

Mines to the rescue of the planet?

by Romain Mainieri

To achieve energy transition, we will need to extract as much metal in the next 20 years as we have done in the entire history of mankind. This is ‘one of the great paradoxes of our times’.

A review of: [Celia Izoard, *La ruée minière au XXIe siècle*, Seuil, Ecocène collection, 2024, 352 pages, €23.](#)

Journalist, translator and philosopher Celia Izoard has been investigating the social and ecological impact of new technologies for several years now. Her new book further explores the damaging effects of the energy and digital transition.

The green transition requires the extraction of massive amounts of metals from the ground. Once extracted, these raw materials will be used to produce the low-carbon energy needed to save the planet. However, this race to obtain metals that are meant to combat climate change might very well end up exacerbating ecological chaos, environmental damage and social inequality.

Celia Izoard conducts an extensive investigation into this global, unprecedented and invisible phenomenon. While other studies highlight the physical unsustainability of such a transition, this book provides a unique overview, through field surveys and in-depth analysis of the cultural, political, economic and social aspects of mining and metals.

The myth of the green mine

At the start of the book, Celia Izoard goes in search of 21st century mines: ‘responsible’, ‘relocated’, ‘4.0’, ‘decarbonised, digital and automated’. Through detailed arguments and an immersion in mines in Spain and Morocco, the author shows that the rhetoric promoted by international institutions, political leaders and business circles hides a different reality: one of predatory, energy-intensive and destructive mining that devours the planet’s habitat and the life it supports.

At a local level, the ‘radicalisation’¹ of industrial mining is detailed in the light of its social devastation. The mine is above all ‘a gigantic machine for uprooting people’ (p. 54), emptying spaces by expropriating the world’s last indigenous peoples. In addition, modern mining exposes humans to a number of illnesses and poisonings. At the Bou-Azzer mine in Morocco, where ‘responsible cobalt’ is extracted for electric cars, miners and local residents suffer from cancer, as well as neurological and cardiovascular diseases.

The global scale of the mining sector’s predation in the 21st century is also outlined in terms of the growing production of waste and pollution. The mining sector is the most contaminating industry in the world². For example, an industrial copper mine produces 99.6% waste. Stockpiled near mining pits, waste rock – extracted in gigantic volumes – generates sulphide emissions that drain the heavy metals contained in the rock, displacing them into watercourses. Depending on the ore being processed, these can include cyanide, acids, hydrocarbons, caustic soda, or known poisons such as lead, arsenic and mercury. Ultimately, zero-carbon mines are an illusion because they are highly energy-intensive. The amount of energy needed to extract, crush, process and refine metals represents around 8 to 10% of the total energy consumed worldwide, making the mining industry a major contributor to climate change.

¹ In the 19th century, mining was an enterprise that brutalised environmental systems. It was accommodated through the commodification of damage, the land policy of paternalism and the mobilisation of scientific knowledge and expertise to circumvent the industrial causes of health damage and environmental damage. See: Bastien Cabot, *Écopolitiques ouvrières. Enquête socio-environnementale dans les mines de charbon du Nord-Pas-de-Calais (fin XIXe-début XXe siècle)*, thesis under the direction of Christophe Prochasson, EHESS, 2022.

² Celia Izoard, ‘Les bas-fonds du capital. L’éternel retour de l’Eldorado’, *Z : Revue itinérante d’enquête et de critique sociale*, vol. 12, n°1, 2018, p. 14-15.

The dark side of energy transition

In the second part of the book, Celia Izoard shows that the elites are 'in the process of burying the climate and energy crisis at the bottom of the mines' (p. 62). The imperative to extract metals for the transition overlaps with the return of the raw materials issue to the forefront of the public agenda, at a time when Western powers have lost their hegemony to China and Russia.

Since when has the transition involved a mining revival and therefore a switch from fossil fuels to metals? This argument is clearly spreading following the publication of a World Bank report in 2017. In collaboration with the world's largest mining lobby (ICMM, the International Council on Mining and Metals), the report states that the mining industry has a major role to play in the fight against climate change by providing low-carbon technologies. Electric batteries, wind turbine rotors, electrolysers, photovoltaic cells and cables for the global wave of electrification: all these infrastructures and technologies require metals in staggering quantities. The energy transition of societies would require the use of many base metals (copper, nickel, chromium and zinc) as well as rare metals (lithium, cobalt and lanthanide). The electrification of the French car fleet alone would require the entire annual global production of cobalt and twice the annual global production of lithium.

In the 21st century, Western powers are suddenly being reminded of the importance of raw materials, having considered themselves free of these since the 1980s. Obviously, Western companies have never stopped sourcing their raw materials from mines and industries relocated to the Global South. This process of displacement also helped to make mines and mining pollution invisible in both the environment and the collective psyche.

Under the banner of transition, which enables us to pre-empt environmental protests and get people on board with this unprecedented global race for metals, lies the plan to pursue growth and lifestyles that require excessive energy and metal resources. This new myth of the capitalist West justifies the extraction of metals that will also be used by European companies in digital, automotive, aerospace, military, chemical, nuclear and other cutting-edge technologies.

‘Demining capitalism’

The third part of the book explores the history of capitalism through the history of mining and metals. It shows how the extractivist model was founded on ideologies: Salvation, Progress, Development... and now, perhaps, Transition. Extractivism is enabled by the development of a system of beliefs and fantasies that grant it omnipotence. Celia Izoard calls this an ‘extractivist cosmology’ (p. 211). Supported by favourable legislation and colonial policies implemented by the state and the bourgeoisie, and then by industrialisation in the 19th century, this matrix fostered our dependence on a mining regime. In the eyes of the Amazonian Yanomami people, white people are ‘land eaters’ (p. 215).

How can we move away from this vision of the Western world structured around the mine, aimed at accumulating capital and power? According to Celia Izoard, the mining-based and technological solution to the climate crisis is a trap. The climate movement must involve reduced mineral consumption, a ‘metal withdrawal as much as an energy withdrawal’ (p. 291). Reducing our consumption of energy and materials is a realistic solution. The daily lives of Westerners are too reliant on mined resources, as illustrated by the emblem of our daily overconsumption of metals: smartphones. These devices contain over 50 metals in complex alloy form. Shouldn’t metals be reserved for uses deemed essential to human life?

To move away from our mining regime, we urgently need to make the overconsumption of metals visible in the public debate. On the one hand, this requires political measures: the introduction of a metals footprint assessment similar to the carbon footprint assessment will help to debunk the myth of a separation between toxic fossil resources (coal, oil and gas) and extracted metals promoted as beneficial and essential according to the ideology of transition. Another solution would be to target the overconsumption of minerals by the wealthiest people, by distinguishing between luxury and subsistence emissions, as proposed by Andreas Malm³. On the other hand, ‘demining capitalism’ (p. 281) will require us to undergo a process of collective and democratic reflection and debate, social movements and individual awareness-raising, particularly in hyper-industrialised countries where the overconsumption of metals has reached absurd levels.

³ Andreas Malm, *How to Blow Up a Pipeline*, Verso Books, 2021.

Not satisfied with circumventing the obstacle of 'energy transition', extractivism is pushing back the frontiers ever further, justifying the conquest of new Eldorados: Greenland, the ocean depths and even extraterrestrial ores. In the face of Earth's contamination and degradation by mining and industry, the fight against these projects is intensifying⁴. Recently, it was the Kolla, an indigenous people in Chile, who opposed mining giants. These companies plan to extract lithium from the Salar de Maricunga,⁵ which involves pumping millions of cubic metres of water from the depths of the salt flats, the emblems of the Andes Mountain range. The Kolla communities will be weakened in the process, especially as they are already suffering due to the urban exodus and the drying up of the region. Farmers will also be forced to abandon their livestock and head for the region's huge mining towns. In addition, transhumance, biodiversity and some forty local wild species (Chilean pink flamingos, vicuñas, guanacos, etc.) are under threat. Supported by their spokeswoman Elena Rivera, the Kolla do not intend to let this happen and have lodged an appeal with the Environmental Tribunal in Santiago, which deals with the many environmental controversies in the country. In the 21st century, debates and struggles surrounding the extraction of lithium in Chile, the country with the second-highest concentration of reserves on the planet, have proved that the poor and the world's last indigenous peoples are on the front line when it comes to the underlying harmful effects of the 'green transition'.

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⁴ Mathieu Brier & Naïké Desquesnes, *Mauvaises mines. Combattre l'industrie minière en France et dans le monde*, Marseille, Agone, 2018.

⁵ Iris Lambert & Lucas Lazo, "Extraction du lithium au Chili", *Socialter*, n°62, February-March 2024, p. 50-57.