractivism (Chagnon et al. 2021; Couldry and Mejias 2019) and epistemic extractivism (Grosfoguel 2019).

Extractivism is, therefore, a broad and expanding field of research. The theoretical expansion has been contested, however. Authors such as Gudynas (2018) argue against an expansive understanding of the concept and believe that the definition of extractivism should be limited to the physical and material extraction of natural resources. In their view, expanding the definition and equating it with manifestations of capitalism impedes finding and imagining alternatives due to the overly broad understanding. Others are more hopeful about the value of expanding extractivism as an “organising concept” (Chagnon et al. 2022) for understanding the current global capitalist system. Gago and Mezzadra (2017) sought to complicate extractivism from its literal sense of extraction of natural resources to encompassing capitalist logic of expansion, accumulation, and colonisation, as resources extracted from the Global South are to be enjoyed in the Global North. Several scholars have sought to critique the “liberal neo-

developmentalism” discourse (Svampa 2012), “neo-extractivism,” or “progressive extractivism” (Andrade 2022; Villalba-Eguiluz and Etxano 2017; Brand et al. 2016; Burchardt and Dietz 2014; Petras and Veltmeyer 2014), which has in recent years positioned itself as a necessary precondition for fighting poverty and achieving equitable social development, especially in Latin America (Gudynas 2010, Engels and Dietz 2017). These are considered not simply temporary economic strategies for development. Instead, destructive practices of extractivism are seen to “inscribe social relations of domination into nature” (Burchardt and Dietz 2014: 480) and are “constituted by, and through, inequalities” (Ye et al. 2020: 156).

The dominance of extractivism as a development strategy illustrates how, since the beginning of the century, the exploitation of natural resources has dramatically expanded in size, scale, and pace (Nygren et al. 2022, Dunlap and Jakobsen 2020). Extractivism has become “a way of world-making, determining, and making demands on most aspects of modern societies, and on the overall organization of the world system and its dynamics” (Chagnon et al. 2022: 761). As a mode of exploitation, depletion, and capital accumulation, it is intimately linked to capitalist imperatives of economic growth, progress, and development (Ye et al. 2020). Moreover, as Chagnon et al. (2022) argue, extractivism is not only one of the ways in which capital accumulation occurs, but it is, in fact, becoming a “prominent modality” of capitalist development, although it has also been present in other politico-economic systems. They introduce the concept of “global extractivism” to account for the expansion of extractivism as a “way of organising life” on a scale of “planetary significance,” focusing on how it has developed from a modality of European colonialism and imperialism to an all-encompassing modality of global capitalism. Similarly, Dunlap and Jakobsen (2020: 1) use the term “total extractivism” to describe how “the techno-capitalist world system harbors a rapacious appetite for all life—total consumption of human and non-human resources—that destructively reconfigures the earth” and characterise the capitalist imperatives towards extractivism as “Worldeaters.” Although concerned with “classical” extractivism of natural resources as understood by Gudynas (2018), this thesis is broadly framed by the approach seeking to open up the concept as it is through such a broad understanding that the expansion of the capitalist logic and “greening” of extractivism can be interrogated, as I describe in the following section.

## Lithium Mining and Green Extractivism

The literature on extractivism has been concerned with the mining of metals, minerals and coal, and extraction of oil and gas (Chagnon et al. 2022; Gudynas 2018) - materials and industries framed as “dirty” (Lefsrud et al. 2017) and environmentally destructive. Acosta (2013: 62) demonstrates how under the imperatives of economic growth, environmental destruction becomes “accepted as the inevitable cost of achieving development” (Acosta 2013: 62). Similarly, Chagnon et al. (2022: 762) posit that extractivism is “diametrically opposed to the concept and practices of sustainability.” Yet, what happens when extractivism of a certain kind of resource - in this case lithium - is presented by some constituencies and interest groups not as in opposition to sustainability but as being in its very heart? There is a striking lack of attention paid to the emergence of new subjects of extractivism, such as lithium, which presents *a distinctive problem*. The hegemonic understanding of lithium as a key to green transition complicates the efforts to challenge extractivist logic. While it is well established that extracting and burning fossil fuels is incompatible with limiting global warming to 2°C (IEA 2021a; McGlade and Ekins 2015), lithium mining is construed in a more benign way as “play[ing] a key role in the fight against climate change” (Brooks 2020: 192).

Lithium is the lightest, the least dense solid element, and the most electropositive metal that is highly flammable. The material properties of lithium make it a sought-after commodity, most notably as part of lithium-based batteries such as LIBs, which are “the technology of choice for essentially every application” (Armand et al. 2020). LIBs are crucial for energy storage, which is necessary for renewable energy technologies, EVs and green transition more generally (Kim et al. 2019). As a result, the demand for lithium has already vastly outstripped the supply, with the prices reaching a new record high almost every day in 2021 (Holman and Ribeiro 2021). Thus, while lithium is a chemical element that has been known for more than 200 years, its value has never been higher, being increasingly referred to as the “new gold” (Penn et al. 2021; Tarascon 2010) or the “white gold” for its colour, both in academic literature (Leifker et al. 2018) and beyond (Pettitt 2022).

Estimating overall lithium global supplies is complex and with significant variations. Gruber et al. (2011) estimate the global supply to be at 39 Mt and the highest demand scenario between 2010 and 2100 reaches 20 Mt. They thus conclude the supply to be sufficient at least till the end of the century. In 2010, they included the Jadar Valley among the worlds’ top ten lithium

deposits, which together account for 83% of the global lithium reserves. Crucially, however, “[s]even of the top ten deposits are not in production, and two new types of deposits, Kings Valley<sup>1</sup> (hectorite) and Jadar Valley (jadarite), have not been operated economically” (2011: 772). Their conclusion is based on the assumption that all the currently known deposits will be exploited regardless of the environmental and social consequences. Thus, even if there was enough lithium in the world to power the energy transition, these supplies are not readily available and not necessarily economically viable to extract. IEA (2021b) shows that there is a fundamental mismatch between the requirement of critical minerals and the dominant climate and environmental policies, such as the COP26 pledge for all the cars and vans sold in leading markets to be “zero emission” by 2035 (UK Government 2022).

Because it is highly reactive, lithium only occurs in compounds in nature and not as a pure element. It is known to be present either in brines or solid minerals (pegmatites or sedimentary rocks), divided between an estimated 87% and 13% of the global reserves<sup>2</sup>, respectively (Agusdinata et al. 2018). Lithium deposits in Serbia were discovered in a sedimentary rock, jadarite (Gruber et al. 2011). Most of the world’s lithium reserves are in the “lithium triangle” between Chile, Argentina, and Bolivia, where the extraction is brine-based and substantially cheaper than hard-rock mining (Desjardins 2015). Lithium is water-intensive with significant impacts on the local environments and communities (Babidge et al. 2019; Liu et al. 2019). Mining in the lithium triangle has been found to negatively impact surface water levels, biodiversity, increasing daytime temperatures and drought conditions (Liu et al. 2019; Flexer et al. 2018). As solid mineral mining is not as dominant as lithium brines, less attention has been paid to its environmental impacts (Chaves et al. 2021). Based on the limited information available, Chaves et al. (2021) emphasise potential toxicity, environmental depletion, and air pollution as some of the negative impacts of solid mineral mining. More broadly, Viana et al. (2020) posit that the surge in the use of LIBs will increase the presence of labile lithium in the environment and especially the aquatic systems globally, with potentially toxic consequences that are largely understudied.

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<sup>1</sup> Nevada, USA

<sup>2</sup> Lithium is also present in seawater, but the extraction is currently considered infeasible (Stamp et al. 2012).

Agusdinata et al. (2018) conduct a bibliometric analysis of research on lithium extraction from 1974 to 2018 to find a substantial knowledge gap on the social and environmental impacts of lithium extraction between the countries that are mainly consuming and those mainly producing lithium - only 2% of the total publications are from lithium-producing countries. The literature on lithium is thus primarily focused on the issues of consuming countries, such as the cost or performance of LIBs, while local socio-environmental problems of producing countries have been largely neglected. They analyse not only the spatial but also the temporal distribution of research topics. They find that some socio-economic topics such as social justice, human health and toxicity emerged in 2012; however, from 2017 onwards, “socio-economic related themes disappear in this period, which shows a shrinking pattern” (2018: 9). They offer little explanation for this phenomenon, yet they conclude that, in general, academic research follows trends set by the consuming countries’ regulatory environment and governmental and corporate policies, rather than leading and establishing such trends. Notably, the Paris Agreement, a major international treaty on climate change establishing the electrification of energy and transport systems as a primary climate strategy, entered into force in November 2016. It is then, arguably, the promotion of lithium as a solution to climate and environmental change based on the techno-capitalist green futures that accelerate and strengthen the extractivist logic.

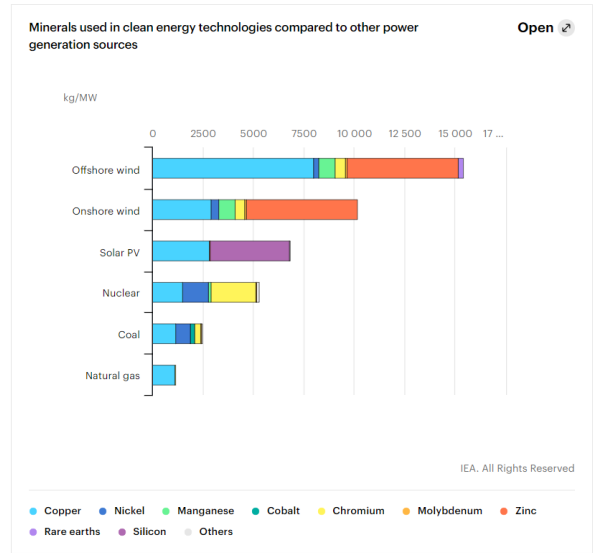
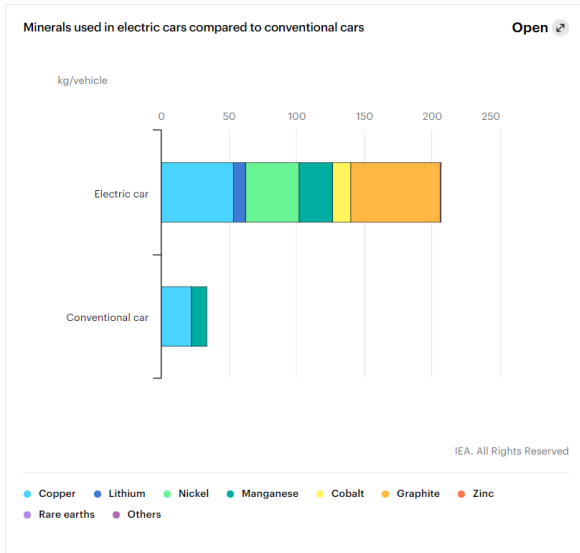
Despite this, several scholars have sought to make visible the contestations underpinning a sustainable future made from lithium. Anlauf (2016) focuses on lithium mining in Argentina and challenges the seemingly taken-for-granted assumptions that EVs are a sustainable solution to climate change, building on the concept of the “imperial mode of living” proposed by Brand and Wissen (2013). The concept describes how everyday practices rely heavily on global expropriation and appropriation of resources based on unequal, “imperial” relations. For Anlauf (2016), the current “lithium rush” (Tscherning and Chapman 2021) presents a “greening” of the imperial mode of living. Rather than being an alternative to the highly consumerist mode of living, current dominant strategies to tackle climate change make it “possible to keep up a fossilist consumption pattern of symbolic significance for the imperial mode of living” (2016: 166). For Anlauf, the green technologies “spatially and temporarily externalize socio-ecological costs and constitute a continuation of the Global North’s imperial mode of living” (2016: 176).

Voskoboynik and Andreucci (2022) use the term “green extractivism” to account for the lack of attention paid to the extraction of “transition minerals”, which they expect to be “at the forefront of future extractive landscapes.” (2022: 788; Arrobas et al. 2017). Transition minerals, also referred to as critical minerals, are essential components of clean or renewable technologies and include lithium but also cobalt, nickel, graphite, copper, manganese, REE, and others (IEA 2021b). As they (2022: 809) put it, green extractivism is signalled by “lithium regimes,”

“the fantasy of an environmentally and climatically benign resource frontier, of an ultimate technological and ecological fix capable of fuelling local and national development while saving global capital from its own ecological contradictions”

Hernandez and Newell (2022) use the term “renewable extractivism” to denote parallel realities. As capitalism has transformed into green capitalism, so has extractivism transformed into green extractivism.

Green transition strategies, including significant policies such as the Green New Deal in the US and the European Green Deal in the EU, are heavily reliant on extractivism (Arrobas et al. 2017; Zografos and Robbins 2020; Voskoboynik and Andreucci 2022). So-called green energy technologies require substantially more minerals than conventional energy sources (Figure 1), including oil and gas, and reaching net zero globally by 2050 would require a six-fold increase in mineral input in 2040 compared to today (IEA 2021b). Thus, it is obvious that what is conventionally understood as a green or sustainable future is fundamentally dependent on the continuous expansion of extractivist frontiers, especially so in the case of lithium. This thesis seeks to contribute to the small but growing body of scholarship on green extractivism by centring the question of materiality along with spatiality and temporality in the analysis, as I explain in the following section.



*Figure 1: Minerals used in electric cars compared to conventional cars and minerals used in clean energy technologies compared to other power generation sources (source: IEA 2021b)*

# Materialities, Spatialities and Temporalities of the New Extractivist Frontier

Given the multiple scales (the planetary to the local) at which extractivism is understood, it is appropriate to frame it in terms of refiguring geopolitics. Extractivism involves a radical ongoing process through which the Earth - as geo - is incorporated into and transformed by various political regimes. As a relatively young concept, more work needs to be done to understand the properties and specificities of extractivism as it has been typically studied from the perspective of political economy and development studies. Geopolitics scholars have been attuned to the ways in which the race for critical minerals has already begun to reconfigure global geopolitical relations (Kalantzakos 2019, 2020), particularly in the case of lithium (Heredia et al. 2020; Dorn and Ruiz Peyré 2020), with most of the critical minerals being more geographically concentrated than oil (Månberger and Johansson 2019).

This thesis seeks to contribute to the scholarship on extractivism by centring an analysis of the geopolitics of extraction around issues of materiality, spatiality, and temporality - all three of which are intimately intertwined (Law and Hetherington 2002). Geopolitics of extractivism cannot be fully understood without examining the materiality of what is being extracted (extractivism of coal is different from extractivism of lithium which is different from agro-extractivism), the spatiality of where the extractivist process is taking place (extractivism in the Amazon is different from extractivism in the Arctic) and the temporality of the extractivist process (extractivism in the Anthropocene is different from extractivism at the beginning of the Industrial Revolution). In many contexts, discoveries of natural resources and extractivism are considered “the starting point for a series of economic and social changes that constitute development” (Bridge 2004: 225). This process is both intensified and accelerated by the materiality of lithium as a panacea to climate change (Tollefson 2008), the spatiality of Serbia as a European periphery in need of economic growth, progress and development, and the temporality of the climate and environmental change (Blok and Jensen 2019).

The thesis is therefore situated in relation to expanding understandings of geopolitics beyond an analysis of representations (Koopman et al. 2021; Ó’Tuathail, 2002). Critical and feminist geopolitics scholars have highlighted the need to focus on materiality (Barry 2013, Dittmer 2014, Dixon 2016, Last 2015, Squire 2015), building on the broader material turn in social

sciences, posthumanism and “new materialism” (Coole and Frost 2010), as well as on the work of Karen Barad (2003) and Annemarie Mol (2002). The work of Andreas Malm and the Zetkin Collective (2021) focuses on the materialities of fossil fuels and makes their interconnection with racism, colonialism, and exploitation, similarly to Timothy Mitchell’s efforts to draw together the materiality of coal and oil with the politico-economic regimes (2011). Additionally, the growing scholarship seeks to “rematerialise” the abstract concept of energy by focusing on technologies, infrastructures, and politics of energy systems (Balmaceda et al. 2019; Jones 2018; Pierce and Paulos 2010). Crucially, this research emphasises the “*geo*” in geopolitics and the materiality of geo-politics. Elden (2013) posits that the “*geo*” in geopolitics should be more concerned with the “Earth” rather than with “space,” bridging the geophysical with the geopolitical. Clark and Yusoff (2017) are similarly concerned with the “geologic turn” and “political geology” to account for the fact that all political and social processes are embedded within the geology and materiality of the Earth which animates them.

Emphasising the *geo-* in geopolitics also involves thinking about Space and spatiality - foundational concepts in geography (Merriman et al. 2012; Ó’Tuathail and Toal 1996). Critical geopolitics scholars sought to complicate the concepts, moving away from the idea of space as a stable (flat) surface (Massey 2005), toward conceptualising it as necessarily material, vertical and temporal (Steinberg and Peters 2015). Scholarship on extractivism has primarily understood space in terms of frontiers which are shifting and expanding in complex ways (Frederiksen and Himley 2020; Rasmussen and Lund 2018; Barney 2009; Tsing 2003). Del Marmol and Vaccaro (2020) warn about the “new wave of extractivism” across European rural areas, marking a shift in development direction from natural protection and conservation to renewed pressures on land uses. Climate and environmental change have “revived European interest in lithium mining” (Gourcerol et al. 2019: 494), particularly in Serbia, Portugal, the Czech Republic, the UK, Ireland, Finland, and France. Chagnon et al. (2022) stress how extractivist logics expand “across increasingly diverse geographies and denote a more nuanced understanding of global colonialities, beyond the traditional core-periphery dynamics.”. Moreover, the focus on verticality and volumetrics (Graham 2004, Elden 2013, Sloterdijk 2011) and subterranean geopolitics (Klinke 2021; Valdivia 2015) extends the growing body of literature on extractivism (Childs 2020; Bennett 2016) in meaningful directions.

Time and temporality, too, have become central to thinking through geopolitics (Sheppard 2022; Klinke 2013; May and Thrift 2003), and this is especially the case through the critical conceptualisation of the Anthropocene as shifting humanity from the individual, biological lives to the temporality and materiality of geological epochs and deep time (Yusoff 2013). As Heise points out, the Anthropocene concept has the “capacity to cast the present as a future that has already arrived” (2016: 203). The present is then “both tragically belated and perennially balanced on the cusp of disaster” (Garrard 2020: 4). Nordblad (2021: 335) suggests that the issue with the Anthropocene lies in already determining the future based on the gaze on the present from the point of the distant future:

“The Anthropocene is declared in the future perfect, as that which will have occurred. [...] This predictive determinism is profoundly unfortunate as a political temporality because it blurs the line between past events and events that are still avoidable (albeit with a great, perhaps unprecedented, political effort).”

Isabelle Stengers similarly refers to this temporality as “future perfect continuous” (in Davis and Turpin 2015: 6). Growing scholarship on the temporality of extractivism is exploring how the discoveries and extractivist efforts invoke different pasts and imagine different futures that are mobilised both in support for and resistance to the project (Braun 2020; Fent and Kojola 2020; Kojola 2020). Bringing this together with literature on temporality in geopolitics and on the Anthropocene along with the climate state of the exception and emergency (Hulme 2019; see Edkins 2013; Agamben 2004) drive the imperative of green extractivism, foreclosing alternative futures from being imagined (Jeffrey and Dyson, 2021; Castree, 2014; Anderson, 2010).

This research thus builds on the literature on extractivism and critical geopolitics to bring attention to the ways in which global extractivist logic has expanded through shifting and multiple materialities, spatialities and temporalities, involving processes of different scales and volumes. While these categories are both broad and deep, difficult to grasp and risk the diffusion of the concept of extractivism as warned against by Gudynas (2018), taking these categories together allows us to begin to understand the geopolitics of lithium mining in Serbia through the questions:

What forms of the geopolitics of extractivism emerge around the efforts to mine lithium in Serbia? How do these forms manifest themselves?

Tectonic and geological activities influenced the Pannonian basin in the Balkans and its surroundings, with ancient lakes forming, migrating, connecting, and disconnecting in cycles

for millions of years, causing sedimentation of minerals throughout Neogene and making the area exceptionally rich in natural resources including, coal, oil shapes, lithium and borates (Bechtel et al. 2018; Krstić et al. 2012; Mrazovac and Vojinović-Miloradov 2011; Obradović et al. 1997). As Steinberg and Peters (2015: 255) stress, “it is the movement (through space and time) of liquids—seas, rivers, streams, lakes—and also solids (that is, ice) and gasses (that is, wind) that deposit materials that form strata, and it is these deposits that ultimately inform the geological, sequential concepts of time that emerge from current studies of the environment.” Minerals formed in Neogene, meaning “newborn,” are to be extracted in the Anthropocene, in order to solve its very cause. “For the future to be open, space must be open too,” posits Massey (2005: 12). It is through the opening of the categories of matter, space, and time that geopolitics of extractivism can be interrogated and the hegemonic understanding of the sustainable future in the Anthropocene challenged. In the next section, I describe the methods, methodologies and ethics used for this aim.

## Methods, Methodology and Ethics

In order to understand *what forms of the geopolitics of extractivism emerge around the efforts to mine lithium in Serbia*, the primary research method is ethnography - an interpretative social sciences approach based on a period of time the researcher spends collecting data in the field (Ghoddousi and Page 2020). I spent January and February 2022 collecting fieldwork, based in Belgrade where most protests and blockades have been taking place, and travelling to the Jadar Valley. I travelled again to Serbia in April prior to the presidential, early parliamentary and some of the local elections on 3rd April to note the election results and their effects on the anti-lithium mining movement. A significant ethnographic event was the protest camp set up in front of the President's Residence between 10th and 15th February, when locals from the areas most affected by lithium exploration camped in Belgrade to raise awareness about the issue and to demand a ban on lithium mining. I camped with these locals and activists, resulting in some of the most generative interactions and interviews. Extensive field notes I took every day were the main source of data, shaping my research by determining what observations are worth annotating (Wolfinger 2002).

Ethnographic research and participant observation were coupled with ten in-depth interviews. While most interviewees and research participants were locals and activists, I also conducted an in-depth interview with a Rio Tinto employee and with a representative of the Belgrade office of the Heinrich Böll Foundation (HBS), a green political foundation associated with the German Green Party. All the interviewees were Serbian, and I conducted and transcribed the interviews in Serbian. The interview material was coded and analysed using qualitative data analysis software NVivo, having identified over fifty thematic nodes, which were organised into the three analytical chapters of this thesis. I translated the relevant quotes I use in this thesis into English and all translations are my own.

The research was approved by Oxford's Central University Research Ethics Committee (CUREC), the fieldwork and interviews were undertaken with informed consent and all the data was securely stored. The interviewees were asked for permission for the interview to be recorded, eight of which allowed for recording while two allowed for notetaking. The interviewees were also given the option to be anonymised. Quotes from the interviews and vignettes are central to this thesis. Through this, I seek to let my research participants speak for

themselves and describe the ways in which they make sense of lithium mining in Serbia in their own words. However, I have made the decision to anonymise all my research participants as only one of the interviewees wished to be anonymous. While the pseudonyms do not necessarily protect the identity among the peers of the relatively small core of the anti-lithium mining movement, anonymising only one participant among the ten interviewees would make their identification significantly easier. All the names have thus been changed, demonstrating the difficulty of navigating the question of ethics beyond the regulatory ethics of the universities (Murphy 2019).

## Extractivist or Critical Ethnography

Ethnography is not an uncriticised method, and it is necessary to engage with its critiques. This is especially the case in the context of this thesis, as ethnography itself has been referred to as an *extractivist* research method. Like many social science approaches, ethnography carries a continued history of (neo)colonial practices through particular representations and modes of knowledge production (Tuhiway Smith 1999; Gupta and Ferguson 1997). These are based on unequal power relations between the researcher and the Other, studying the Other from a distant, “scientific” gaze, separated from the Self (Tedlock 1991; Haraway 1988). Extractivist ethnography is theorised by Burman (2018: 56) as “a cost-benefit-oriented methodology for extracting knowledge and information and an instrumentalist approach toward the people among whom we work.” Such ethnography extracts knowledge from people and communities, commodifying it into books, papers, and lectures within the institutional environment that reinforces the cost-effective and extractivist research, reflective of broader capitalist and neoliberal conditions within universities (see also Murphy 2019).

Herbert (2000) posits that there are three main critiques of ethnography that prevented geography from fully embracing the method - the concern regarding the ethnographic representational practices, the view of the method as unscientific, and overfocusing on case studies rather than theory building. Despite this, Herbert calls for geography to engage with ethnography as a valuable method focused on the specificities of the people, the places and the everyday. Megoran (2006) similarly reflects on the lack of ethnographic participant observation as a research method in political geography and geopolitics, which have historically not been concerned with everyday experiences or focused on methods such as semi-

structured interviews or surveys. For Megoran, ethnographic research is a crucial method in understanding everyday practices and the ways individuals or groups are sensing and making sense of the world.

Both Herbert's (2000) and Megoran's (2006) calls for geography to embrace ethnography are based on a particular understanding of the method. Decades of work in anthropology, geography, and related disciplines, grounded in the critical feminist perspectives on positionality and reflexivity, have sought to contest the deep-rooted positivist approach to qualitative research that emphasises the researcher's neutrality as a key basis for scientific inquiry (Wildemuth 1993). The apparently "universal" truths have been produced through what Haraway (1988) termed "the god trick" - the position of scientists to observe everything from nowhere. In contrast to that, feminist reflexivity stresses the need to recognise all knowledge as "situated" (Haraway 1988) and to constantly interrogate one's position as a researcher (Rose 1997). Such ethnography rejects the idea of the researcher as a neutral, god-like observer, extracting knowledge from Others, and instead embraces the impossibility of distancing oneself from the research participants. As Phyllis Rose (1985: 77) puts it, "[t]here is no neutrality. There is only greater or less awareness of one's biases." Neutrality is not a decision or a choice to be made, or in words of Albert (1997: 57-8):

"[T]he social engagement of the ethnographer can no longer be seen as a personal political or ethical choice, optional and foreign to his scientific project. [...] The anthropologist's 'observation' is no longer merely 'participant'; his social 'participation' has become both the condition and the framework of [their] field research."

This research subscribes to the understanding of ethnography as based on collaboration and "correspondence" (Ingold 2014). Murphy (2019) stresses that an open discussion on becoming *friends* with one's research participants contributes to the efforts to decolonise anthropology - and indeed to challenge the extractivist ethnography.

Chari and Donner (2010: 76) call for a "reflexive ethnography critical of power relations and inequalities inherent in research with 'others,'" seeking "not just to describe but to transcend existing inequalities." Thomas (1993: 4) distinguishes conventional ethnography, that "describes what is," and critical ethnography, that "asks what could be." Madison (2011) talks about the "ethical responsibility" of the researcher, a moral obligation to write against inequalities and injustices, while Kirsch (2002: 178) argues that "activism is a logical extension of the commitment to reciprocity that underlies the practice of anthropology." In 1995,

Scheper-Hughes radically argued that “if [anthropology] is to be worth anything at all, [it] must be ethically grounded” (410), calling for what she termed “militant anthropology.” She addresses the postmodern critique of anthropology as reducing the subjects through the scientific gaze and instead believes that ethnography can be used as “a tool for critical reflection and for human liberation” (418). Similarly, for Shah (2017: 45), participant observation is a “profoundly political act” with revolutionary potential.

Reflecting on her experience as a (militant) anthropologist and ethnographer, Scheper-Hughes (1995: 416) notes people’s astounding capacity to grow accustomed to terror, pain, and brutality. She posits that “it is almost impossible to be continually conscious of the state of emergency in which one lives. Sooner or later, one makes one's accommodations to it.” Indeed, the work of Agamben (2004) and Edkins (2013) on the state of exception demonstrates how sovereign power legitimises itself through this state. Scheper-Hughes (417) sees the role of the anthropologists as resisting this acceptance by producing “politically complicated and morally demanding texts and images capable of sinking through the layers of acceptance, complicity, and bad faith.” Although she mainly refers to suffering such as death and violence, the climate and environmental crisis is also potentially leading to increased acceptance of the suffering and surrendering of the values of social, economic, and environmental justice. In the context of the state of the emergency and exception that is the Anthropocene and the hegemonic insistence on techno-fixes as a solution to the crisis, it is a moral imperative to remain critical even to that which seems impossible to criticise - the “solutions” to the climate and environmental crisis in the form of green extractivism, green capitalism and deepening of global inequalities. Following Scheper-Hughes, this thesis seeks to sink through the acceptance, focus on the resistance to the hegemonic understanding of sustainable futures and open the possibilities of thinking and imagining differently.

## Insider, Outsider, and Immigrant

Following the work of critical and feminist scholars, it is through reflecting and displaying one’s own position as a researcher and admitting to the impossibility of neutrality that the structures of power become (a bit more) visible.

As I spent time with my research participants in Serbia and, in particular, one of the activist groups, two questions linger over my head:

How does one become a member of a group?

How does one become a member of a nation?

One of the classical questions of ethnographic research is whether a researcher should be a member of a group they study or not. Adler and Adler (1987: 85) asserted that the distinction between researcher and participant has “traditionally existed more strongly in theory than in practice.” Dwyer and Buckle (2009) seek to address the insider-outsider binary and suggest that a third position of “researching at the hyphen of insider-outsider” (Kanuha 2000: 443) might be more appropriate. They suggest that it is, in fact, impossible to fully occupy one or the other side of the insider/outsider binary. Instead, “as researchers we can only ever occupy the space between” (2009: 61):

“Just as our personhood affects the analysis, so, too, the analysis affects our personhood. Within this circle of impact is the space between. The intimacy of qualitative research no longer allows us to remain true outsiders to the experience under study and, because of our role as researchers, it does not qualify us as complete insiders. We now occupy the space between, with the costs and benefits this status affords.”

It is this space in between or the space at the hyphen that becomes an important tool in decolonising and resisting extractivist ethnographies.

The question of the insider/outsider binary is something that second-generation immigrants have to navigate their entire lives, always occupying the space in between. Despite being born in Prague, Czech Republic, I was never considered Czech - or Czech enough - as both of my parents were from Serbia. I never lived in Serbia and moving there for my fieldwork was the longest time I ever spent in the country where I have but a few connections and extended family members. Yet, of course, I was never “fully” or “properly” Serbian either. Although I am a native speaker and Serbian was the first language I learned, I occasionally make mistakes when I speak, and I have an accent of someone who does not live in the country - an -insider-outsider. “You speak well, considering you’re not from here,” I heard throughout my fieldwork. My Serbian also improved, and my accent slightly softened during my stay, and I wondered whether that perhaps too had any effect on my relationship with my research participants. Additionally, being an outsider can also be easily used to undermine my research on the politically sensitive topic that lithium mining in Serbia is. “What do you know about the

protests when you never lived here,” my great-aunt told me during a family lunch while I was on my fieldwork. Her delicious food that I had been craving for weeks turned sour in my mouth within seconds.

Occupying the space in between also manifests itself through mobilities and abilities to enter and exit the field, both metaphorically and physically. Jansen (2009) reflects on his position and privilege as an EU citizen conducting research in Serbia and BiH, or what he refers to as the EU’s “immediate outside.” He describes the sense of humiliation and “present entrapment” as Yugoslav passports, which were some of the most powerful in the world at the time due to Yugoslavia’s Non-Aligned position, are replaced with new national(ist) passports. These were under the EU’s strict visa restrictions until 2008 and while the restrictions were later eased, Serbian citizens are far from enjoying the same mobility as the EU citizens, or as in Yugoslavia. Important to my own case, while Yugoslav passport holders used to enjoy visa-free movement to the United Kingdom, Serbian citizens cannot enter the country without a tourist visa. Not only am I able to study at the University of Oxford, I am also simply able to *enter* the United Kingdom without many difficulties, as well as to leave Serbia whenever I want. “The personal, it is said, is political, but sometimes the geopolitical becomes personal,” Jansen asserts (2009: 821).

In Chapter 2, I talk about the narratives around history, war, displacement, and relocation. Some of those who refused to sell their houses to Rio Tinto and instead decided to organise against the mining project called those who sold the houses and left the valley “traitors.” My mind drifted to my father, who told me about the times he was called a traitor for having left Serbia with my mother in 1993, purposefully avoiding conscription and never fighting in the war. He did not defend his land. I also think about that during a conversation with David, one of the activists who showed me around the Jadar, when he reflects on living in the region that constantly seems on the brink of war: “I know I wouldn’t be able to fight or kill someone, but I also know that I could not leave. I am stuck,” he tells me. Yet, my parents left. I was born in Prague. I got Czech citizenship. A citizen of the European Union, I had the privilege of studying in the UK at the home fee rate, before Brexit that is. I was only able to do this research project at the University of Oxford, and to come *back* to Serbia as a researcher, because my parents left.

As an immigrant, and as a researcher, one is never fully an insider or an outsider, but always at the hyphen. My personal family history gets entangled in the histories of my research participants. I embody spatialities of trauma and displacement that physically manifest through my presence and research in the country. This work was made possible by my parents' decision to leave their country - or more precisely what was no longer their country - and to provide their yet-to-be-born children with a different kind of future. Although different futures are always uncertain, the first step is rejecting the futures lined up ahead of us. This thesis is concerned with one such rejection of the hegemonic understanding of sustainable futures in the Anthropocene by a group of locals and activists in Serbia. The following chapters describe this rejection and the opening and imagining of different kinds of futures.

# Chapter 1: Discovering Kryptonite in the Jadar Valley

*“To find a new mineral is not that rare. But to find a new mineral in such vast quantities as we have in the Jadar Basin is a truly remarkable discovery.” (Nenad Grubin, the geologists who discovered jadarite and ex-director of Rio Sava, Rio Tinto 2022f)*

Between 2001 and 2004, a team of four geologists led by Nenad Grubin received funding from Rio Tinto for two exploration drill holes, initially looking for borates<sup>3</sup> in the western part of Serbia, close to the borders with BiH and approximately 140 km from the capital Belgrade. “Nenad and his fellow explorers from Rio Tinto had spent months looking for evidence of borates in the Jadar Valley, wading through creeks and examining rocky outcrops” (Rio Tinto 2022f). During our interview, Kristina, a Rio Tinto employee, described the difficult and laborious process of deciding where to drill the exploratory hole as “you have only two shots in the large exploration area.” Portrayed both by Kristina and the Rio Tinto website (2022f) as almost a mythical question of fate, it was in the second drill that a new mineral containing both borates and lithium was found - “that glorious Eureka moment” of discovering what would later become known as *jadarite*, named after the local river. “[L]ithium was not what we set out to find. But we did find it,” says Grubin in an interview (Nešić 2021).

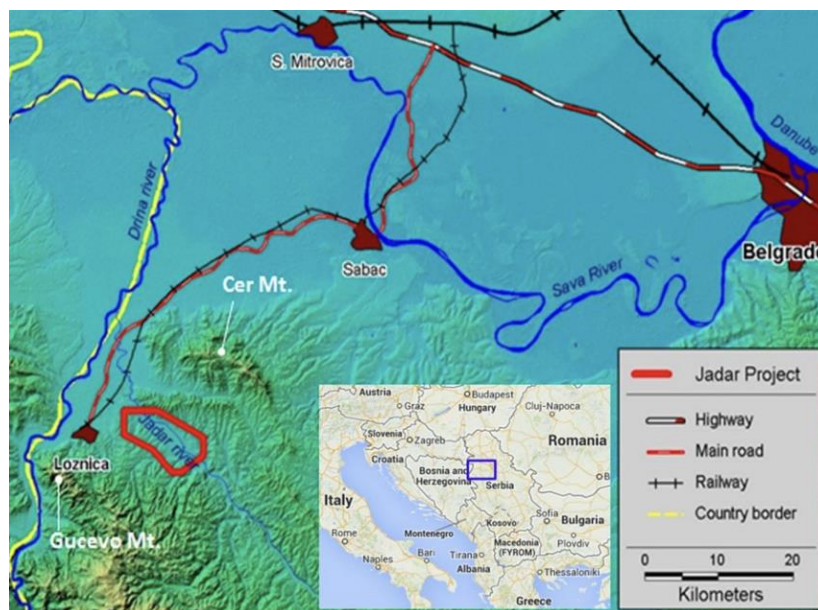


*Figure 2: The newly discovered mineral jadarite (source: Rio Tinto 2022f)*

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<sup>3</sup> Rio Tinto is one of the major producers of borates in the world, most used in fertilisers and high-tech applications. Its Boron operation in California is one of the largest borate mines in the world, with the open pit mine spreading over 54 square kilometres (NASA 2013) and supplying 30% of the global refined borate demand (Rio Tinto 2022a).

Jadarite was declared a new mineral in 2006 following a series of scientific examinations and tests. A holotype<sup>4</sup> is in the London Natural History Museum, while parts of the holotype are also located in the National Mineral Collection of Canada, and fragments of the cotype<sup>5</sup> have been “donated” to the Budapest Natural History Museum in Hungary and Belgrade National History Museum in Serbia (Stanley et al. 2007). The jadarite is primarily concentrated in the Jadar Valley, with the deposit stretching to several basins in Serbia and BiH. The area is the only known jadarite deposit in the world (Christmann et al. 2015). Jadarite is said to have an “ideal composition” (Tabelin et al. 2021) and “unusually high volume” of lithium (Kesler et al. 2012), while the Jadar represents a “non-conventional’ world-class lithium deposit” (Gourcerol et al. 2019: 499). In December 2021, the total mineral resources of the Jadar Project were estimated at 143.5 Mt, with 1.80% of Li<sub>2</sub>O and 14.4% of B<sub>2</sub>O<sub>3</sub> (Rio Tinto 2022e), representing a “giant deposit” of lithium (Gourcerol et al. 2019<sup>6</sup>).



*Figure 3: The location of the Jadar Project based on the Rio Tinto representation of the area (source: Rio Tinto 2022e: 2). Apart from the Jadar Project on the Jadar river, the map also shows significant cities such as Loznica, the biggest city of the Jadar Valley, or the capital Belgrade. Historically important Cer Mountain (described in Chapter 2) and the national borders with BiH are also depicted on the map.*

<sup>4</sup> “A single specimen (designated by the author) from which all the data for the original description were obtained. Where portions of such a specimen have been sent to other museums for preservation, the author will designate each of these as ‘part of the holotype’” (Dunn and Mandarino 1987: 1269). That is, a specimen upon which the name and description of the new mineral is based.

<sup>5</sup> “Specimens (designated by the author) as those used to obtain quantitative data for the original description” (Dunn and Mandarino 1987: 1269).

<sup>6</sup> Gourcerol et al. (2019) operate with data provided by Rio Tinto in 2017, which have since been adjusted as the estimate of total mineral resources has increased. Hence the disparity in cited publication years.

In 2007, the discovery made global news, yet for a rather particular reason. Jadarite was found to have an almost identical composition to the fictional element kryptonite from the Superman franchise. In the story, kryptonite, Superman's only weakness, is a green mineral from space. Christopher J. Stanley from the Natural History Museum in London was the one who determined jadarite to be a new mineral (Stanley et al. 2007) and found it to be chemically almost identical to the fictional kryptonite. He explains that he searched the internet for *sodium lithium boron silicate hydroxide*, the chemical formula of jadarite, only to find out that the same formula was used in the film Superman Returns to describe kryptonite (Natural History Museum, 2007). In another interview, Stanley, however, emphasises the distinction between kryptonite and jadarite: “It's not green. It's white, and it's powdery, and actually it's pretty boring.” (NPR 2007, emphasis added). Similarly, it was stressed in the international media that jadarite’s “properties are certainly not miraculous” (ČTK 2007). Years later, with skyrocketing prices of lithium and mass protests leading to the cancellation of the project that would have been the biggest lithium mine in Europe, Rio Tinto likely would not describe jadarite in these terms.

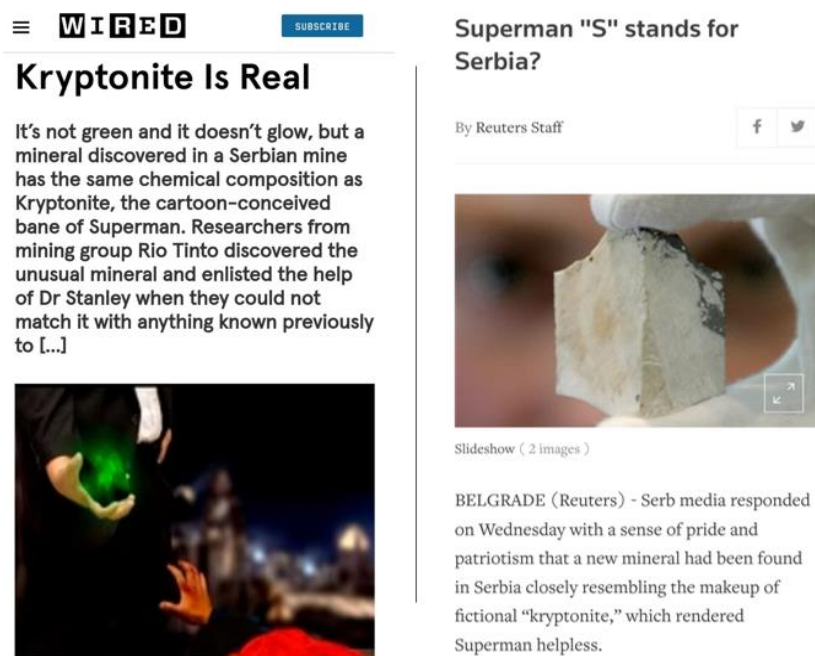


Figure 4: International media reporting on the discovery of “kryptonite” - the classification of jadarite as a new mineral in 2007 (source: WIRED 2007; Reuters Staff 2007)

This chapter is broadly concerned with the *materialities*. The chapter focuses on the process of a new mineral being discovered, named, commodified, and resisted by the local population and the ways in which the material properties of jadarite have influenced these processes. First, I describe the shift from the initial discovery to specific plans to build a mine in the Jadar Valley. Second, I describe the process of locals learning about the move from exploratory to extractivist efforts, getting organised and mobilised and connecting with other villages across Serbia that are impacted by lithium exploration led by numerous other companies. Third, I look at the exploration drills as a particular object and site of struggle as locals seek to demonstrate the ongoing material effects of the drills in terms of soil and water pollution. Finally, this is connected to the questions of local expertise and politics of knowledge production as locals engage in citizen science to demonstrate the material effects of the drills and possible adverse effects of the mine to challenge the Jadar Project.

## Exploratory drills and economic expectations

*“Exploration for mineral deposits is not a matter of chance and neither is it a pure science. Exploration is a business. It progressively utilises science and resources to achieve economic return. It takes many years of research and fieldwork before we drill and find a new deposit.”*  
(Nenad Grubin, *Rio Tinto* 2022f)

Nenad Grubin worked as a research assistant to Prof Jelena Obradović at the Faculty of Mining and Geology of the University of Belgrade when she led a team conducting an analysis of borates in the mid-1990s. Rio Tinto researchers in the US noted a series of journal articles produced by the team (Obradović et al. 1997), marking the beginning of the collaboration (Dragojlo 2022). Obradović et al. (1997) discuss several basins in Serbia, including in the Jadar Valley, and their geological properties and history, indicating a high boron content. The Jadar was the subject of geological interest as early as during the Yugoslav period (Petrović 1969, 1970). It was, however, after Serbia’s post-socialist transition and opening to global markets, following the bloody period of ethnic and nationalist violence of the 1990s, that the region became of international commercial interest. Rio Sava<sup>7</sup> Explorations, the Serbian subsidiary of Rio Tinto, was established in May 2001 with Nenad Grubin as its director until 2012.

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<sup>7</sup> Rio Tinto is named after a Spanish river, translated as the Red River, that got its colour from the copper mining in the area (Harvey 1981). The Sava is the third biggest river in Serbia, flowing

Extraction depends on exploration and experimentation. In Serbia, these have been ongoing and intensifying in recent years and are part of a larger vision of development and economic growth. In April 2021, the Serbian government adopted the Law on Amendments (Official Gazette of the Republic of Serbia no. 40/2021), updating the Law on Mining and Geological Research which entered into force in December 2015 (Official Gazette of the RS no. 101/2015) with the aim of further encouraging investment in the mining sector in Serbia. The law establishes the strategic importance of mineral raw materials and prescribes their exploitation to be in the public interest (Stojković Attorneys 2021). The recently adopted amendments further simplify the procedures for obtaining exploration and exploitation permits and are a legal basis for the introduction of e-mining and geology, meaning that the entire application process could take place digitally and be shortened from 150 to 20 days (Spasić 2021). Confirmed mineral reserves in Serbia are now valued at more than 200 billion USD, and the government aims to increase the portion of GDP from the mining sector from the current 1.9% to 4-5% during the next five years (ibid.)

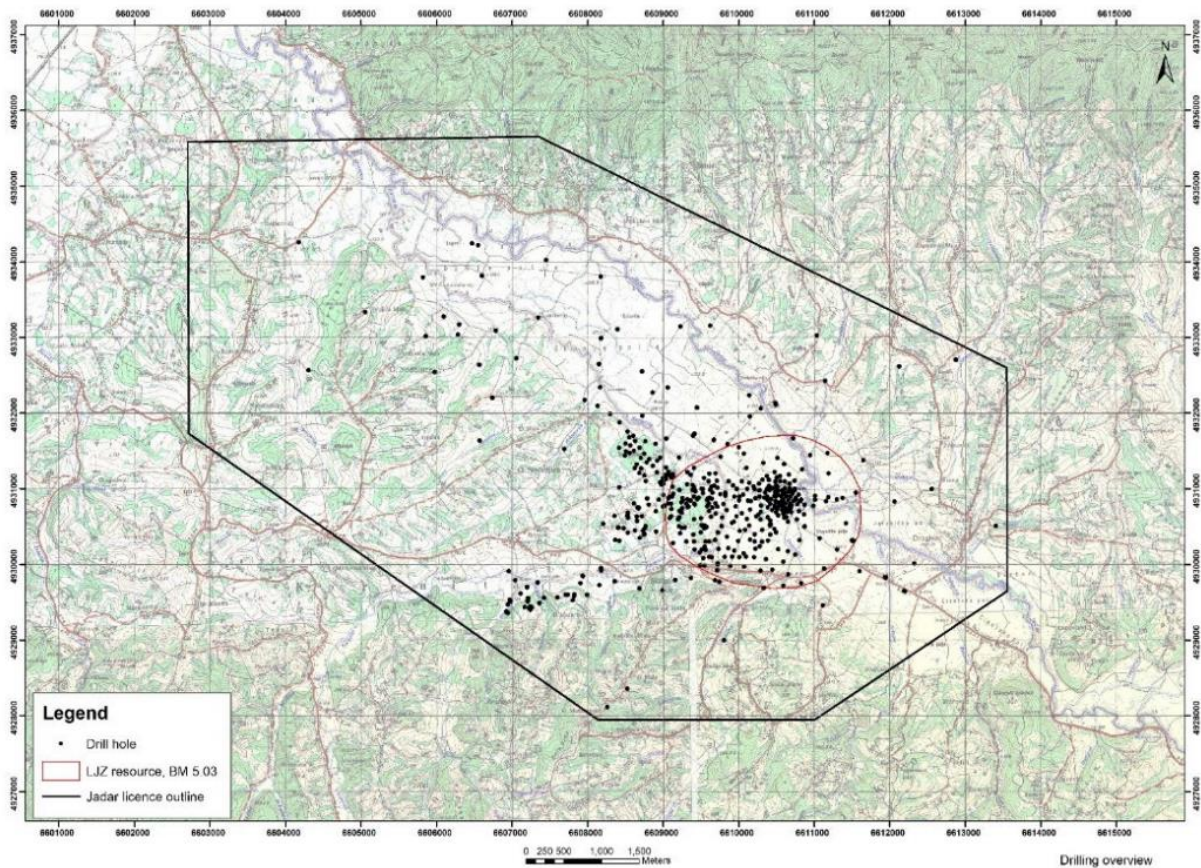
The Ministry of Mining and Energy awards the exploration permits, and they designate exploration zones. Investigative journalists published in April 2022 an article mapping the process of the new lithium exploration companies entering Serbia and being founded, merged, and acquired, many of which involve former Rio Tinto employees as well as Grubin's brother Jovan (Dragojlo 2022). Crucially, the law describes the transfer of permits from one company to another, and acquisition is one such case. Exploration efforts have quickly expanded beyond the Jadar Valley, with four other companies seeking to explore lithium in Serbia - Euro Balkan Lithium, Asena Investment, Balkan Istraživanja (Balkan Mining and Minerals), and Geomin Pro - and a total of eight active lithium exploration licences and three applications between them (ibid.). As explained by Grubin:

“Rio Sava was a pioneer of commercial geological exploration in Serbia. Our presence and our success have incentivized and encouraged many other mining companies to come to Serbia. Everyone used Rio Tinto as an example. Looking at all those competitors, some dear to me personally, I always thought of the Chinese saying, ‘let a thousand flowers bloom.’” (Grubin, interview by Nešić, 2021).

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through the western part of the country where most of the mining exploration takes place and feeding into the Danube in Belgrade.

This legal and commercial landscape is ever more difficult to navigate, as stressed by locals and activists, and it amplifies why the anti-lithium movement continues operating despite the cancellation of the Jadar Project. Locals and activists assert that Rio Tinto is only a *symbol* of broader issues in Serbia and of all the other exploration and mining companies.



*Figure 5: Exploratory Licence map with illustrated drill holes. LJZ refers to the Lower Jadarite Zone, currently the only zone classified by Rio Tinto as Mineral Resource (source: Rio Tinto 2022e). The LJZ, on this figure denoted by the red circle, roughly corresponds to the area of the proposed mine where the process of the buyout of land and houses started in 2020*

The exploration, geological research, and drilling is justified by local and national governments, as well as companies, as only inspecting a possibility rather than causing any direct damage. Danijela, a local from the municipality of Rekovac, which is another lithium exploration frontier in Serbia about 200 km from the Jadar Valley, explains this dynamic from the local perspective:

“The Law on Mining is allowing for various corporations to be awarded exploratory rights without any plan or strategy and without the local population being informed or asked whether

they want to develop in that direction. The authorities are justifying that by saying that it is just exploratory work, and it doesn't have to mean anything, that just a small percentage of the exploratory areas ends up being exploited. [...] But we cannot gamble with our fate and our lives, in a sense that if they find satisfactory resources, they will open a mine. We reject that possibility.' (Danijela)

The exploration drills are constructed as tentative possibilities and nothing to be worried about - at least for now. The efforts to mine lithium in Serbia began with two exploration drills, the second containing jadarite. In February 2022, Rio Tinto reported a total of 518 exploratory diamond drill holes across the Jadar Valley, drilling a total of 204.7 km below the surface, with the deposit lying at depths between 100 and 720 metres underground (Rio Tinto 2022e). Figure 6 denotes metres drilled by Rio Tinto within the Exploratory Licence zone (Figure 5), which covers approximately 60 km<sup>2</sup> (Rio Tinto 2020a: 1), with more than 45,000 metres drilled underground in 2019. Locals and activists report a total of 528 exploration drills. It is the understanding of exploration as a possibility, an option that creates an opening for a future of extraction that allows companies to expand both spatially and vertically.

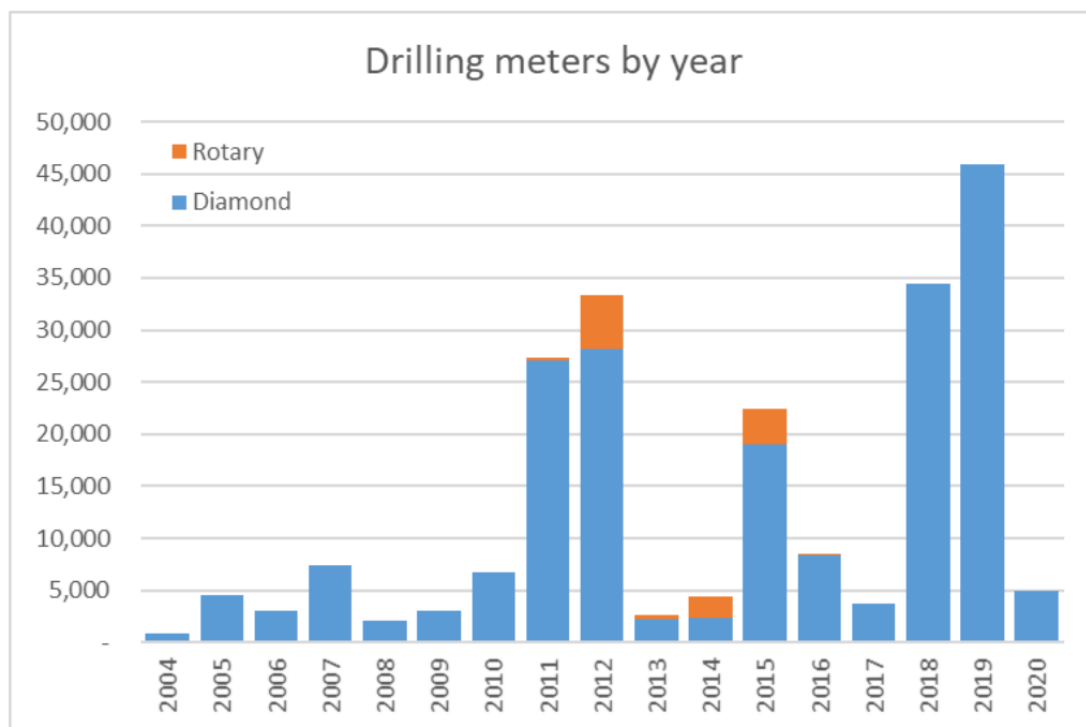


Figure 6: Metres drilled by year by Rio Tinto, including the first 515 drills (source: Rio Tinto 2020b: 14). According to Rio Tinto (2022: 3), there have been 518 diamond drills drilled, a total of 204.7 km. Locals and activists cite 528 as the total number of drills in the Jadar Valley

After the initial excitement of having discovered “kryptonite,” what follows is the process of establishing the “economic viability” of the mining project. As jadarite is a new mineral, a novel way of extracting lithium and borates had to be established. Rio Tinto’s scientists across the world tested the technology for years before determining that it was economically viable to go ahead with the mining project, thus resulting in the decision to open the mine. Rio Tinto, the third biggest mining company in the world, based on revenue (Garside 2021), was expected to become one of the ten biggest lithium producers globally thanks to the discovery of jadarite (Rio Tinto 2021b)<sup>8</sup>. The company has, in turn, promised to position Serbia as a world leader in lithium mining. The mine was to contribute 1% directly and 4% indirectly to the Serbian GDP and to create 2,100 jobs during construction and 1,000 jobs during mining and processing once production started (*ibid.*). The process of material extraction of lithium invoked the future of profit both for the company and the Serbian government “in order to make projects appear viable in the present” (Fent and Kojola 2020: 820). On one hand, then, the temporal certainty of profit and resources justified the extractivist efforts, while on the other, the temporal uncertainty of explorations justifies the exploration drills.

Once the certainty of profit was established, the company could shift relatively swiftly and unexpectedly from exploration to extraction. Jadar thus became one of the world’s largest greenfield lithium mining projects and was designated to become Europe’s largest supply of lithium for at least the next 15 years (Rio Tinto 2022c). In July 2020, it was moved into the stage of a feasibility study, accompanied by an investment of almost \$200 million to fund project development, including “detailed engineering, land acquisition, workforce and supply preparation for construction, permitting and the early infrastructure development” (Rio Tinto 2020b: 1). A total of \$450 million was committed in pre-feasibility, feasibility, and other studies in Jadar (Rio Tinto 2021a). In December 2020, the deposit was officially declared a maiden Ore Reserve at the lithium-borates project that is 100% owned by Rio Tinto (Rio Tinto 2020b). In July 2021, the company committed an additional \$2.4 billion to construct the mine, despite the feasibility study and Environmental Impact Assessment (EIA) not yet completed (Rio Tinto 2021a). The feasibility study was expected to be completed by the end of 2021, as was the land acquisition process, followed by the construction of the mine of up to four years

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<sup>8</sup> Rio Tinto has sought to strengthen its position in the lithium market and diversify its production, acquiring an undeveloped lithium brine project in Argentina from Rincon Mining for \$825 million in March 2022 (Rio Tinto 2022d). While the acquisition process was started before the cancellation of the Jadar Project, its importance for the company and the global lithium market is now ever so significant.

which was set to commence in early 2022 (Rio Tinto 2020c). Yet six months after the major financial commitment, in January 2022, the Serbian government revoked all the awarded licences following a series of mass protests (Sekularac 2022). In the following section, I explore the process of the local population learning about the mining initiatives and organising in response.

## Getting informed, organised, and mobilised

*“Had we known what we know now, I believe that not a single house would have been sold and not a single drill would have been drilled.” (Nataša, a local from Gornje Nedeljice, Jadar Valley)*

How did the local population make sense of the rapidly shifting temporalities and spatialities between exploration and extraction? And how did they navigate the tensions between the abstract explorations and discoveries, and material drills, as they learned about mining initiatives? Locals of the Jadar Valley and elsewhere reported a significant lack of communication around the exploratory drills. As Nataša, a local teacher from Gornje Nedeljice, one of the villages that has been the most impacted by the proposed mine in the Jadar, explained above, locals opposing the mine feel misinformed and lied to about the impact and the extent of the project. Danijela from Rekovac explains:

“They [locals of the Jadar Valley] had no idea what was to come. They were slowly cooked like a frog, they [the Rio Tinto employees] infiltrated the society, donated to schools, came into their houses to visit, for Slavas<sup>9</sup> and so on. They were convincing locals that it is a very small area in question, and they presented the project in a completely different way.” (Danijela)

Invoking the metaphor of the cooked frog in this context is interesting not only for its graphic imagery but also for its temporality. According to the metaphor, if a frog is placed in boiling water, it will immediately jump out to escape the danger, but if it is firstly placed in tepid water that is only gradually heated up, it will not realise the danger until it is too late. The metaphor invokes the slow process from the discovery and the company’s involvement in local life,

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<sup>9</sup> Slava is a Serbian Orthodox Christian tradition of the ritual of glorification of a family's saint patron’s day. The saint patron is believed to be the protector of the family. Different families have different patrons and celebrate a Slava on different days. Friends and extended family are invited to celebrate and feast together. In 2014 it was inscribed in the UNESCO Intangible Cultural Heritage Lists of Serbia (UNESCO 2022).

cultivating a sense of trust, followed by what was perceived as a rapid shift to acquire the land and construct the mine. As Fent and Kojola (2020: 823) remind us, “[t]he building of trust is a temporal process, and it often becomes a site of contestation between different visions of the future.” Kristina, the Rio Tinto employee, remembers with a certain nostalgia the times when journalists and media would call them to ask when the mine was finally going to be opened - the times when the mining project was not only uncritically accepted but also awaited with excitement. Figure 4 similarly describes a sense of pride and patriotism when the local media reported the discovery, illustrative of the changing attitudes as the Jadar Project began to materialise.

Stefan, from a local activist group, explains that the first significant milestone was when the draft of the Spatial Plan for the Jadar Project<sup>10</sup> and the associated assessment report were made available for public inspection for 30 days between 25th November and 24 December 2019 (MGSI 2019). In March 2020, the Spatial Plan was established by law (Official Gazette of the RS no. 26/2020). “And, in fact, it was from that strategy that we saw what is to come,” Stefan says. Yet he stresses the difficulty for locals, who are mostly farmers, to access such information. A crucial turning point came during autumn 2020 when, as locals describe, the status of their land was changed overnight in the cadastral register from agriculture and forestry land to building land without their knowledge. They described this as a direct threat to their livelihoods as farmers. According to the Centre for Investigative Journalism Serbia (CINS 2021), the tax for the change of status was paid by Rio Tinto despite the company not owning the land<sup>11</sup>.

Some of the first local protests started in the Jadar Valley in the autumn 2020, 16 years after the discovery of jadarite, and they began to escalate through 2021, most notably during the summer, when in July, the local government of Loznica amended the spatial plan of the municipality to align it with the previously adopted Spatial Plan for the Jadar Project, leading

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<sup>10</sup> Full titles “Draft of the Spatial Plan for the Special Purpose Area for the Implementation of the ‘Jadar’ Project of Exploitation and Processing of Jadarite Mineral” and “Strategic Assessment Report of the Impact of the Spatial Plan on the Environment” (“*Nacrt prostornog plana područja posebne namene za realizaciju projekta eksploatacije i prerade minerala jadarita ‘Jadar’*” and “*Izveštaj o strateškoj proceni uticaja prostornog plana područja posebne namene za realizaciju projekta eksploatacije i prerade minerala jadarita ‘Jadar’ na životnu sredinu*”)

<sup>11</sup> The land in Gornje Nedeljice was returned from the building to the agriculture and forestry status in April 2022 following the cancellation of the Jadar Project (RTS 2022).

to hundreds protesting in front of the City Assembly (Todorović 2021a). Ana, a local from the Jadar who was one of the first to become publicly known for her vocal resistance against the mining project, explains:

[The resistance to the mining project] was a huge shock for the company, they had been operating there for 17 years, and no one said a thing, they were working well with locals, got close to them, they went to Slavias, to birthdays, those employees who lived in the villages alongside locals (Ana).

How is the long period between the discovery of the jadarite and the first protests to be interpreted? At the centre of the local struggle to make sense of the lithium mining efforts in the Jadar Valley is the temporal shift from tentative possibilities of exploration to definite certainties of extraction. Locals and activists began to organise themselves as the plan to construct the lithium mine became embedded within the local Spatial Plan and materialised through the change in the status of their land.

With the arrival of mining and exploration companies in their region and the rise of the movement against the mine, the day-to-day lives of locals were ruptured, and their mobilisation involved a process of becoming informed in unprecedented ways. “We lived completely different lives,” says Nataša from the Jadar. She stresses the difficulty of obtaining relevant information from Rio Tinto, and other research participants confirm that they rarely received answers to the questions they had for the company:

“They think we are [...] uneducated, stupid, dumb. I prepared myself, I read the laws, I came to the meeting with the company and whatever I asked them, they didn’t know how to answer. I was studying for three whole days so that I knew what to ask them and they had nothing to tell me.” (Nataša)

Crucially, the process of getting informed does not only refer to learning about the planned mining project. It also means learning how to *become* an activist and mobilise the masses:

“It should be taken into account that we are ordinary people who suddenly found themselves in this role of having to read through the laws, read through the spatial plans, communicate with the media, be quote-unquote politicians in the sense of having to negotiate and reach consensus between different ideas and methods and so on. So we suddenly found ourselves in this story that is completely different from our day-to-day lives.” (Danijela)

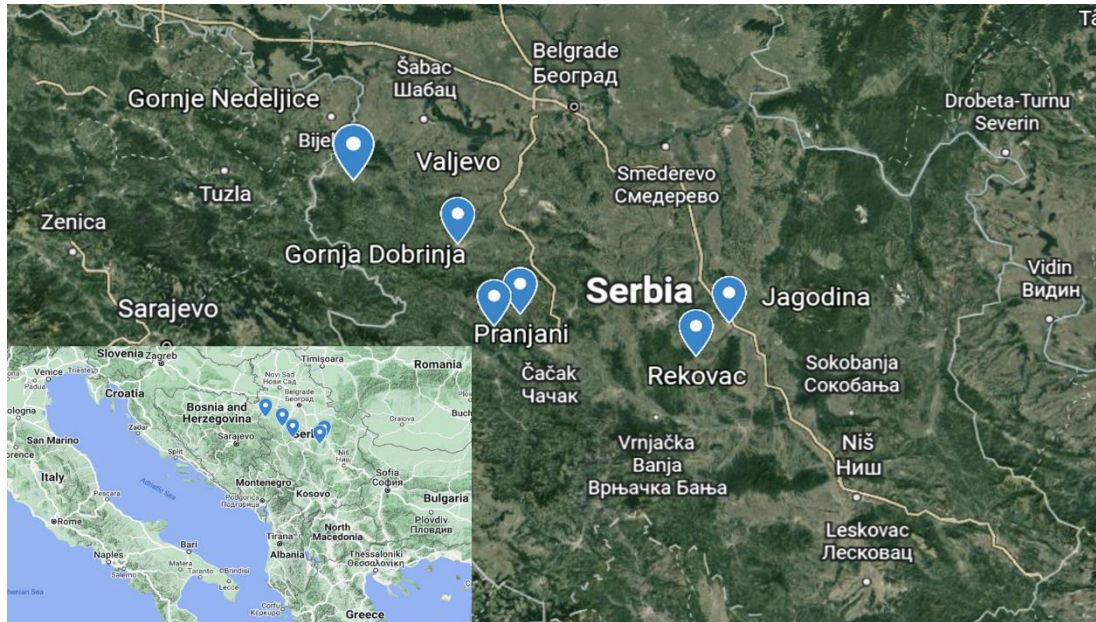
As locals had little experience with environmental activism, they partnered with activist groups from all over the country. New activist groups also formed in response to lithium mining efforts

in Serbia, and the resistance to the Jadar Project attracted people who were not from any areas directly affected by lithium mining.

While the lithium exploration started in the Jadar Valley, as emphasised by Grubin, there are now lithium exploratory mining works across Serbia. Throughout the spring and summer of 2021, other locations affected by lithium exploration got organised and connected, resulting in the official formation of SEOS, the Association of Ecological Organisations of Serbia (*Savez ekoloških organizacija Srbije*), in October 2021. SEOS unites six local organisations from across Serbia affected by lithium exploration - Gornje Nedeljice (Jadar Valley), Valjevo, Pranjani, Jagodina, Rekovac and Dobrinja. Yet, the process of getting informed, organised, and mobilised, and sharing the information with other villages across Serbia is embedded within the particular politics of temporality. Different locations are positioned differentially in relation to the temporality of the mining projects, from the ones in the Jadar Valley already affected by the proposed mine to the ones that have only heard they might be next:

“Our luck, and maybe this is a bit bad to say, but our luck is that we have the Jadar as an example.” (Danijela)

Danijela from Rekovac, one of the six areas represented by SEOS, explains how Jadar, where locals did not have sufficient information about the project from its conception, became a cautionary example for other villages of the possible future. In that sense, the drills are no longer just a tentative possibility that is to be ignored, but they become understood as the real and material *beginning* of the mining process. Other villages across Serbia are now rejecting any possibility of exploration and drilling.



*Figure 7: Areas in Serbia affected by lithium exploration and mining efforts, Gornje Nedeljice, Valjevo, Dobrinja, Pranjani, Rekovac and Jagodina. Local organisations from these areas are founding members of SEOS, the Association of Ecological Organisations of Serbia (source: Google Earth, map my own)*

Danijela says that Rekovac has been neglected for years by the local and national government, with young people leaving the rural area for cities and the population rapidly ageing. She saw an article around February 2021 saying that Rekovac sits on the treasure that is lithium. Her immediate reaction was a deep worry because she had already heard the story of the Jadar and Rio Tinto. She started her own investigation only to find out that two exploratory holes have already been drilled on the municipal territory. Both holes were drilled during the lockdown, which, she says, contributed to the fact that locals were unaware of the explorations. By October 2021, locals were organised, and they physically stopped Balkan Mining and Minerals company from drilling another hole by blocking the road (Nikić 2021). Similarly, another drill was physically blocked at the end of April 2022 in the Valjevo municipality. The municipality is 60 km from the Jadar Valley, yet locals of the Jadar arrived to help prevent the drill by the Euro Lithium Balkan company (Spasić 2022a). The understanding of the drills as a tentative possibility and nothing to be worried about became physically rejected by locals. Instead, the drills became a central site of the materialisation of lithium mining efforts in Serbia. In the next section, I explore how drills, although framed as the mere possibility of extraction, cause things and information to surface and play a vital role in locals getting informed about lithium mining.



Figure 8: Locals of the Rekovac municipality blocking the access for an exploration drill to be drilled, October 2021 (source: Nikić 2021)

## The underground, the elements and pollution

*“I got to know the character of the bees as much as I could, and their character is to be respected. Not simply loved, but respected,” Goran says. “Their character?” I ask. “Well, it is an organised society. Where there are no stupid conversations. This is a stupid conversation. Some things go without saying. Lithium belongs underground. We can do without it, but to pollute water would be a disaster. Irreversible disaster.” (Goran, a beekeeper, Jadar Valley)*

Hundreds of drills across Serbia have drilled hundreds of kilometres underground, reaching deep below the surface to establish the presence of lithium. The exploratory holes are drilled through different spatialities, materialities and temporalities - the “subterranean geopolitics” of extractivism (Valdivia 2015). The drills are a manifestation of the *geopolitical* power of the verticality and the underground (Klinke 2021) and the theoretical need to move beyond the flat surface of space. Talking about geological strata and formations, “horizontal sheets of materiality,” Steinberg and Peters (2015: 255) stress that “it is the vertical influence of gravity that—over the course of many thousands of years—compacts the distributed matter into its geophysical form as rock that can be traced and dated.” Despite reassurances from the mining company, drilling through thousands of years of *matter* has had real and material consequences

for locals of the Jadar Valley and beyond. Rather than with the excitement of the company's geologists, some of the locals now describe the drills as "an open wound" and locals are contesting the image of the exploration drills as not having any effect on their lives:

"The fact is that they do not play by the rules, there are drill holes close to a well, a school, and they are already causing problems in and of themselves, let alone something more than that." (Danijela)

According to locals, the drills have already polluted the local environment, with increased levels of toxins in the soil and water. Proving these effects becomes a knowledge controversy I describe in the following section.

Central to how a relationship with land is framed for many locals and activists is an elemental imaginary. The biggest concern is the possibility of pollution and "poisoning" of earth, water, and air, some of which has already been happening because of the drills, according to locals. Locals stress both the spatial and temporal effect of the pollution and hence dispute the calculations of the company that suggest only lower hundreds of locals would be affected by the mine. Nataša says that tens of thousands of people live off the soil in the Jadar Valley. Farming, agriculture, their food, and livelihoods depend on the earth, water and air and polluting them is understood as a direct threat to the existence of the people within that space. Despite the company's insistence on the newest and cleanest technology, locals refuse to "gamble with their lives" as put by Danijela and livelihoods as stressed by Nataša. For Isidora, from a non-local, Belgrade-based activist organisation, the biggest environmental issue in Serbia is the "attack on water, earth and air." She thinks that is why so many people supported the locals' struggle in Jadar - almost 300,000 people signed the petition against the mine in a country of less than seven million. "We must understand that it is fundamental to breathe clean air, eat healthy food and drink pure water. There is no life without that. They [the mining and exploration companies] simply struck at something fundamental. It is a question of survival."

The Jadar Valley and jadarite are named after the river Jadar, which flows to the Drina, the Sava and later the Danube in Belgrade. Indeed, one of the campaign groups is called Marš sa Drine (Get Off Drina), referring to the importance of the river not only environmentally but also historically and culturally. Through the names, both the company and the activist groups invoke the importance of the rivers. The region is known for frequent flooding - and the floods are what makes the soil in the region so fertile. The security of the mine is also questioned on

the grounds of being located in a region with frequent floods that could result in the pollution from the mine spilling into the surrounding area. The existence of the mine is seen as in direct opposition to the existence of the local population in the area in its current form, not only because of the displacement in the immediate zone of the mine but also because of the pollution and environmental degradation the mine would cause, impacting a much larger area.

“There is healthy water under our space. Pools of clean drinking water,” says Nataša. Several interviewed participants have expressed scepticism that Rio Tinto has truly intended to mine lithium. Instead, some suggested that they are there because of water. While the participants mostly recognised that that is an unlikely interpretation of the events, it serves to demonstrate that for some of the locals, it is almost impossible to believe that the company would destroy the fresh groundwaters for lithium. It is possibly easier to believe in some sort of conspiracy where the water itself is the target in order to make sense of the conditions in which they have newly found themselves. Locals stress that pollution of underground waters causes irrevocable damage as it is, in essence, impossible to clean up. The pollution of the rivers, groundwaters and soil due to the mine itself as well as the exploratory drills is seen as the single biggest threat to the environment and its inhabitants.

“[Lithium] has to stay underground. It is literally like in Dante’s hell, and that is supposed to stay down and not up.” (Nataša)

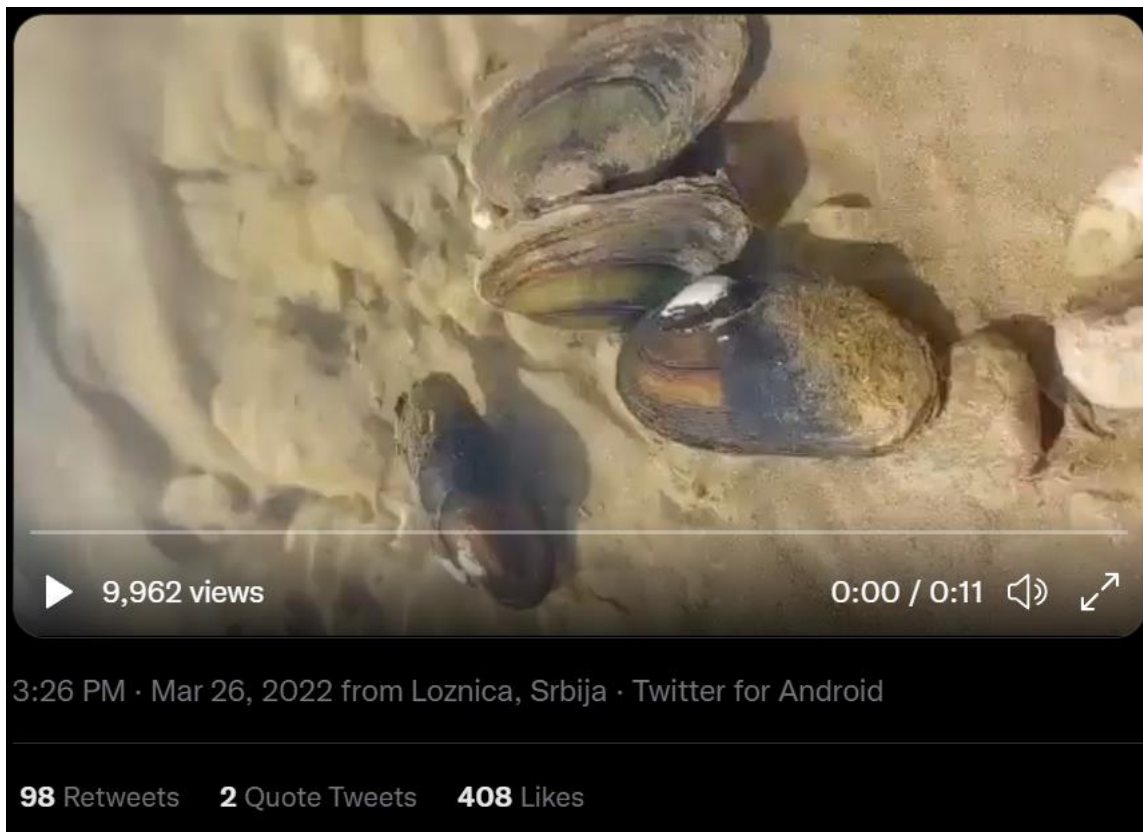
Nataša, similarly to Goran quoted at the beginning of this section, invokes a sense of what is *supposed* to stay underground - a clear understanding of an order that the mining companies have violently ruptured. In the next section, I describe the effort of locals to demonstrate the effects of this violation.

## Local knowledge, science, and expertise

*“Nothing grows where they drilled.” (Nataša, Jadar Valley)*

Proving the harmful effects of the drills as well as the potential mine is a difficult process and a knowledge controversy. The material, spatial and temporal focus of this thesis seeks to go “beyond any understanding of knowledge controversies merely as isolated events” (Barry 2012: 330) but rather as taking place in the broader context of a political situation. Through local knowledge and experience with the exploration drills and the pollution they caused, locals

were able to connect across the villages, even hundreds of kilometres away. Nataša shows me pictures of sunflowers near the drills that grow visibly lower compared to other sunflowers in the Jadar Valley. She says there are now freshwater mussels in the Jadar river only upstream from the drills, with no mussels downstream (Figure 9). They also saw roe deer die near the drills and say that some springs have dried up because drilling disrupts the groundwater levels. In their efforts to document the effects of the drills, locals took videos of the drills leaking with the concrete around the drills visibly moist, photos of the crops and engaged in collecting the soil and water samples to provide evidence of the damage. At the same time, as the possibility of mining became real, it was not only the exploration drilling that was rejected by the locals. On multiple occasions, locals from the affected areas physically prevented companies' geologists from collecting soil samples. The material politics of sample collection thus becomes the central site of the conflict about who gets to produce what kind of knowledge and to what end.



*Figure 9: An 11-second-long video of freshwater mussels shared on the Twitter account of a local anti-lithium mining group We Don't Give Jadar (Ne damo Jadar). The video has been viewed almost 10,000 times (source: Ne damo Jadar, 2022)*

A strong scientific discourse surrounds the question of exploration and geological research, and the abstract idea of scientific progress justifies the exploration as well as the extraction. There is an important connection between some scientists, primarily geologists, and the mining companies. The role of universities, both local and international, is vital not only for explorations - and discoveries - but also later in justifying the mining project. The local knowledge and experience clashes with the “expertise” of some scientists from the Faculty of Mining and Geology of the University of Belgrade, with whom the lithium mining in Serbia not only started but who have also supported the development of the mine both through media and academia by producing assessment reports which were commissioned by Rio Tinto, with the Faculty receiving over million euros from the company. Locals and activists stress that the expertise of the scientists has thus been compromised, while the Faculty argues that this is a standard procedure and the funding and donations do not influence their results (Dragojlo 2022).

It would, however, be simplistic to present the case as the expert knowledge standing in opposition to citizen science and local expertise. Locals and activists have deeply engaged with the science surrounding the construction of the mine and partnered with scientists from institutions such as the Institute of Chemistry, Technology and Metallurgy, the Serbian Academy of Sciences and Arts, the Faculty of Biology and the Faculty of Forestry also of the University of Belgrade. Locals and activists frequently cite the scientific evidence against the proposed mine, and they would typically invite at least one scientist to talk about the issues of lithium mining as a speaker at the protests. They have also sought to demonstrate the pollution caused by the exploration drills through sample collection, with some results showing between 3- and 17-times higher concentrations of arsenic, boron, and lithium in the Jadar river downstream from the exploration drills (Spasić 2022b). The Valjevo municipality is considered the most affected area by lithium exploration after the Jadar Valley, with 49 drill holes. A local activist group Get off Kolubara (*Marš s Kolubare*<sup>12</sup>) won a temporary ban on exploration works by Euro Lithium Balkan in December 2021, amidst the height of the nationwide protests and road blockades against lithium exploration. Crucially, the ruling was based on water samples collected from the local wells that showed alleviated levels of iron, sodium and boron (Balkan Green Energy News 2021). A particularly well-known case involved one elderly farmer who was drinking water from his well with alleviated toxins for 18 months. In his case, boron was

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<sup>12</sup> Kolubara is a local river and a tributary to the Sava river.

found to be 15 to 20 times higher than the recommended levels (Nastevski 2022). It is, however, difficult to establish the cause of the alleviated levels as there is no base-level data from previous years, which becomes central to the knowledge controversy.

In the interviews, several locals stressed their lack of expertise, describing themselves as “normal people” who do not understand the science behind the mine. “We are being accused of being fake environmentalists. I don’t consider myself an environmentalist at all. I don’t have enough knowledge to be able to explain confidently and scientifically what the effects on the environment would be. But I rely on science for that,” explains Danijela. And as Goran puts it, “the stance of science is that the mine is not healthy.” Both Goran and Vera stress their lack of university education but talk about their life experience as farmers, lay knowledge and plain logic. During our interview, Vera, who describes herself as a “writer and villager,” contrasts her position with mine when she explains her knowledge about the consequences of lithium mining:

All I am is a careful listener. Everything I am telling you, that doesn’t come from universities and prestigious schools like in your case, which is why you have that knowledge. All I did was listen to wise people, and now I am conveying that to you. All I am is a sort of a guide through the thought of intelligent, wise people [...] and making judgements based on that.

As the movement became comprised of locals and activist groups from Belgrade and other big cities, Elena from a non-local activist group says that the movement was successful in connecting “a villager (*seljak*<sup>13</sup>) with an intellectual,” rural areas with big cities - and both are equally important in the fight against lithium mining.

Nevertheless, many of the interviewed locals and activists reflect on the “unfairness” of the fact that no one knows “whom to trust.” “You can’t trust anyone, that’s exactly why we are in this mess in the first place. The truth is so messy that people started to believe that it doesn’t exist at all,” says Vera. Danijela reflects on the laborious and time-consuming process of educating oneself, examining all the scientific statements: “And so as a layperson, you have to

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<sup>13</sup> The Serbian word *seljak* translates as a villager or a peasant, describing a person living in the countryside and most commonly working as a farmer. The best way to understand the word might be through the Spanish equivalent *campesino/a*, describing a person that has a sense of belonging to the land and often works as a small-scale farmer. Especially in Latin America, *campesino/a* movements play a vital role in struggles for environmental and agricultural justice, indigenous rights and anti-extractivist movements (Rodriguez Castro 2021; Holt-Giménez 2006). In Serbian, the word can also be used in pejorative or derogatory terms, yet it is being reclaimed by those who use it proudly.

decide what the truth is. I think that's very unfair to normal people, who don't know which of the scientists to trust." Isidora, from a non-local activist group, brings up the question of morality and ethics to criticise the scientists whom she thinks lost their morals when they supported the lithium mining initiative in the Jadar Valley: "It's not enough to be an expert, the end doesn't justify the means. Just because you have a title, that doesn't mean you're a good person with true motives." Interestingly, Kristina, the Rio Tinto employee working in communications, raises the question of morality herself when she explains why she trusts the company's scientists and engineers. As she does not fully understand the science either, she stresses that she works every day with experts and moral and honourable people with integrity she fully trusts. This is indicative of the nature of knowledge controversy where it is impossible to solely rely on "science." Rather, both those in support of and opposition to the mine invoke other questions such as "morality" to justify their position.

Regardless of the knowledge controversy and the rightness or wrongness of science(s), Ana stresses the community's right to say "no." Similarly, Danijela cannot "understand why it is even disputed that we should be asked how we want to develop the space where we live," says Danijela. She questions the authority of those who speak in favour of the mine without considering the perspective of locals and their wishes and opinions about what constitutes development:

"The professors who speak in favour of the mine, simply put, talk about the fact that the problem is technological - if good technology was developed, why wouldn't we develop the mines? But I think they still fail to see what is perhaps an alternative to such development, and they don't go into the issue of people's existence in those territories, people who want to live differently. And that I don't like. In that, I recognise an elitist arrogance of science, where an ordinary person and their fate are completely put aside. So they only talk about development, but the questions of what is our life, what are the real problems we deal with, and the fact that we could truly become ecological refugees, no one puts in the foreground. To me, those human lives and the nature we inherited are still more important than anything else. Maybe someone will say I'm naive, but that's my opinion." (Danijela)

Since the discovery of the jadarite in 2004, hundreds of kilometres have been drilled underground in an effort to mine lithium in Serbia. Exploration drills have been constructed as a mere tentative possibility of extractivism in the context of the legal landscape encouraging investment in mining. Yet the temporal shift from years of tentative explorations to material

(and spatial) plans to construct the mine in the Jadar Valley has led the local population to inform themselves about the potential consequences of the mine in the area where they depend on the soil and water. The drill holes became a site of contestation as locals reported that they pollute the local environment. The drills and the Jadar Project became a knowledge controversy as locals partnered with scientists to prove the material effects of the drills as well as the possible devastating effect of the mine on the local environment and population. In the next chapter, I expand on a fundamental aspect of the struggle against lithium mining in Serbia - a relationship locals have with their immediate environment, Serbia and the rest of the world.

## Chapter 2: Lithium Mining in a Forgotten Corner of Europe

Between 10th and 15th February 2022, locals, activists, and myself alongside them, set up a protest camp in front of the President's Residence in the Pioneers Park in the centre of Belgrade. The camp was organised in cooperation between the local and non-local activist groups to raise awareness about the way lithium mining projects threaten locals and their livelihoods. Around twenty tents were set up, tables, benches, and a small marquee in the middle of the camp, banners and flags waved around. Passers-by would stop to talk to locals, some brought them food and blankets and wondered how come the campers do not freeze at night. Locals brought homemade food with them to Belgrade, which they offered to the camp's visitors. Journalists were coming every day to interview locals and, in the evenings, when most people would gather, actors, artists and writers performed, including Vera, who read her poems in a voice that got hoarse from camping in the cold. The campers were also visited by the prince and princess of the royal family<sup>14</sup> (although Serbia has not had a monarchy since 1945 with the birth of the Socialist Federal Republic of Yugoslavia) as well as the two oppositional presidential candidates, while mostly ignored by the pro-government media, illustrating the political division in the country.

On the second evening of the camp, a famous Serbian actor read a passage from the historical novel *The Bridge on the Drina* (*Na Drini ćuprija*) written in 1945 by Ivo Andrić, a Yugoslav Nobel Prize in Literature laureate. The passage was about young Christian Balkan boys being forcibly recruited by the Ottoman Empire to become re-educated as Janissaries, elite Ottoman infantry known for strict order and discipline, a practice that started in the 14th century with the Ottoman conquest of the Balkans. The passage read in the camp on the February evening, surrounded by locals, activists, and visitors of the camp, describes the moment young boys are taken away from their families, never to see them again:

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<sup>14</sup> Prince Filip Karadjordjević, unofficially titled Hereditary Prince of Serbia and Yugoslavia, was born in the US and raised in the UK. In 2020, aged 38, he moved permanently with his wife Danica and their son to Belgrade, Serbia. They have since become vocal on social and political issues in the country, supporting the environmental protests in contrast to the governing party SNS and advocating for the monarchy (Danas 2021). Although without formal political power, their popularity has increased since their move to Serbia.

“The mothers were especially persistent and hard to restrain. Some would rush forward not looking where they were going, with bare breasts, and dishevelled hair, forgetting everything about them, wailing and lamenting as at a burial, while others almost out of their minds moaned as if their wombs were being torn by birth-pangs, and blinded with tears ran right on to the horsemen's whips and replied to every blow with the fruitless question: 'Where are you taking him? Why are you taking him from me?' Some tried to speak clearly to their children and to give them some last part of themselves, as much as might be said in a couple of words, some recommendation or advice for the way \_\_\_\_

'Rade, my son, don't forget your mother....'

'Ilija, Ilija, Ilija!' screamed another woman, searching desperately with her glances for the dear well-known head and repeating this incessantly as if she wished to carve into the child's memory that name which would in a day or two be taken from him forever” (1977: 24).

The actor’s eyes glistened with tears as he looked up into the light set up by the campers to illuminate his performance. I looked around and saw others in the audience impacted in the same way by the power of the words, and I was surprised by the goosebumps on my arms.

This chapter is broadly concerned with *spatialities*. Although the protest camp took place after the official cancellation of the Jadar Project, I use this vignette as a starting point for this chapter in which I focus on the emotional and affective geographies, the relationship of locals with the land, the sense of place and the spatialities of displacement (Lunstrum 2016) and resistance. In doing so, I trace the connections between the surfacing of concerns about lithium mining and the resurfacing and remobilisation of historical events as different temporalities mix in the soil as the machines drill through them. First, I describe how the history and heritage underpin the local struggles against the mine and the refusal to sell their houses and leave the land. Second, I focus on the questions of farming and the livelihood the land provides, which are pivotal in understanding the opposition to the mine. Third, I describe how locals understand their position in relation to the rest of the world, with a particular focus on becoming a sacrifice zone in Europe and re-articulation of the questions of colonialism and imperialism. Finally, I describe how their struggle led to the escalation of the protests in the form of thousands of people blocking major highways, roads, and bridges across the country between November 2021 and January 2022, ultimately leading to the cancellation of the Jadar Project.

## History, heritage, and war

*“Even though I am by no means a nationalist, I feel something when I drive through this part of the country, and it means something to me. You really should know about this,” David tells me as we drive through the Jadar Valley, referring to my lack of knowledge of Serbian history.*

*“This land is ours, and we have the right to defend it with our lives.” (Vera)*

The Balkans has historically been presented as a bridge between the East and the West, and Serbia was divided between the Austro-Hungarian and the Ottoman Empires, the border running through Belgrade. The Western discourses on “the Balkans” as a contested space are not new but a product of a long history of othering (Todorova 1994; Goldsworthy 1998; Wolff 1994). For Todorova (1997: 188), “the Balkans have served as a repository of negative characteristics against which a positive and self-congratulatory image of the ‘European’ and the ‘West’ has been constructed,” with the Balkans always “lagging and lacking” behind the West. Yet while her term “Balkanism” needs to be read in relation to orientalism and post-colonialism, unlike in the case of the imaginary Orient, the Balkans is distinctly located between the West and the East, “left in Europe’s thrall, anticivilization, alter ego, the dark side within” (1997: 188). Serbia, ex-Yugoslavia, the Western Balkans, or south-eastern Europe thus present a case of geographical space that is European, but not as European; white, but not as white; Christian, but not as Christian; developed, but not as developed. This “dark side” manifest through numerous wars and massacres that have marked the history of the region and that have been constructed in the Western imagination as a result of eternal hatred between different ethnic groups - and hence impossible to avoid, conveniently masking the West’s own role in the wars (Hansen 2013).

The Ottoman colonisation of the Balkans between the 14th and 19th centuries is critical for the Serbian national myth (Hammond 2017; Hajdarpašić 2008; Djordjević 1967), and it complicates the Western-centric understanding of colonialism and imperialism (Lameborshi 2019; Mikhail and Philliou 2012; Mignolo and Tlostanova 2006; Deringil 2003). Evoking the struggle of the Serbs under the occupation of a colonial force, the Ottoman Empire, and the struggle for independence is by no means insignificant in the context of the resistance to lithium mining. The parallel with lithium mining implies the continuation of this dynamic as Rio Tinto is frequently referred to as the “occupier”. The Serbian Revolution occurred between 1804 and

1817, after which the Serbian Principality as an autonomous state was established. Miloš Obrenović, the Prince of Serbia and the leader of the Second Serbian uprising between 1815 and 1817, was born in Dobrinja, one of the villages impacted by lithium mining approximately 120 km from the Jadar Valley. Let's Protect Dobrinja and its Surroundings (*Zaštitimo Dobrinju i okolinu*), one of the founding organisations of SEOS, has the portrait of Miloš Obrenović as its symbol and logo. I am given keychains and badges with Miloš Obrenović, and flags with his portrait are waving around at the protests. The First Serbian Uprising of 1804 started on 15th February, now celebrated as Serbian Statehood Day. 15th February 2022 also marked the last day of the protest camp and the blockade of the ceremony of the president Vučić awarding the state orders<sup>15</sup>. It was also the day of the dissolution of the Serbian Parliament, marking 45 days before the presidential, early parliamentary and some local elections on 3rd April, seen by many locals and activists as a critical moment for exerting pressure on the government (Radio Slobodna Evropa 2022).

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<sup>15</sup> As the protesters were trying to block the entrance to the Palace of Serbia and disrupt the ceremony, American actor Johnny Depp was among those who received the order from Vučić. The award came at the height of the controversy surrounding his ex-wife Amber Heard who accused him of sexual assault and domestic violence (Legaspi 2022).



*Figure 10: The flag of Zaštitimo Dobrinju i okolinu with Miloš Obrenović waved over the protesters at the blockade of the Palace of Serbia on 15th February, the last day of the protest camp, as they sought to block the ceremony of the president Vučić the state orders. The practice of raising hands at protests is used in tense situations with the police to demonstrate that no violence was initiated from the side of the protesters. On one of the hands, a face mask with the logo of the activist group Get Off Drina (Marš sa Drine) can be seen (source: picture my own).*

The spatial and temporal entanglements underline the resistance to the lithium mining efforts in Serbia. The spatialities are also volumetric as the exploration drills drill through the sediments of soil and different temporalities that mix in the Jadar Valley:

There is not a single family here that did not lose someone in that war, Battle of Cer<sup>16</sup>, WWI, WWII. Our soil is flooded with blood. Even now, when they plough, they still find a skeleton, gun, knife. We were fighting here. There have always been wars for the Valley. And that is

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<sup>16</sup> The Battle of Cer was one of the first battles of WWI, taking place in August 1914 around the Cer Mountain in western Serbia. The battle was part of the Austro-Hungarian invasion following the assassination of Archduke Franz Ferdinand in Sarajevo. Yet surprisingly, the Serbian forces won decisively, marking the first victory of the Allied Powers (Rothenberg 1989).

why the people have a completely different relationship with this land. [...] That is something they can't understand (Nataša).

By “they,” Nataša refers to the employees of Rio Tinto, her neighbours who sold their land, as well as other supporters of the mining project. Goran took me to the monument to the executed victims and a mass grave in Draginac, just a few kilometres from the proposed mine. He says he likes to bring here all the international journalists who come to report on the local struggle against the Jadar Project. The monument commemorates the local civilian victims who were executed during WWII. In response to a series of communist-led Partisan resistance attacks, the German commander Franz Böhme ordered for every one wounded German soldier, fifty Serbian civilians to be executed - and one hundred civilians for every dead German soldier. Most executions took place in October 1941, when around 3,000 people were killed during the course of five days, out of which 305 were children under 10 (Spomenik Database 2021). Goran tells me that people died on this land defending it and foreign forces have always wanted to seize this fertile part of Serbia. Every Serbian child learns about this at school, he says. I didn't, I think to myself, reminded of my position at the hyphen of the insider-outsider dichotomy and of David's words as we drove here, quoted above. In an interview, Goran tells me Rio Tinto supplied Nazi Germany with steel during WWII<sup>17</sup>. Their experience connects past ancestors, and the struggle against Rio Tinto becomes replicated as defending Jadar from just another invader. Those civilians were killed with guns manufactured thanks to Rio Tinto, the same company that now comes here to displace locals, he says.

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<sup>17</sup> Rio Tinto operated in Spain during the Francoist dictatorship, selling iron ore and pyrites to Nazi Germany (London Mining Network 2010; Leitz 1996; Whealey 1977; Hubbard 1953). Whealey (1977: 145) stresses that “[Franco's] ability to obtain further credits from Nazi Germany and Fascist Italy depended in part on the support given him by British and American businessmen,” suggesting that Franco's control of Rio Tinto and other mining and oil industries in large part financed his regime throughout the civil war.



*Figure 11: Monument to the executed victims in Draginac. Goran urged me to take a picture of the monument, but unfortunately, it did not come out well (source: Spomenik Database 2021).*

The traumatic history and heritage and the emotional geographies (Graybill 2018) of the area inform the locals' attitudes against the mining project, seen as a continuation of the long history of defending their land against foreign invaders - or investors. The narrative of war permeates the struggle against lithium mining. The (possibility of) pollution of the earth, water, and the air is seen as an "attack" as "food and water are of strategic importance" (Ana). This is also reflected by Goran and Nataša, all three from the Jadar Valley:

"Water is the future. Wars are being led because of water, is that right? And not because of lithium. Maybe in the future, there are also going to be wars because of lithium. Maybe we will have to fight." (Goran)

"The 21st century will be about food, water, and clean air. That is what wars will be fought for." (Nataša)

For Elena, an activist from a non-local group formed in response to the Jadar Project, if you kill the earth, poison air and water and sell a nation's natural resources, you are killing the people living on that land – "ecocide is genocide," she says. For her, genocide and ecocide are intimately connected, having the same root cause - patriarchal domination over a nation, women, animals, nature. Genocide is a loaded term in the Balkans and especially in Serbia, where the 1995 massacre in Srebrenica of more than 8,000 Bosniak Muslim men and boys who were killed by the Bosnian Serb armed forces, less than 60 kilometres from the Jadar Valley,

but on the other side of the border, is still denied as genocide by many (Memorijalni centar Srebrenica 2022). The collective trauma and guilt of the 1990s wars on all sides, albeit rejected by many, linger over the Balkans. Crucially, the lithium vein extends to BiH, and deposits have also been identified around Srebrenica (Katić 2021).

The attachment to the land is deeply personal and the role of emotions is critical in struggles against extractivism (González-Hidalgo and Zografos 2017). Nataša describes her feelings about the local church and cemetery:

“Our local church is one of the oldest churches in the region, it is seven centuries old. My mother-in-law died five months ago, and then...I don’t know what I would do if they told us to move our dead somewhere else. [...] We cannot fight just for the living, now we also have to fight for the dead. And so, it is very emotional, very painful, you are trying not to get overwhelmed by the emotions, but you get overwhelmed very quickly.” (Nataša)

As Rio Tinto started the process of the buyout of the land and houses necessary for the construction of the mine, the discourses and narratives around heritage surfaced. Ognjen, one of the locals of the Jadar Valley, told me in the protest camp:

“How much is the Pantheon worth? And the Pyramids? Would anyone sell those? My father and my grandfather built everything with their bare hands. Who am I to sell that to anyone?”

Those who refused to sell their houses and land found themselves at the heart of the resistance to the Jadar Project. Their attachment to the place received international attention and widespread support.

Although Kristina, the Rio Tinto employee, believes that only a handful of locals truly and honestly do not wish to leave their land while others are protesting for “political reasons,” she says she understands the attachment to the land of the few. My grandfather was one of the last to leave Kosovo<sup>18</sup>, she told me during our interview. One of the most prominent figures against the Jadar mining project, part of a non-local activist group, openly talks about his experience of leaving Kosovo as a young child and becoming a refugee. Thus, both a Rio Tinto employee and an activist, although never having spoken to each other, are connected through their experience of war and their families leaving their homes in Kosovo. The spatialities of

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<sup>18</sup> In 1999, more than 210,000 internally displaced persons (IDPs) fled to Serbia from Kosovo, most of them ethnic Serbs, Roma, and other ethnic minorities. During the 1990s, more than 550,000 refugees arrived in Serbia from the former Yugoslav republics. To this day, Serbia has one of the highest refugee and IDP population in Europe (UNHCR 2022).

displacement and the temporalities of war and conflict linger over the Balkans and are (re)mobilised in relation to the mining project. Leaving one's house and land is associated with becoming a refugee. Despite this, many have sold their houses, as I explore in Chapter 3. Before that, I focus on the role of farming in the cancellation of the Jadar Project.

## Farming, fertile soil and food

*"You cannot eat lithium." (protest slogan)*

*"Serbia has the highest number of beehives per capita in the entire world<sup>19</sup>. We are a country of bees. Not a country of lithium. There cannot be both." (Goran, a beekeeper, Jadar Valley)*

In the middle of the protest camp of February 2022, which was set up to promote the idea of the ban on lithium mining in Serbia, a sort of pedestal out of square hay bales was set up, forming what looked like a little staircase (Figure 12). On each stair, a local product was displayed with pride, arranged on a colourful, traditionally embroidered quilt. Products included jams, ajvar, roasted red peppers relish, and rakija, a traditional brandy made from plums or other fruit. Vera brought her famous cheese, and Goran prided himself on his homemade honey, giving out jars to distinguished guests of the camp. The attachment to land comes both from its historical importance as a site of heritage and present and future importance as a source of food and livelihood. It is hence not only affective but also rooted in economic practices. The Jadar Valley is known for its fertile soil and is sometimes referred to as the breadbasket of Serbia. Most of the local population works as farmers, producing fruits and vegetables, meat, dairy or honey. In Jadar, they are feeding all of Serbia, says Elena. Locals attached to their land struggle to understand the move from farming and agriculture to lithium mining and the potential production of electric vehicles.

"We simply do not understand anything. How can someone ride a car if they are hungry and thirsty? First, they have to eat and drink." (Nataša)

With this statement, like "you cannot eat lithium," locals and activists are using sarcasm to dispute the benefits of lithium mining over food production. Similarly, Goran, who took me to the WWII mass grave, invokes this idea through his bees:

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<sup>19</sup> Serbia has one beehive per six inhabitants (Tanasković et al. 2022; USAID 2018).

“Bees are part of human survival. They are necessary for the ecosystem for pollination. Every second bite is connected to a bee. It is not connected to lithium.” (Goran)



*Figure 12: Local products are displayed in the protest camp in front of the President's Residence in Belgrade, 10th-15th February 2022. The picture was shared on the social media account of one of the local activist groups (source: Zaštitimo Dobrinju i Okolinu 2022)*

Crucially, the impact of lithium mining transcends the human, and includes animals, plants, soil, and other more-than-humans. As have scholars recently challenged the idea of agency as exclusively human capacity (Greenhough 2011), so too have some locals stressed the agency and desire of the more-than-humans in the Jadar. Goran's bees *want* to stay where they are:

“Our family bees have been here in this village for fifty years. That is also why I bought the land here twenty years ago...why, well because it suits them [the bees]. They told me, quote-unquote.” (Goran)

Ana also says she is disappointed with how the “rights of nature” have been ignored, with many endangered and endemic species in the area:

“What hurts me the most is that people completely forget about biodiversity and nature. People can move away, they can sell their houses, but what about all those plants and animals that don't have another home? And no one is concerned with that, not even the experts. We all became a sort of anthropocentric system, but we are in this problem precisely because of anthropocentrism.” (Ana)

Vera similarly revokes the connections with other living beings which the mining jeopardises:

“My son confessed to me that he heard the birds sing for the first time when he returned from America. We live in a village, sparrows have been waking him up his entire life, but he never paid attention. We only realise what we have after we lose it. [...] No one told us that we will no longer be able to hear [our birds] after Rio Tinto.”

Importantly, for some locals, it is also the soil itself that has an agency:

“They [the supporters of the mining project] want money, progress, and industry. And the earth doesn’t want that. It wants hands and care. It wants love, not money!” (Nataša)

In this understanding, the earth has an agency and *wants* to be cultivated, it does not want to be drilled and mined.

Isidora from a non-local activist group talks about why others in Serbia and further - mostly citizens of urban conglomerations - became so intrigued by the local struggle, ultimately leading to tens of thousands of people protesting:

“They [locals of the Jadar Valley] work every day with that soil, they live from that soil, their lives depend on that soil, and so, of course that is something that is their priority. And of course, that should be a priority for all of us. [...]

We would always support someone from a village, who works with soil, is not threatening anyone, simply producing, and creating something valuable. I have no dilemma whether to support those people or not.”

The local relationship with the land is hence understood as *productive*, producing food and feeding thousands of people through their labour - and through which the earth reaches its full potential. Mining, on the other hand, is seen as inherently destructive, despite the fact that it “produces” lithium as an extracted element.

## Becoming a sacrifice zone

*“There May Be a Fortune Buried in a Forgotten Corner of Europe” (Title of a Bloomberg article, Gomez and Savic 2019)*

“Serbia is not a colony” and “Serbia is not for sale” were some of the most widely used protest slogans. They are reflective of the wider sentiments and another crucial aspect in understanding the opposition to lithium mining - the (self)perception of Serbia regarding the rest of Europe. Elena explains the massive protesters in large cities as a defence of the rural, and she calls the

lithium mining a “colonisation of a village.” While Ana stresses the irony of anthropocentrism as a solution to the climate and environmental crises, Elena talks in this sense about “neocolonialism and neoliberalism” being the cause of the problem they pretend to be the solutions to. For her, the emphasis on lithium as an element required for green transition is “greenwashing and colonisation 101,” condemning some countries to become sacrifice zones while others get to drive EVs:

“It is very convenient for Serbia to become both a lithium mine and a landfill. Great, they have clean hands, they have clean technology. And about the Balkans, who gives a f\*ck.” (Stefan).

These sentiments are reflective of a broader sense in the country and a “periphery” or a “sacrifice zone” are not mere academic terms. One of the biggest Serbian tabloids, Blic, published an article on 12th November, a few days before the escalation of the mass blockades, titled “The EU has designated the Jadar region as a ‘sacrifice zone’!” (Vukasinović 2021). The already existing sense of being a periphery is reinforced through the mining project. A sense of a periphery is articulated both spatially and temporarily through the notions of Balkanism and lagging and lacking behind Europe. At the same time, these sentiments are accompanied by a great self-awareness of the country’s position.

The notion of a bridge, a line or a border continues to this day as the border between the EU and the rest of Europe divides what was formerly one country, Yugoslavia.

“I suppose we are convenient because we are close to Europe, but we are *not in Europe*.”  
(Danijela)

Danijela’s reflection that Serbia is “not in Europe” resonates with some of the international framing, including through media articles such as “There May Be a Fortune Buried in a Forgotten Corner of Europe” and “Serbian farmers sitting on a fortune in rare lithium deposits” (Smith and Pantovic 2021). “Corner of Europe” refers to spatial power dynamics, while “forgotten” refers to temporal. Rio Tinto promises “to position Serbia as the European hub for green energy” while referring to the country as at the “doorsteps of Europe” (Rio Tinto 2022b), constructing the space as not European although being geographically located in Europe. The mine occupies the liminal space of lithium being easily accessible and conveniently located in Europe while at the same time reproducing the extractivist divide between the Global South, where mining takes place and the Global North, where the material is enjoyed.

Within the movement, there is a sense of the mining project only being made possible by the perpetuation of the unique position of Serbia - both political and geographic.

“I feel like we are constantly being treated like a third world country, that everything that cannot happen somewhere else, can happen here.” (Isidora)

“They do not have to follow all the rules here, unfortunately, and it is obvious that we are a fertile ground for exploitation to take place here. And honestly, I cannot believe that everyone in Europe accepted that it’s like this. We are not far from countries that are in the EU, the pollution is going to reach them too.” (Danijela)

When asked whether she personally feels like a part of Europe, Danijela says she feels like a “citizen of the world”:

It is absolutely not the case that because I live in a small village, I feel like some small person in my local environment. On the contrary. [...] But then you feel a bit discouraged when you see that maybe Europe doesn’t really want the best for you. [...] As in, they obviously do not want you in the EU if they support the mining projects here. Then some of the things that are respected in Europe would also need to be respected here, and then these things like the mine could not happen. (Danijela)

Goran suggests that “Serbia doesn’t have the most lithium, but it has the most corruption.” For Stefan, “the biggest environmental issue in Serbia is corruption;” similarly, for Ana, “through corruption is how we are the most polluted.” The broader political situation in the country further described in Chapter 3 thus contributes to the becoming of a sacrifice zone.

There is a sense of betrayal by the West and, in particular, the EU, condemning Serbia to become a sacrifice zone. Then-chancellor Angela Merkel stated that Germany and the EU are interested in lithium during her visit to Serbia in September 2021 (Todorović 2021b), which was well-remembered by locals and activists. Petar, from the Belgrade Office of the HBS, a green political foundation associated with the German Green Party, which operates globally, reflects on this dynamic. While the foundation plays an important role in promoting environmental projects and supporting democracy and human rights in the country, it has not officially condemned the Jadar Project. “What we wouldn’t want is for Germany to be perceived as some sort of a neocolonial power,” emphasised Petar during our interview. Nevertheless, such a statement reflects that these sentiments and perceptions are already prevailing. Similarly, Serbian opposition leaders claimed that US Special Envoy, Matthew Palmer encouraged them not to criticise the government and the Jadar Project during his visit in June 2021 (Dragojlo 2021).

While lithium mines are being developed in other European countries, as emphasised (Gourcerol et al. 2019), there is a strong sense that “we are the periphery,” as put by Nataša.

“I consider Serbia to be part of Europe geographically - and culturally, of course. [...] But the fact is that within the global order we are just another country of the Global South. [...] And to all those quote-unquote investors, we are just another mine.” (Ana)

At the same time, research participants are well-aware that globally, Serbia is by no means a unique case. For Stefan, his resistance to the mining project starts when he first heard of Papua New Guinea, Madagascar, Mongolia, Uganda, and other places where Rio Tinto has operated. Struggles of other marginalised groups across the globe against Rio Tinto become publicly known and discussed, including the blowing up of the sacred 46,000-year-old aboriginal site in Australia and the involvement of Rio Tinto in the civil war in Papua New Guinea between 1988 and 1998 (Bogdanović 2021).

Anlauf (2016: 174) describes the local indigenous community around the Argentinian lithium mine as “[h]istorically marginalized, not accustomed to Western knowledge system,” and hence largely excluded from the decision-making process. Yet, the spatiality of Serbia as European, but not European enough, presents a case of exploitation within - or at the borders of - the Western knowledge system. Notably, despite the sense of condemnation by the West to become a sacrifice zone, there is a strong sense of moral superiority articulated by some of locals in opposition to the “foreigners” who support the mining project. Rather than understanding the temporal dimension in linear terms as lagging, it is better to understand the local relationship to the land as *anachronistic*, temporarily inconsistent with the imperative of progress and development and something that the West or the “developed” world has forgotten and no longer understands:

“The foreigners do not understand what it means to be attached. I remember one of my neighbours said a few years ago to an English journalist who came to the valley to talk to us: ‘I did not earn that, that was my great grandfather, then grandfather, then father, then me and then my son, and tomorrow it will be my grandson. If I sell all of that to you, I have nothing. I am nothing. I have no roots.’ The foreigners don’t understand that.” (Nataša)

Nataša speaks of both the international journalists who were, as she says, astonished to discover a part of Europe where people feel as attached to the land, and of the foreign investors and Rio Tinto employees. Critically, this process of forgetting is attributed to globalisation and capitalist growth and development (aspects I further explore in Chapter 3), and it doesn’t refer only to the soil as a site of heritage but also farming.

“What globalisation took away is that connection to nature, to earth, to what it means to live healthily, to drink from a stream, to be able to eat a plant from a field if you have nothing to eat, to know which root can feed you. To create something out of nothing. They don’t know this because I feel like their senses have been literally turned off. A man became a machine, we’re no longer human. No emotions, just profit, just money.” (Nataša)

In this vein, and as emphasised in the previous section, there is a strong moral imperative not to sell one’s house and land. Vera sees this imperative as a national attribute and something that the foreigners don’t understand.

“For [Rio Tinto], the people are resources. [...] The fact that a poor nation doesn’t want the money, doesn’t want big money, doesn’t want any money, that they cannot understand. Do you believe me that if Rio Tinto came to me right now with a truck full of dollars [...], I would say devils get out of my house. That money is, first of all, blood money, and I know it’s bloody because they are destroying people. And I don’t need that money.” (Vera)

Yet, the divide between the foreigner and the local is not as straightforward. At the same time, most of the Rio Tinto (Rio Sava) employees are Serbian. For Vera, it is not only foreigners who do not understand that, but also those who sold their houses. The notion of a “foreigner” thus arguably does not refer to one’s nation but rather their attachment to the land - or a land. For Isidora from a non-local activist group, “we” are also among those who forgot these values:

“You see in them [locals against the lithium mine] a sincere love towards the soil, homeland, family, and those are some of the values that maybe we simply forgot on our way. And that is something that should be the priority and not profit. That is why they are so inspirational to so many of us.”

It is in this sense that the lithium mine is located in the space which is both the forgotten corner of Europe and where some people have not (yet) forgotten what it means to be attached to the land. Despite the sense of some of locals that no one understands them, their struggle attracted almost 300,000 signatures in a Serbian petition against the mine. What started with locals of the Jadar Valley organising themselves in their church and later, when the church deemed their activities too “political” and banned them from gathering there, in each other’s kitchens and living rooms, grew into a national movement.

## Blockades of roads, bridges, and borders

*I meet Sara, one of the activists from a non-local group, who is just a year younger than me, and we walk towards the blockade together. As we approach the protesters, I ask her whether I should wear a mask. She says she is not worried about covid because she had it recently. “What about facial recognition,” I ask, as I was warned about it by other protesters at the blockade that took place the previous week. She laughs and shrugs her shoulders. “They know all about us anyway,” she says. I can’t help but feel anxious about surveillance, but it feels ridiculous to wear a mask when no locals or activists are concerned with being recognised and fined. “They are already recording us,” says Sara as she points up. Flickering red light from a drone is visible over the night sky. Aleksandar, not wearing a mask either, raises his hand and points his middle finger toward the drone. He looks at me and giggles.*

The lithium mining efforts in Serbia need to be understood within the political context of president Aleksandar Vučić who has been largely supportive of the mining project - and of diminishing democracy and freedom of the press, increasing ethno-nationalism (Maksić 2020), a culture of corruption and an atmosphere of fear and surveillance, none of which started with the regime of Vučić but have been greatly exacerbated since. The blockades are a continuation of decades of massive protests, including in 2017 when Vučić was elected for his first term as the president, leading to tens of thousands of people protesting in the streets for days (Bjeloš 2017). Between 1998 and 2000, Vučić served as the Minister of Information during the era of Slobodan Milošević, rising to prominence as “the architect of Europe’s most restrictive media law by the end of the 20th century” (Jovanović 2019: 63). Rising again to power in 2012 as the deputy prime minister and later as the prime minister from 2014 and the president since 2017, today’s rule of Vučić is marked by the control of media, albeit the control is mainly established through “populist communication” (Kulić 2020) rather than open prosecution and violence towards journalists.

At the beginning of the escalation of protests are the issues of freedom of speech and press in the context of availability and accuracy of information being central in knowledge controversies. During autumn 2021, Radio Television of Serbia (RTS), Serbia's public broadcaster, and other media, broadcasted Rio Tinto’s advertisement about the Jadar Project. In response, a non-local activist group Kreni-Promeni shot an ad criticising the project and

submitted it to RTS, which, however, refused to broadcast the anti-ad, citing a lack of required documentation (RTS 2021). In response, the activist organised a protest on Friday, 19th November, in front of the RTS building. Research participants stress the “media blockade” (Ana) under which they were and the “media war” (Nataša) which they ultimately won as the media could no longer ignore them.

On 21st and 22nd November, more protests were sparked by the government's efforts to pass amendments to the Law on Referendum and the Law on Expropriation, which the activists argued were designed for the ease of international investors such as Rio Tinto. The Law on Expropriation, which Elena called “the legalisation of the colonisation of Serbia” would, according to its critics, significantly ease the process of expropriation of the land if it is deemed in the public interest. Both Laws then present a critical moment in resisting the mining project as Stefan talks about the timing and temporality of resistance and explains how the adoption of the two laws was “the right moment,” for mass protests to be ignited. The protests escalated into blockades of major roads and bridges across the country. On Saturday, 27th November, the first blockade was to take place. Next Saturday, 4th December, marked the biggest blockade (Figure 13), with over 50 cities blocked across the country by thousands of protesters. On the same day, Vučić announced during his visit to Gornje Nedeljice, Jadar Valley, that he would suggest amendments to the Laws, effectively accepting the demands of the protestors (N1 2021). “We changed the law through the blockades,” says Isidora. While one part of the movement announced the victory and stopping of the blockades, another part insisted on persisting with the blockades. To a much smaller extent, the blockades continued until January, when the Jadar Project was finally cancelled on 20<sup>th</sup> January.



*Figure 13: Protestors blocking the highway in Belgrade during the biggest blockade that included over 50 cities across the country, Saturday, 4th December 2021. The photo was taken by the Serbian photographer Marko Risović, shared on his Instagram account with the description “Belgrade has awoken,” and received more than 75,000 likes (source: Risović 2021).*

Under the slogan “Serbia must stop so it can move again,” the blockades present a fascinating case of civil disobedience and direct action connecting multiple places nationally and internationally as the traffic is blocked. Equally powerful is the temporal aspect of the blockades, stopping the traffic, “stopping Serbia,” and forcing the entire economic apparatus of movement of people, goods, and services to halt for one hour at the same time every week. The activist groups live-streamed the protests through their social media accounts, with thousands of people watching the protests live from the perspective of the protesters. The Live feature on Instagram allowed the activists to call a point of contact at blockades and, through the online interface, they were able to cut through space and show live footage taken by people present at different sites, different spatialities mixing up in a single event.

The blockades continued for weeks, always on Saturday at 2 PM for one hour and in more than fifty different locations across Serbia during the height of the protests. Solidarity blockades were also organised internationally, in London in front of the Rio Tinto headquarters, New York, Washington, Paris, Berlin, Prague and other cities in sync with the blockades in Serbia. On 15th January, one of the blocked locations included the international border with BiH, close to the proposed mine. The protesters entered the road and prevented crossing the border for

approximately one hour. The action received surprisingly little attention both from the local and the international media, considering its political importance and implications. In the European region, where the borders remain contested and were often violently drawn and redrawn, the protesters blocked the borders of countries that were at war less than two decades ago. Five days later, the prime minister announced that the government would revoke all the licences awarded to Rio Tinto, and the Jadar Project would be cancelled.

Critical in resisting the mining project was the question of spatiality, a sense of place and emotional geographies. Collective trauma and memories both of recent and less recent wars inform and influence the attitude towards Rio Tinto and other mining companies. The attachment to the land is not only historical, as most locals are farmers, and they view the mining project as in direct opposition to their lives and livelihoods in the area. The sentiment of becoming a sacrifice zone reinforces historical (self)perception as a periphery. Despite the sense of many locals and activists that their attachment to the land and their elemental imaginary is anachronistic, their resistance to the mining project has attracted the support of hundreds of thousands of people across Serbia who signed the petitions or attended the blockades. Different spatialities are connected and mixed through the blockades that ultimately lead to the cancellation of the Jadar Project. In the next chapter, I focus on what comes after the cancellation.

## Chapter 3: Imagining Futures Beyond and After Extractivism

*“We will be facing great trouble. What we are facing now is nothing compared to what we will in the future. I don’t want to be the bearer of bad news, although poets have always been prophets. I think there is a great global crisis ahead of us. And that crisis will be mostly felt by the countries who are at the short end of the stick of globalisation.” (Vera, writer and villager)*

Despite the official cancellation of the Jadar Project on 20th January 2022, the anti-lithium campaigns in Serbia continue even at the time of writing during the summer of 2022, showing little signs of slowing down. How is this to be made sense of? The key in this regard is the question of temporalities of the future, progress, and development that became amplified by the Jadar Project. During our interview in February in the protest camp, Vera, a self-described writer and villager, talked about the movement and what she sees as a great crisis ahead of us. She was talking generally and abstractly and likely did not suspect how quickly she might be proven right as our interview took place ten days before Russia invaded Ukraine, *the* geopolitical event (Ingram 2019), at least in the Western imagination. A few weeks later, when I was back home in the Czech Republic from my fieldwork, one of the activists and I exchanged a few messages, and he asked me how I was doing. “Good,” I said, “but the atmosphere in the country is sombre because everyone talks about Ukraine<sup>20</sup>”. “They clearly don’t have Rio Tinto in their country, so they can be so concerned with Ukraine,” he replied jokingly. The brief exchange illustrates the importance of lithium mining in Serbia for locals and activists, as well as how different events are perceived differently based on geography - what some termed the “hierarchy of victims” in the West’s reaction to the war in Ukraine compared to other events in the Global South (McCloskey 2022).

However, as the war progressed, the invasion quickly became a critical event to be concerned with in Serbia too. As the EU candidate country, the pressure is on Serbia to align itself with the EU sanctions on Russia. Yet, the country heavily relies on Russian gas as well as on the

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<sup>20</sup> The invasion of Ukraine is talked about in the Czech Republic in the context of a vivid memory in the national consciousness of Czechoslovakia being invaded by the Soviet Union in 1968.

discourse of nationalist Slavic-orthodox “brotherhood” (see Milić 2014 on the “Russification” of Serbia). Vučić announced that the upcoming winter would be the most difficult one for the country since 1944 due to the sanctions and energy crisis and warned about the danger of food shortages (Valtner 2022). It is in the context of the EU’s reliance on Russian oil and gas that energy and food sovereignty became imperative. Not only is it necessary to transition from fossil fuels to “green” energy sources – for which lithium is the key - but the war also highlighted the geopolitical sensitivity of supply chains. The global lithium supply chain is dominated by China, which has a 79% share of the global LIB manufacturing capacity, with the market share growing by 12% in the last two years (Placek 2022). The beginning of the invasion of Ukraine, taking place a month and a half after the cancellation of the Jadar Project, made the geopolitical significance of lithium mining in Serbia ever more pressing and the complete ban of lithium mining in the country ever more unlikely.

This chapter is broadly concerned with *temporalities*. I explore the temporalities of futures, progress and development and alternative imagined futures proposed by locals and activists. First, I describe the imperative of modernity and economic growth proposed by the Serbian government, as well as Rio Tinto, which I contrast with decades of dissatisfaction and protests in the country. This is provided within the context of the Serbian political situation and the super-elections of 3rd April 2022. Second, I focus on ruination, abandonment, and rural development by attending to the family homes in the Jadar Valley that were sold to the company, illustrating the complexity of the question of development in Serbia. Third, I explore the alternative developments proposed by locals who put forward local farming and agriculture as a more sustainable and economical alternative to mining. Finally, I conclude by focusing on the possible and imagined futures of the movement and the question of lithium mining in Serbia.

## Progress, elections, and change

*“This is the Serbia in which our children should live. Super-modern, yet conservative, full of knowledge, emancipated, busy, smiling, militarily capable, well-intended, attractive.” (Nenad Grubin, the geologists who discovered jadarite and ex-director of Rio Sava, interview by Nešić 2021)*

Despite the cancellation of the Jadar Project, the question of lithium mining in Serbia remains. While the government accepted the protesters' demands, locals and activists told me they are being called "hinderers of progress." Stefan, who was part of the group that was negotiating with prime minister Ana Brnabić, told me in our interview that Brnabić said in a private conversation that the activists were going to "turn locals into the Amish," referring to the traditionalist Christian fellowship known for rejecting some forms of modern technology (Wetmore 2007). For the company, "jadarite is one of the most exciting discoveries of recent times because of the high concentration of lithium and boron in the mineral, two elements which are essential for the *modern* world" (Rio Tinto 2022f, emphasis added). As illustrated by the quote of Grubin above, the Jadar Project becomes synonymous with modernity and progress, while the anti-mine movement is constructed as opposing those values.

The question of lithium extraction has come to act as a lens through which broader questions about development and modernity in Serbia have been posed. Kristina, the Rio Tinto employee, tells me there is a lack of public debate in Serbia about how the country should develop: "do we want industrial development or not?" She says the company and the government should accept if the answer is no, but that is not clear despite the protests. Should the answer be yes, she guarantees that the mine would have the highest technical and environmental standards. Kristina also says that the mining industry needs to understand that society is perhaps developing in ways that are moving away from consumerism - the industry needs to listen to whatever the global conclusion to the question of development is going to be. "Do we really need phones and EVs, or do we need clean water and air," she asks. "But we also need hospitals and medicine" - and she stresses that lithium is used in pacemakers<sup>21</sup>. Lithium medical uses also include as a highly effective treatment for bipolar disorder<sup>22</sup>. "What does it mean to be a *modern* society," Kristina asks. "It's not black and white. What the mining industry produces is necessary for the world - not just a modern world, but any kind of world," she says.

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<sup>21</sup> There are over 3 million people with implanted pacemakers in the world (Mallela et al. 2004).

<sup>22</sup> (Malhi et al. 2013; Marmol 2008, Geddes et al. 2004). The risk of suicide was found to be 2.7 times lower for bipolar patients treated with lithium than with Divalproex, the most common mood-stabilizing drug in the US (Goodwin et al. 2003). There is also some evidence of lithium's effectiveness in treating neurodegenerative diseases such as Alzheimer's (Marmol 2008). Author Laura Grace Simpkins (2021) wrote a compelling series of articles, mapping out her relationship with lithium as a treatment for her bipolar disorder while learning about the social and environmental impacts of lithium mining and becoming conflicted about the element.

However, the temporality of progress and the idea of modernity clashes with the temporal sense of being a periphery where no meaningful change is possible - what is amplified by the collective trauma of the 1990s. I spoke to an extended family member who is not part of the anti-lithium mining movement and has not attended the protests during my fieldwork. She spoke with great scepticism - and pain in her voice - about the effect of protesting in the Balkans.

“When I was your age, I was at all the anti-war protests in Belgrade throughout the 1990s, especially in 1991. Hundreds of thousands of people were on the streets, in freezing temperatures, clashing with the police. They used tear gas and water cannons against us in freezing temperatures! Hundreds of thousands. These blockades are nothing compared to that. But did we stop the war? Have we changed anything? You can’t change a thing in this country.”

Isidora, who was questioning the ethics and morality of scientists supporting the mining project (Chapter 1), says that “the question of morality has been forgotten here [in Serbia] for decades.” She, too, reflects on the anti-war protests:

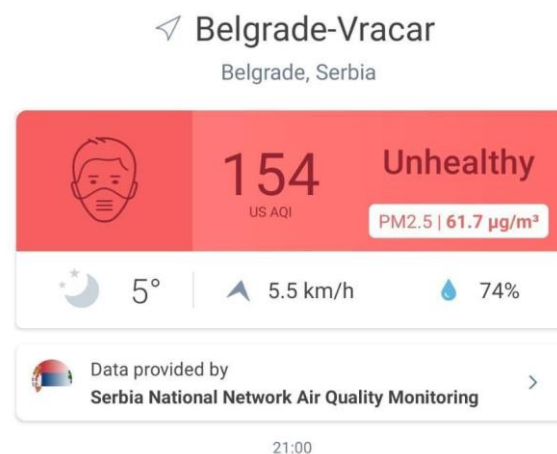
“I went to the first grade in 1990, so I have been protesting since the first grade of my elementary school. And I mean, I’m sick of it.” (Isidora)

Her account illustrates the temporal and spatial connection between various protests. Although sparked by different events, the protests are connected through a general sense of dissatisfaction with the conditions in the country - and life on the periphery. Petar from the HBS, who has not attended the blockades, comments on the country’s fatigue from never-ending protests:

“These are not the nineties anymore when we were protesting when it was snowing, when there was ice, when it was sub-zero degrees Celsius. Now, as soon as there is a bit of rain, people stay at home and don’t want to come out to protest. So, the protest is only successful if the weather is nice, there are no sports events, when there is no Slava, it’s no one’s birthday, and then people come to walk around.” (Petar)

Yet neither my relative nor Petar attended the protests, and Isidora’s comment was made with defiance in her voice, suggesting that she was tired of protesting but determined to continue. The blockades are taking place not only in the context of decades of political protests, but also years of rising environmental consciousness. Petar from the HBS says the Foundation commissioned a public opinion poll and found out that environmental protection is the fourth priority in the country for the respondents, following the economic situation, healthcare, and employment, a significant rise compared to the previous years. In Belgrade, it is the top priority, and especially the question of air pollution. Air in Belgrade becomes the most polluted in the

world several times a year, especially during winter, as Serbia's heating and energy systems heavily rely on outdated coal power plants (UN Environment 2019). The blockades thus take place as the protesters receive notifications on their phones advising them not to go outside because of the dangerous levels of air pollution. Masks are then worn outside not only because of covid but also because of air pollution and facial recognition. The campers were camping in front of the President's Residency not only amid the cold but also amid the air pollution (Figure 14). Mass protests and civil disobedience against air pollution, small and micro hydropower plants, urban planning, and for the rights of farmers and local food producers that have been taking place during the last few years in Serbia are all connected with the blockades against lithium mining.



*Figure 14: Air pollution on the first evening of the protest camp in front of the President's Residence, 10th February 21:00 (Source: IQAir, picture my own)*

The blockades successfully led to changes in the Law on Expropriation and the Law on Referendum, as well as the cancellation of the mining project, at least on paper. The success of the blockades is at least partially attributed to the pre-election timeframe that marked the months before 3rd April, when three elections took place - the presidential election, the early parliamentary elections, and some local elections, including in Belgrade. Lithium mining and environmental protection in Serbia became a central question in election debates, and locals and activists continued with protests and engaged in political campaigning. While they did not endorse any party or a candidate, they campaigned against Vučić and his ruling party under the slogan “a vote for Vučić is a vote for the mine.” Despite this, Vučić and his ruling party won in all three cases, yet the victory was not as overwhelming as in previous elections. With tensions and irregularities reported during the elections, Vučić received 60.01% of the votes in

the first round of the presidential elections, and the SNS won 120 out of 250 seats in the parliamentary elections. The party lost 68 as it had a supermajority following the 2020 parliamentary elections when most opposition parties boycotted the elections (CeSID 2022).

The movement, however, received a big blow. In all polling stations across 15 villages in the Jadar Valley that are near the proposed mine, Vučić and SNS achieved overwhelming victory despite years of resistance against the mine, and campaigning against the president and his party (Danas 2022a). This is despite the fact that many of the research participants stated before the elections that one of the movement's biggest successes has been infiltrating the voting base of Vučić and SNS in a region that historically supported him - as did many locals themselves. Moreover, the election results in the Jadar Valley became widely discussed in the media (Vučićević 2022). Some of the people across Serbia who were attending the protests and blockades for weeks in support of the anti-lithium movement felt like their energy was futile and became angry toward the locals. Some research participants opposing the mine received derogatory comments and online threats. Since the elections, Vučić has made several statements about the cancellation of the Jadar Project being a mistake and suggested that most of the local population of the Jadar Valley supports the mining project, as reflected in the election results, and it is only a small but vocal minority that is hindering progress and development (Danas 2022b).

## Abandonment, ruination and the rural

*Driving through the green valley, passing big houses, buzzing beehives and children playing in the streets, the scenery suddenly changes once we turn onto a road with the houses that have been sold. The red and white tape exclaiming NO ENTRY wraps around the fences of what used to be family homes, and Private Property signs are deterring anyone who would want to come closer to the sold houses. The houses belong to Rio Tinto now, and installed cameras are recording any attempt of trespassing. As the houses were intended to be demolished by the company, the people were allowed to take everything with them, including the doors, windows, and roofs. What is left are skeletons of the houses, bare brick walls and wooden roof rafters. Garbage and construction waste are scattered around, and we walk past a large metal bin overflowing with garbage, with the word "prijatno" (translated as pleasant, enjoyable, also in the sense of bon appétit) sprayed over the bin.*

How is the victory of the president and ruling pro-mining party in the Jadar Valley to be interpreted? Critical, in this sense, is the question of rural development. Even events that do not happen, or do not fully happen, or do not yet happen, such as the construction of the lithium mine in the Jadar Valley, continue to have consequences. The discovery of jadarite has altered the lives and worlds of locals in the Jadar Valley, impacting their relationship with their environment - both human and more-than-human. Despite the profound relationship with the land quoted by the research participants, many locals of the Jadar Valley sold their houses to Rio Tinto during the buyout stage necessary for the construction of the mine. The sense of war described in Chapter 2 runs like a thread through the movement and manifests itself in the ruins of the abandoned houses:

“That region now looks like after a war [...]. It probably looks like after Operation Storm in Croatia<sup>23</sup>, when our people were leaving. [...] The houses are completely abandoned, no one is there, and it is a very gloomy, sad, sad picture.” (Petar)

For those who have decided to stay, the houses serve as a constant reminder of what is seen as a betrayal of their neighbours and a fate that they too could meet, what Goran called a “psychological war.”

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<sup>23</sup> Between the 4th and 7th August 1995, Operation Storm was a decisive victory for the Croatian forces and the last major battle of the Croatian War of Independence. It resulted in more than 200,000 Croatian Serbs being displaced from Croatia, with the vast majority fleeing to Serbia. During the Croatian War of Independence, hundreds of thousands of ethnic Croats were also displaced by Serbian forces. 120,000 ethnic Croats returned to the areas brought under Croatian control during Operation Storm, many settling in houses previously occupied by Croatian Serbs, making the return of Serbian refugees after the war more complicated (US Committee for Refugees and Immigrants 2001).



*Figure 15: Sold family houses in Gornje Nedeljice, Jadar Valley, now owned by Rio Tinto (source: Nedeljnik Vreme 2022)*

Locals of the Jadar Valley have to live next to the abandoned and ruined houses that now belong to the company, a constant reminder of the events of lithium mining. Ruins are manifestations of the interplay between the material, spatial and temporal processes, and the disintegration of the usual order as the past cast itself over the present (DeSilvey and Edensor 2012). The houses have now become sites of haunting. Locals say they are worried about snakes, rats and other pests that turned the abandoned houses into their new home, and about letting their children near the houses as the walls that remain are unstable. What is to happen to those houses after the cancellation of the project? In some cases, Rio Tinto continues to rent out the land to its previous owners, who continue with their farming and agricultural work. Some activists suggest the government should buy out the houses and land from Rio Tinto and rent it to locals who have stayed or allow them to buy the houses through affordable credits. I ask whether they know of anyone who sold their house but would now like to return. Nataša thinks for a second before slowly replying:

“Yes. There are some. But we are not going to accept them. Why would we? We could have all been fighting together. [...] But those people do not understand what it means to be attached.”

The attachment to the land, soil and family heritage wraps itself around Jadar, dividing people and houses between those who sold and those who did not.

Rio Tinto (2022b) estimated that 52 permanently occupied houses and land from a further 293 landowners had to be acquitted. How much has been bought out by the company remains controversial. Kristina, from Rio Tinto, said it was around 60%, while locals insist that while the company bought most of the houses, but they still own most of the land. Neighbourhood relationships have been profoundly affected by the arrival of the company and the discovery of the mineral, as locals tell me that there were numerous cases of family disputes due to the questions of whether to sell or not. Those who sold their land are “traitors” to some (Vera), while Danijela, on the other hand, says that she does not judge those people at all:

“They saw that the state is not standing up for them, no one is, they are left on their own. And I understand that. What is a person supposed to do, then? They leave. But only some did that while others decided not to sell no matter the price.”

Ana says she personally is “not particularly angry with those people. It is simply frightening that the people of this country have come to this situation,” not being able to make an informed decision. She says that she does not believe that people were coerced into selling their houses, although others would disagree, but they simply did not understand the consequences of their decision. Vera later corrects herself - “they are not traitors, they are simply lost.”

Kristina again stresses that she genuinely understands the people’s attachment to their land. She says that during one of the Open Days, when the company invited locals to share their concerns, an older man came in crying, saying that Rio Tinto will destroy everything there is in the area. But in the end, after calming down, he said that he trusts them to do the best job possible when constructing the mine. Kristina is convinced that the mine would be constructed in the best possible way, and it would improve the living standard of locals. She explains that the most common question they get from people coming to the local Rio Tinto office in the Jadar is whether there are any open job positions. Rio Tinto has invested heavily in the region, especially prior to the rise of the protests, donating to the local health centres, municipality offices, sports clubs, schools, museums, and cultural centres. “They are going to have food,” Kristina says unprompted, referring to the importance of agriculture in the area, “but surely more is necessary for life, things like infrastructure, schools, hospitals, cultural centres - a development,” she says. This is also invoked by Petar from the HBS:

“We have to ask ourselves what the options are. We have parts of Serbia which are dead, where people are leaving [...] with or without Rio Tinto.”

For Ana, who has been prominent in the movement against the mine, “the fact is, most of the population lives in cities, and our villages have been falling apart for decades.” The sold houses lie at the centre of the question of rural development. What locals and activists are calling for is a different understanding of progress, development, and sustainability, one based on the intimate relationship with the land with a focus on small-scale, organic farming and agriculture as opposed to extractivism, as I explore in the following chapter.

## Alternative developments beyond and after extractivism

*“We don’t want to be called the hinderers of progress. All we want is an alternative that is not going to jeopardise human lives and natural riches which are truly exceptional.” (Danijela)*

*“Sustainability is only possible when it is just. When it is just for all members of the community, then it is sustainable. And that includes the plant and animal world, all living beings. As long as someone has to suffer, it cannot be called sustainability.” (Ana)*

As emphasised in Chapter 2, the attachment to the land is not only affective but also practical, with farming and agriculture proposed as central alternatives to extractivism-based development. During one of the protests in Belgrade, Elena approached the police and asked them - “do you have a village?” “They are not allowed to talk to you,” she tells me, “but one of them muttered ‘who doesn’t.’” What is meant by the question of “having” a village is a connection with the rural areas. Many of those who live and work in cities have friends and families in the rural areas - “everyone has contact with a village,” Elena explains during our interview. She called the mining project “colonisation of village” (Chapter 2), and she told the police at the protest “well, we are also defending your village.” This exchange demonstrates the importance of the rural areas and agriculture production in the Serbian context.

Agriculture presented 6.34% of GDP in Serbia in 2020 (O’Neill 2022) compared to the EU average of 1.3% (Eurostat 2022), almost five times less. As a reminder, the mining sector

currently accounts for 1.9% of GDP with an aim to increase it to 4-5% during the next five years (Spasić 2021).

“We agree that the state should have a strategy, but that strategy cannot be [developing] 40 mines. The whole of Serbia is to become an exploratory zone - not an exploratory zone but in fact literally a waste heap.” (Danijela).

As of 2018, an estimated 1.1 million people or 15.7% of the population are working on agricultural farms (part-time or full-time), and there are 564,542 agricultural farms, of which 99.7% are considered traditional family farms (RZS 2018: 11). Farming and agriculture provide food and livelihood to a large portion of the population, and locals and activists frequently repeat that people in this country are surviving thanks to *a village*.

Locals and activists stress the economic contribution of farming and agriculture, which is largely taken for granted, and they argue that the cited economic benefits of the lithium mine do not consider the economic loss that would result from the end of agricultural activity in the area.

“No one wants to say how much we are getting from agricultural products, how much we will lose from raspberry, milk, corn, soya, honey, not to mention clean water. [,,,] No one talks about that. In fact, a proper agro-economic analysis of the project has never been conducted.” (Ana)

Goran invokes similar ideas through his bees and their invisible labour:

“If the bees do not pollinate those crops, fruit, vegetables, plants, they will not fertilise, there won't be any harvest, or it will be dramatically reduced. That is the profit of the state that is measured in billions, but it is not directly visible. They refuse to see it, they don't care. Why would they care about the bees?” (Goran)

While Rio Tinto and the government frequently emphasised the creation of job opportunities through the mine, locals stress that farming not only provides livelihood to a much larger number of people than the mine would but is also a better job in terms of quality of life - being in the fresh air, relationship to the land and similar.

“Do we really want our children to be working in a mine and to be left with a destroyed exceptional natural heritage, which, in the era when food and water are an issue, is, in fact, a possibility through which to develop the country?” (Danijela)

For Nataša, working in farming and agriculture cannot be compared with working in a mine. Isidora says that agriculture is a “creation of something of value” while at the same time it is giving people an impulse to work and, for her, it is certainly a better way towards sustainability than mining. Interestingly, there is a strong sense of solidarity between locals and activists

opposing the Jadar Project and miners. Two days before the elections in April 2022, eight miners were tragically killed in the coal mine “Soko” in the eastern part of the country (N1 2022). The tragedy has been widely shared on the social media of the movements, with some members of the movement attending a vigil in Belgrade for the killed miners. Elena says that miners are “honest workers” who are sacrificing their health - and lives – “for something we call a development.”

The understanding of locals and activists of sustainable development strongly opposes extractivism, and they contest the idea of mining and extractivism as ever possibly being “green”:

“Mining is the most destructive activity on the planet Earth. And the whole story with the green agenda, green economy, green growth, whatever green, is a pure lie, just another colour of capitalism and nothing else.” (Ana)

“There is no such thing as green mining. What is green are fields and leaves because of chlorophyll, that is green. What they want to do here cannot ever be green. We are to be sacrificed.” (Nataša)

For Ana and many other locals, the idea of sustainability based on lithium mining, which jeopardises not only human but also more-than-human existence within the space of the Jadar Valley, is inconceivable and unjust. For Ana, it is not only anthropocentrism (Chapter 2) but also extractivism that is central to the current global problems:

“We are in this problem of climate change and global warming precisely because of extractivism. Extractivism of everything, mineral resources, people, nature, in any shape or form. And now they think we will get out of this problem through even more extractivism. That is absurd.” (Ana)

She also stresses the inherent injustice connected to green extractivism, saying that if we looked at the number of people in the world who can afford EVs, that is still significantly lower than those with access to clean water, food, healthcare and a “dignified life”:

“And all of that under the excuse of civilisation and progress. But only for the elite. Not for the whole world.”

Locals resisting the mining project thus present a direct challenge to the almost universally accepted understanding of how green transition is to look when based on green capitalism and green extractivism of lithium and other minerals.

For some locals and activists, at the centre of the resistance to the lithium mining is the “fertility” of the soil, connected to their livelihoods as farmers.

“We simply do not want any mining projects on fertile soil. We are constantly being accused that we are fighting against the development of the country, against technology, that we want to live in the Middle Ages. That is absolutely not true, but at least we are not aware that anywhere in the world exceptionally fertile land would be devastated because of mining. [...] We just want an alternative that will not jeopardise people’s lives and natural resources that are truly exceptional.” (Danijela)

However, Kristina, the Rio Tinto employee, disputes the romanticisation of the soil of the Jadar Valley and says that Loznica, the biggest town in the area, has “always been an industrial city.” The Jadar Valley has been affected by several polluting industries, including two antimony ore mines and an abandoned factory complex within Loznica with stored toxic substances (Ristić et al. 2022). Past pollutants make it more difficult to determine the cause of current pollution of soil and water, contributing to the knowledge controversy. Similarly, Kristina disputes how environmentally friendly the farming and agriculture activities of locals truly are as “many of them are likely using herbicides and pesticides.” One of the results of the mining and processing of jadarite would be boric acid, a key material for fertiliser products. Agriculture and mining in the Jadar Valley are thus connected through the materiality of jadarite and the borates it contains.

Ana, on the other hand, rejects any extractivist efforts, generally and globally. She talks about the issue of lithium mining in Latin America and the resulting problems with water in desert areas. While for some, like Danijela and Kristina, soil “fertility” is central to their resistance to the mining project, Ana disregards the importance of “fertility” when opposing extractivism. Yet, the connection between mining, fertilisers, and industrial agriculture makes visible the reinforcing circle of extractivism, as literature on agro-extractivism demonstrates. For Ana, the solution to the circle of extractivism is “degrowth”:

“The Western civilisation is suffering from the constant economic growth, which is inherently unsustainable. The constant economic growth depends on constant extractivism, but all the resources that are being extracted are finite.”

Ana’s insistence on degrowth, which she says also means “reducing greed,” resonates with accounts of other research participants, such as Vera, who explains why she would never sell her house and land (Chapter 2) - because she doesn’t need that money:

“I have everything I need in life. Actually, I need a few more grandchildren, but other than that, I have everything. I can’t drive two cars, I can’t sleep in two houses, I can’t wear two pairs of

shoes. I have an ocean of friends and more books than I could ever read. That is how I measure wealth.”

Ana agrees that the future of sustainability lies in farming, but the farming must be organic, she says. Most of the research participants insist on the organicity of their farming activities and stress further economic benefits of organic agriculture. Locals and activists are opposing lithium mining for different reasons, and they are imagining different futures, as I further describe in the following section.

## Futures, hope and resistance

*“Subject to all of these approvals being granted, first saleable production is expected to be no earlier than 2027” (official website of the Jadar Project in August, seven months after the cancellation, Rio Tinto 2022b).*

Despite the official cancellation of the mining project on 20th January 2022, seven months later, as of the time of the writing of this thesis, the Rio Tinto website still states the expected date of saleable production of lithium and borates. Locals report that the company continues to operate in the area, with all its offices in the country remaining open. There is also evidence that property was transferred to Rio Tinto in the land and cadastral register after the project’s cancellation. Kristina explains this by saying that it is only the property of which the buyout process has started prior to the cancellation. The company publicly expressed its interest in pursuing the project and stated in August 2022 that it seeks to complete the internal Feasibility Study to fulfil “previous commitments” and is waiting for the new government to be formed (Todorović 2022a). During our interview, Kristina said that the future remains uncertain, but she is hopeful, as she believes the project would greatly benefit Serbia.

Yet the question of the future was not straightforward within the movement either. In January 2022, a key conflict emerged. A non-local activist group began to campaign for and propose a moratorium on lithium mining as an answer to the question of the future of lithium in Serbia. The crucial characteristic of a moratorium is that it is temporarily bound - a ban that is not indefinite but lasts for an agreed period of time. While the proponents of a moratorium were first proposing a period of 50 years, the dominant form later became 20 years, or “at least” 10.

The rationale was that a moratorium is an achievable political goal more likely to be negotiated with the government. The proponents argued that the key reason why the Jadar Project should be opposed is a lack of information on the impact of lithium mining in the Jadar Valley rather than to oppose lithium mining in any form. A moratorium would allow for better technology to develop and a more informed decision about the mine to be made in the future.

Local activist groups sharply opposed this line of reasoning, and particularly those grouped under SEOS which represents other locations affected by lithium exploration in addition to the Jadar Valley. Locals argued that the moratorium would only postpone the problem - for their children to deal with in the future.

“How are you supposed to invest in your land, in your house, in your work, in the future of your children within that space, when the future would be so uncertain if the moratorium was accepted.” (Ana)

Ana, from a local activist group of the Jadar Valley, also strikingly reflects on the question of temporalities of the future in the context of large international companies:

“For all those big companies, the passage of time is perceived considerably differently than for us ‘ordinary mortals’, so to speak. For them to wait for another 20 or 50 years is nothing. They have already been here for 20 years, and no one even noticed, they were working under the radar. That is why talking about the moratorium is so dangerous, because to wait for 10, 20, 50 years, [...] for a company of this size, that’s nothing.”

The proponents of the moratorium later accepted such arguments and the movement united instead behind the idea of a complete ban on lithium mining and exploration in Serbia as locals sought to eliminate any uncertainty that a mine could ever be opened. The temporalities and uncertainties of the future mobilise the movement to continue to operate despite the official cancellation of the Jadar Project.

The future of lithium mining thus remains open. Following the overwhelming victory of the ruling party not only in the Jadar Valley but also in other locations across Serbia that have been affected either by planned or ongoing mining projects, many of the protesters expressed a sense of despair and disappointment, doubtful whether a change was possible. Yet many of the activists stress the temporality of the struggle in terms of its longevity. Danijela, who described the reality of living in a rural area in terms of its underdevelopment, ageing population, and people leaving for bigger cities or more developed countries (Chapter 1), sees the current struggle as an awakening of the rural population.

“Until now, nothing like this was going on, and this has at least shown that people can change something, at least a bit. I know about that example in Romania, where people fought for ten years and have now finally put an end to that project<sup>24</sup>. And that is something I keep telling everyone. All those who think this fight will be short and easy, they should give up right now. [...] But, after all these years, it turned out that people are not completely apathetic. They are not turned off. There is some hope. Let it last. And I am certain it will last, and that is what’s wonderful to me. I honestly wondered if something is ever going to happen for that fire to re-emerge, that fire that connects and brings people together, to create again that empathy, solidarity between people, which I thought has degraded in this society, but it is clearly still alive. We just need to nurture it and cultivate it.”

For Goran, continuing life as usual is resisting the mining project:

“I continue to work. In 2018 I started a big investment into a building on my land, not knowing about the mine. And that building is finished now, the carpentry is finished, and there is only a bit of work left in one part of the building. I continue to work. I’m not bothered. They do their job, I do my job. They are buying land and destroying carpentry, I am building carpentry. And that is my answer to them.” (Goran)

In this sense, the imagined futures are those that are unchanged by lithium mining and at the same time, are different from the sustainable global futures of extractivism.

The local case of lithium mining in Serbia has global implications and connections. “I think it affects every person...on the planet. I am not just talking about Serbia,” says Isidora, from a non-local activist group. In July 2022, the activist groups initiated a joint signing of a declaration on international cooperation and solidarity in resistance to lithium mining and green extractivism. Representatives of nine organisations from Chile, Spain, Portugal, Germany and Serbia signed the Jadar Declaration in Gornje Nedeljice, Jadar Valley, marking the connectedness of the anti-lithium movement on a global level (Todorović 2022b). In that sense, the cancellation of the Jadar Project is not just a victory for the Serbian anti-lithium movement but for the global anti-extractivist struggle.

“It is a big thing to kick Rio Tinto out, that’s a big multinational company that planned to invest 200 million euros just in the first round. They truly have enough money to buy the entire Serbia

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<sup>24</sup> Danijela refers the anti-mining struggle in neighbouring Romania, where locals opposed a gold mining project in the Rosia Montana region (Velicu and Kaika 2017). Locals and activist affected by lithium mining in Serbia were in contact with activists from Romania and shared their experiences.

six times, to buy all of us (she laughs)<sup>25</sup>. To say no to such a company that has created a mess across the world is a serious thing, especially in such a short period of time. I really think our people should be proud. [...] We were not equal...it was like David and Goliath, but we succeeded.” (Isidora)

Just as extractivism is a global capitalist modality, and Rio Tinto is a multinational mining company, so too the anti-lithium struggle seeks to transform itself into a global movement.

Different temporalities run through the efforts to mine and to resist lithium in Serbia, imagining different futures. The political regime of president Vučić and the SNS party invokes the temporalities of progress, development and economic growth that remain supported by most of the Serbian population. Directly clashing with these state- and corporate-supported temporalities of progress is the sense of impossibility of change, felt by many locals and activists, invoked by diminishing freedom of the press, surveillance, and irregularities during elections. The ruined and abandoned houses sold to Rio Tinto are a material, spatial, and temporal manifestation of the conflicting understandings of the future. Locals and activists seek to contest the hegemonic propositions of sustainable futures based on green capitalism and green extractivism and instead imagine alternatives beyond and after extractivism that are centred around small-scale organic farming and a relationship with the land. The temporalities of hope continue even after the cancellation of the mining project, as the company hopes for the project to be reinstated and locals and activists remain hopeful in their ability to resist it.

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<sup>25</sup> Rio Tinto’s market capitalisation, or the total value of the publicly traded company, was 98.21 billion USD as of August 2022 (Companies Market Cap 2022). The entire GDP of Serbia was 63.07 billion USD in 2021 (World Data 2022)).

# Conclusion

This thesis is concerned with the case study of lithium mining in Serbia and the tensions between the promise and problems of lithium. Throughout the thesis, I sought to explore the question:

What forms of the geopolitics of extractivism emerge around the efforts to mine lithium in Serbia? How do these forms manifest themselves?

Based on the findings of my ethnographic research, I contend that the geopolitics of extractivism in Serbia emerge in three inherently intertwined forms – material, spatial and temporal. Together, these forms have manifested themselves as a contestation of the hegemonic understanding of sustainable futures in the Anthropocene rooted in green capitalism and extractivism.

The existing literature on extractivism critically points out the ways in which extractivist logic expands as an all-encompassing capitalist modality. Yet, as this thesis sought to point out by bringing together the extractivist scholarship with critical and feminist geopolitics, more attention needs to be paid to particular materialities, spatialities and temporalities. Nygren et al. (2022) argue that “[p]olicies promoting climate adaptation and green economies have done relatively little to reduce the pace of extractivism or to mitigate its environmental-social impacts in order to build more just futures” (2022: 734). Based on the findings of my research, I go further by suggesting that not only have hegemonic green policies done little to alleviate the extractivist pressures, but rather, they have accelerated and strengthened the logic of extractivism by promoting the mining of lithium and other “critical” minerals as an indispensable solution to the climate and environmental change, based on a techno-capitalist green future.

The continuously increasing sense of the state of exception or emergency in the context of the Anthropocene has strengthened the elemental allure (Engelmann and McCormack 2021) of lithium as a panacea to climate change, a simple techno-fix that is saving nature (and humanity as a whole) rather than destroying it. The material properties of lithium as a “green” element have been protecting it from criticism. Lithium mining marks a case of extractivism expanding from commodities that were deemed “dirty,” such as fossil fuels, to commodities that are deemed “clean” and “green.” What remains is the extractivist logic of value generation that is

“necessarily temporary” and strictly linear, assuming that resources are infinite (Ye et al. 2020). Scholarly attention must remain vigilant to the ever-expanding, transforming, and shifting modalities of extractivism.

By focusing on the materiality, spatiality, and temporality of the geopolitics of lithium extractivism in Serbia, I sought to make visible the largely overlooked contestations that are underpinning the futures made out of lithium. The materiality of the newly discovered mineral jadarite opens the question of how Serbia is to manage what was supposed to become Europe’s biggest lithium mine. The materiality of the exploration drills and the experiential evidence of the pollution they cause leads locals to resist the mining project, citing environmental concerns and fundamentally challenging the construction of lithium extractivism as green or sustainable. The focus on spatialities of the Jadar Valley centres the role of history and heritage as well as the present sense of place and a relationship with the land in terms of farming and livelihood. The histories and spatialities of the Balkans are remobilised through the sense of becoming a sacrifice zone, a periphery or a (neo)colony. The protests, as a physical manifestation of *blocking space* at different locations in Serbia and internationally, ultimately led to the cancellation of the Jadar Project. The question of temporalities asks about the future of the project and the futures in the Anthropocene more broadly. The temporalities of progress, development and modernity mobilised by the governing party and the mining companies clash with sentiments of impossibility of change. The ruination of the abandoned sold houses in the Jadar Valley and the questions of leaving or staying in rural areas are illustrative of these dynamics. Alternative ways to develop challenge the extractivist development model and the hegemonic understanding of sustainability as based on green extractivism and instead focus on small-scale organic farming. Temporalities of hope, future and resistance surround the continued uncertainties regarding the Jadar Project.

The uniqueness of the case study lies in the timeframe of achieving the cancellation of the Jadar Project before the construction of the mine could begin, as well as in the scale of the project as the biggest lithium mine in Europe. However, while many aspects of the anti-lithium mining movement in Serbia are specific to the materialities of jadarite, spatialities of the Jadar Valley and the Balkans more broadly, and temporalities of the future in the Anthropocene, it is by no means an isolated case. As demonstrated by the Jadar Declaration, communities across the world are resisting extractivist projects every day (Willow 2018), and locals and activists in

Serbia are well-aware of the international aspect of their struggle. This is even as the extractivist logic expands materially to encompass elements such as lithium, spatially through new extractivist frontiers, and temporally to cast itself as necessary for the futures in the Anthropocene.

More research is needed to attend to the accelerating proliferation of green extractivism, focusing on other extractivist frontiers as well as on other critical minerals. Ethnographic research is well positioned to explore the local specificities and the global connections between the everyday lives of those most affected by the extractivist efforts. Yet, other methods, both qualitative and quantitative (see Agusdinata 2018), are also crucial. It is equally vital to explore various aspects and attitudes to green extractivism. The limitation of this study lied in not including the voices and direct experiences of locals who sold their houses. Despite focusing on the perspective of locals and activists resisting lithium mining, their relationship to the land and proposed alternative futures, it is vital not to fall into the trap of simplification and romanticisation. Throughout this thesis, I sought to show the complexities of the questions of sustainability, development, and futures that emerge in the Jadar Valley and Serbia more broadly. Especially in the final chapter, I give space to the perspectives of Kristina, the interviewed Rio Tinto employee, to demonstrate these complexities. Nevertheless, more research is needed for a comprehensive interrogation of the extractivist logic.

The case study of lithium mining in Serbia opens the question of sustainability and the future in the Anthropocene. In this thesis, I argued that it is the role of the researchers to remain critical even of that which seemingly cannot be criticised, such as proposed solutions to climate and environmental change. The temporality of the state of exception and emergency are foreclosing different futures through dominant capitalist solutions and techno-fixes. Yet it is only through the insistence on the future that is still open that alternatives can be imagined and fought for - alternatives which are not only “green” but also just.

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# Appendices

## List of Interviewees

<b>Pseudonym</b>	<b>Organisation</b>	<b>Date</b>	<b>Recorded</b>
Stefan	Local activist group	28/01/2022	Yes
Isidora	Non-local activist group	31/01/2022	Yes
Petar	HBS	01/02/2022	Yes
Elena	Non-local activist group	09/02/2022	No
Danijela	Local activist group (SEOS)	11/02/2022	Yes
Goran	Local activist group (SEOS)	11/02/2022	Yes
Kristina	Rio Tinto	12/02/2022	No
Nataša	Local activist group (SEOS)	13/02/2022	Yes
Vera	Local activist group (SEOS)	14/02/2022	Yes
Ana	Local activist group	18/02/2022	Yes (phone interview)

## Sample interview questions

1. How did you personally become involved in your organisation against the Jadar Project?
2. Do you consider the question of the Jadar Project to be officially closed? What do you think about the question of lithium mining in Serbia generally?
3. Apart from what we could have seen in the media, what did the process of resisting the Jadar Project look like?
4. What is the cooperation with other organisations across Serbia like? What about international cooperation?
5. In what kind of activities is your organisation involved? What activities do you consider the most effective in making your claims heard (e.g., protests, blockades, petitions, negotiations etc.)?
6. Are you or your organisation against the Jadar Project or against lithium mining in general? What is your position regarding the moratorium on lithium mining? At some point in the future, could there be green or sustainable mining that you would support?
7. What does sustainability mean to you?
8. What is the role of experts, scientists, and universities in the question of lithium mining in Serbia?
9. What do you consider to be currently the biggest environmental issue in Serbia?
10. What do you think the future of Serbia should look like?
11. How can both economic growth and environmental protection to be achieved?
12. Is there anything else you would like to mention?