

CAN WE MINE OURSELVES OUT OF THE CLIMATE CRISIS? WHY AND HOW TO RESIST EXTRACTIVISM¹

Introduction

Mainstream climate policies are based on the fundamental belief that decarbonisation is possible without systemic change. Whereas advocates of climate action frequently called for a change in the Western consumerist lifestyle, the opposing strategies have prevailed. The climate crisis is presented as an opportunity for business and innovation based on green growth. From this perspective, growth is not only compatible with decarbonisation, but it is in fact deemed essential to achieving it. Technological solutions indeed became safer, more efficient, and cheaper at a staggering pace, from batteries to solar panels. Techno-optimism represents the belief that technological innovation alone will be sufficient for solving the climate crisis.²

Yet while low-carbon energy sources make up an increasing share of total energy production, they only partially offset the growing demand. While the overall share of fossil fuels in energy production has been slowly declining, we can hardly speak of a dramatic absolute drop, which is essential for achieving climate goals. Energy production continues to rise across all sources, including fossil fuels, with the only exception of coal.³ The very concept of an “energy transition” is therefore misleading. Rather, what we are witnessing is “energy addition.”⁴ On the global level, decarbonisation is essentially non-existent. Techno-optimism and green growth are not solving the climate crisis;

¹ An earlier version of this text appeared as a chapter in Czech in the book *Vrchol je dno: Politika pro vyčerpané lidi a planetu* (Peak is the Bottom: Politics for Exhausted People and the Planet).

² Marcos, H. (2025). “Tech Won’t Save Us: Climate Crisis, Techno-Optimism, and International Law”. *Law, Technology and Humans* 7(1): 22-46.

³ New Scientist (4.8. 2021). [How to Understand World Energy Use – in 10 Graphs](#).

⁴ York, R. & Bell, S. E. (2019). “Energy Transitions or Additions?: Why a Transition from Fossil Fuels Requires more than the Growth of Renewable Energy”. *Energy Research & Social Science* 51: 40-43.

they are deepening it. The growing demand for energy is increasing the need for the so-called critical raw materials (CRMs) such as lithium, cobalt, nickel, or rare earth metals, which are key components of low-carbon technologies.

There is a profound mismatch between the projected demand for CRMs and their current availability.⁵ The green transition based on technofixes would require an unprecedented increase in mining production. The European Commission estimates that by 2050, demand for lithium could increase twenty-one times compared to 2024.⁶ CRMs are also central to digitalisation as well as aerospace and defence industries, and their importance is growing with the rising geopolitical tensions. Yet the extraction of these raw materials – just like mining in general – is one of the most polluting human activities, causing widespread environmental destruction and pollution of water, soil, and air. It also leads to conflicts with local communities, endangers their health, and harms entire ecosystems.⁷ The mining sector is one of the largest emitters of greenhouse gases, responsible for 4–7% of global emissions.⁸

The vision of green transition based on growth and extractivism is thus in direct contradiction with a just ecological transition. Communities affected by the new wave of mining projects are pointing precisely to these contradictions between supposed decarbonisation on one hand and the experienced violence and pollution on the other, such as is the case in Serbia.

The biggest lithium mine of Europe, which won't be

The war in Ukraine and growing awareness of China's dominance in low-carbon technologies have deepened concerns about the EU's material sovereignty, security, and competitiveness.⁹ As a result, securing access to CRMs has become one of the EU's priorities, sealed by the adoption of the European Critical Raw Materials Act (CRMA) in 2023. Serbia, an EU candidate country, was to play a key role in this regard. The mineral jadarite, discovered in 2004 in the western part

⁵ International Energy Agency (5.5. 2021). [Clean Energy Demand for Critical Minerals Set to Soar as the World Pursues Net Zero Goals](#).

⁶ European Commission (2024). [Critical Raw Materials Act](#).

⁷ Conde, M. (2017). "Resistance to Mining. A Review". *Ecological Economics* 132: 80-90.

⁸ Delevingne L. et al. *McKinsey* (28.1. 2020). [Climate Risk and Decarbonization: What Every Mining CEO Needs to Know](#).

⁹ Djukanović, N. *AMO* (27.6. 2025). [Material Dependencies: Competitiveness, Security and Socio-Environmental Issues of Critical Raw Materials](#).

of the country, is exceptionally rich in lithium and borates.¹⁰ The Jadar Project, led by Rio Tinto, one of the world's largest mining corporations, has been presented both as a green solution for the EU and a development opportunity for Serbia.

Construction of the largest lithium mine in Europe was set to commence in 2022. Yet the project attracted widespread resistance led by residents of the Jadar Valley, who refused to sell their land, leave their homes, or live next to a mine. The deep attachment of the local community in Jadar to their homes and to the land as a source of livelihood, as well as their desire to protect the environment from the devastation that mining would cause, have led to a wave of protests across Serbia and internationally. The anti-lithium mining movement has been mobilised above all by a profound sense of injustice, with fertile land to be transformed into a mining complex in order for the European upper classes to drive EVs, and for multinational corporations to profit from the extraction of natural wealth. In the autumn of 2021, tens of thousands of people took to the streets across Serbian towns and cities for weeks, blocking major economic arteries such as bridges and highways. Following the months of protest, the government was ultimately forced to officially cancel the project in January 2022.

Despite the project's cancellation, the plans to mine lithium in Serbia were not to be easily abandoned by the national and international interest groups. Only two and a half years later, in July 2024, Serbian political leaders hastily revived the project and signed a Memorandum of Understanding with the EU on "sustainable raw materials, battery value chains, and electric vehicles." In addition to Serbian and European officials, the signing was attended by then-German Chancellor Olaf Scholz and the ambassadors of Germany, Italy, and the United States. Additionally, a Letter of Intent was signed by the chief executives of Mercedes-Benz, Rio Tinto, and InoBat.¹¹ The support of the EU and other international powers for the mining project thus became official, while the interests of major powers and multinational corporations converged.

¹⁰ Stanley, C. J., Jones, G. C., Rumsey, M. S., Blake, C., Roberts, A. C., Stirling, J. A., ... & Lepage, Y. (2007). "Jadarite, LiNaSiB3O7 (OH), A New Mineral Species from the Jadar Basin, Serbia". *European Journal of Mineralogy* 19(4): 575-580.

¹¹ The Government of the Republic of Serbia (19.7. 2024). [Serbia, EU Sign Memorandum of Understanding on Mineral Raw Materials](#).

Resistance, however, has not subsided, and the plans for mining lithium across the country, not only in Jadar, are continuously met with waves of protests. Although activists have been increasingly subjected to arrest, intimidation, and surveillance, including receiving death threats and having their phones spied on using Israeli technology,¹² their resistance has not weakened. The struggle of local communities and their allies, both in Serbia and beyond, represents a fundamental challenge to a “green” transition which is based on endless growth, material consumption and relentless extractivism, and which is, by definition, unjust. The concept of extractivism is key to understanding these dynamics.

Why extractivism and not just mining

What do we mean by extractivism? What is the relationship between extraction and extractivism? In other words, when does the act of extracting raw materials become the logic known as extractivism?

The concept of extractivism originates in Latin America, where peasant and rural communities, Indigenous peoples, activists, academics, artists and many others sought to describe the long history of colonial exploitation of natural resources, primarily by Western empires. Alberto Acosta defined extractivism in the classical sense as “those activities which remove large quantities of natural resources that are not processed (or processed only to a limited degree), especially for export.”¹³ At the same time, understanding of extractivism has expanded, so that the concept is used not only to speak of physical or material extraction but also for instance financial or epistemic¹⁴ extractivism.

¹² Tesic, A. BalkanInsight (16.12. 2024). [Silent Spying: How Serbian Intelligence Hacks Activists' Phones - Without Them Knowing](#).

¹³ Acosta, A. (2013). “Extractivism and Neoextractivism: Two Sides of the Same Curse”. *Beyond Development: Alternative Visions from Latin America* 1: 61-86.

¹⁴ The Indigenous peoples of Latin America speak of epistemic extractivism as the exploitation not only of their knowledge but also of their very ways of thinking, their cultural heritage, and their cosmologies. See: Grosfoguel, R. (2019). “Epistemic Extractivism: A Dialogue with Alberto Acosta, Leanne Betasamosake Simpson, and Silvia Rivera Cusicanqui”. In: de Sousa Santos, B. & Meneses, M. (eds.), *Knowledges Born in the Struggle: Constructing the Epistemologies of the Global South*, London: Routledge, 203-218.

Moreover, extractivism is no longer limited to colonial powers. The massive increase in mining and other forms of resource extraction in Latin America since the late 20th century has often been carried out by states themselves, in close cooperation with transnational capital and international institutions.¹⁵

Extractivism has thus become a dominant development model promoted by both progressive and neoliberal governments, left and right. Although extractivism was also central in the Soviet Union or Yugoslavia, the “commodities boom” has been expanding on a planetary scale since the early 21st century. Extractivism is a foundational pillar of global capitalism. Alexander Dunlap and Jostein Jakobsen use the term “total extractivism” to describe how “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.”¹⁶ Extractivism is therefore not merely the act of extracting resources. It is a set of ontological practices and ways of thinking fundamentally reliant on violence in its many different forms, whether against human or more-than-human communities and ecosystems.

But whereas the destruction of the environment through the “traditional” forms of extractivism has long been accepted as the price to be paid for development, the extraction of CRMs represents the “greening” of extractivism. Green extractivism is no longer seen as incompatible with sustainability but rather as a necessary condition for achieving it.¹⁷ The significance of such a shift in perception cannot be overstated. It needs to be understood as a direct result of complex greenwashing by multinational corporations and their allied political forces.

Dominant Western strategies for combating the climate crisis maintain the same consumption patterns as fossil fuel-based economies, rather than seeking systemic change which would dismantle the highly consumerist – and imperial – way of life.¹⁸

¹⁵ Svampa, M. (2015). “Commodities Consensus: Neoextractivism and Enclosure of the Commons in Latin America”. *South Atlantic Quarterly* 114(1): 65-82.

¹⁶ Dunlap, A. & Jakobsen, J. (2020). *The Violent Technologies of Extraction: Political Ecology, Critical Agrarian Studies and the Capitalist Worldeater*. London/New York: Palgrave Macmillian, 1.

¹⁷ Voskoboynik, D. M. & Andreucci, D. (2022). “Greening Extractivism: Environmental Discourses and Resource Governance in the ‘Lithium Triangle’”. *Environment and Planning E: Nature and Space* 5(2): 787-809.

¹⁸ Brand, U. & Wissen, M. (2013). *The Imperial Mode of Living*. London/New York: Verso Books.

What is hegemonically labelled as a green transition is intrinsically dependent on the continual expansion of extractivism – from CRMs to low-carbon infrastructure. Green extractivism thus goes beyond extractivism in its classical sense, legitimising mining, extraction and destruction through moral signalling: whoever opposes green extractivism is considered a hinderer of the fight against the climate crisis.

Sustainable mining in Europe?

“Anyone interested in the green transition, anyone interested in our path toward electrification – and that doesn’t mean just electric vehicles, but also renewable energy – should be an ally of the Jadar project.”¹⁹ These words from the former director of Rio Tinto’s Serbian branch capture the logic of green extractivism. Rio Tinto, like other mining companies, has insisted that it can ensure the highest environmental standards. Green extractivism thus paints mining itself green – with the development of new technologies, environmental impacts are expected to be minimal. Extractivism is thus becoming not only “greener” but also “smarter” with automation and robotisation of mining. Yet such claims stand in stark contrast to the massive wave of deregulation and “simplification” of the EU legislation. Strategies such as the CRMA, along with various national initiatives, aim to speed up the implementation of projects deemed strategic.

The long-standing beliefs about the EU’s superior environmental standards are losing their validity. In March 2025, the European Commission selected a list of 47 “strategic projects” on the extraction and processing of CRMs within the EU, followed by a list of 13 projects outside the EU. The strategic projects are supposed to strengthen the EU’s control of the raw materials’ supply chains, and they are to benefit from fast-tracking and deregulation. The lists include some of the most controversial lithium mining projects such as Jadar in Serbia, Barroso in Portugal, or Cínovec in Czechia.

The rush to open new mines within the EU and in partner countries has not only to do with the proclaimed green transition but also with increased securitisation and militarisation. “[T]he new Strategic Projects contribute significantly to Europe’s green and digital transitions, while supporting Europe’s defence industry and aerospace industries,” writes the European Commission in a press release.²⁰

¹⁹ Nova S (2024). [GOST: Marijanti Babić, Glavna Zastupnica Rio Tinto.](#)

²⁰ European Commission (25.3. 2025). [Commission Selects 47 Strategic Projects to Secure and Diversify Access to Raw Materials in the EU.](#)

The current system, in which wealthy countries of the Global North rely primarily on mining in countries of the Global South, is neither just nor sustainable. The European Union consumes 25-30% of the world's metal production, while making up only 6% of the global population.²¹ Yet moving the production capacities closer to the imperial "core" and partner third countries through onshoring and "nearshoring"²² is not an attempt to correct injustices or to decolonise extractivism in the Global South, but rather a geopolitical race to the bottom and a new expansion of multinational capital. Opening new mines in Europe would not mean closing mines elsewhere. Decarbonisation based solely on low-carbon technologies, remaining in the paradigm of never-ending economic growth, would require an unprecedented amount of CRMs, with mining corporations expanding existing mines and opening new ones wherever possible. The projections are, of course, significantly more dire when considering the immense quantity of materials needed for militarisation, digitalisation and the expansion of AI and data centres.

Concrete policy proposals for meeting climate goals with minimal mining already exist. Demand regulation is necessary through policies of sufficiency – strategies that focus on reducing excessive consumption and strive to meet human needs fairly within ecological limits.²³ Recycling and circularity play a key role, yet circularity cannot be achieved without significantly reducing overconsumption, especially of the wealthiest, the most polluting and the most consuming parts of society. Energy and transport, the two most emission-intensive sectors of the economy, are central here. According to the International Energy Agency, more than 80% of lithium demand in 2040 will be driven by electric vehicles, the vast majority of them private cars.²⁴ A shift away from individual car ownership toward systemic solutions such as public and active transport is needed. Lithium demand in the US could be reduced by up to 92% by 2050 compared to scenarios assuming the highest growth in consumption by lowering car dependence.²⁵ These are not mere behavioural changes, but rather a broader shift toward

²¹ Friends of the Earth Europe (2023). *Mining the Depth of Influence: How Industry is Forging the EU Critical Raw Materials Act*; Marin, D. et al. European Environmental Bureau (2023). *Sacrifice Zones for Sustainability? Green Extractivism and the Struggle for a Just Transition*.

²² Riofrancos, T. (2023). "The Security–Sustainability Nexus: Lithium Onshoring in the Global North". *Global Environmental Politics* 23(1): 20-41.

²³ Seas at Risk (2021). *Breaking Free from Mining: A 2050 Blueprint for a World Without Mining – on Land and in the Deep Sea*, 5.

²⁴ International Energy Agency (21.5.2024). *Critical Minerals Data Explorer*.

²⁵ Riofrancos, T. et al. (2023). *Achieving Zero Emissions with More Mobility and Less Mining*.

a less energy-intensive and material-intensive economy. Such a transformation would lead to lower energy and material dependence – and thus to greater self-sufficiency and security.

Moving out of the vicious circle of green extractivism

It is seemingly impossible to envision a system which would not be based on infinite economic growth, and with that on continuous extraction. A crucial part of any alternative must also be breaking free from the imperative of extractivism. In Latin America, the anti-extractivist and post-extractivist movements have a long tradition,²⁶ articulating alternatives which emphasise the importance of values such as *buen vivir* – a good life and well-being beyond the destructive logic of extractivism. They thus offer pathways toward liberation from an exploitative relationship with nature and toward genuine *transformation*, rather than mere transition.

Regrettably, parts of the climate movement have struggled to articulate a critical position towards green extractivism. Communities are far from equal even within Europe, and certainly not between the EU and the rest of the continent. Mining projects are often planned in peripheral areas and on Indigenous lands, such as in the Sápmi region of northern Europe. Those communities that are the most affected by planned mining projects are among the very ones least responsible for the climate crisis. Today, Western countries are abandoning even these non-systemic green policies based on technofixes. The promise of the green transition has been almost entirely replaced by the rhetoric of geopolitical rivalry, militarisation and economic growth based on digitalisation. Not only is it the case that growth-based climate policies could have never worked in solving the climate crisis – they are now, regardless, buried under the rise of far-right and genocidal forces.

Faced with the new wave of green extractivism, communities are organising across the Global North-South axis through networks of solidarity that insist on resisting extractivism anywhere. It is this resistance that presents the main obstacle to the uncontrolled expansion of capital and extractivism. Yet far too often are these communities left to fend for themselves, or their struggle becomes coopted by right-wing demagogues and climate change deniers.

²⁶ Acosta, A., et al. (2016). “Post-Growth and Post-Extractivism: Two Sides of the Same Cultural Transformation”. *Alternautas* 3(1).

At least partially to blame are climate and environmental organisations, which fail to clearly oppose destructive mining projects – regardless of the material that is being mined – and the erosion of environmental protection and democratic participation.

So how to resist the logic of green extractivism? Misleading terms such as “renewable energy sources” or “energy transition” need to be critically interrogated. Energy sources are not entirely renewable – they require raw materials that must be mined somewhere, most often in countries of the Global South, but increasingly so wherever it is possible. And there is no energy transition taking place in the sense of one energy source replacing another – rather, overall energy consumption is growing. Such climate policies are neither sustainable nor just. It is only through resistance to green extractivism that a different kind of future will be possible.