

Smoke and Minerals: How the mining industry plans to profit from the energy transition

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‘Everything starts with mining.’

(CEO of BHP)¹

While most of us probably rarely think about it on a daily basis, the handful of transnational corporations that dominate the mining industry play a key role in providing inputs for goods we interact with every day – from smartphones to food. Their profits stem from their role

in the production of these goods: control of extraction of minerals at the starting point of the vast global supply chains that stretch from Chilean and Congolese mineral landscapes to – in the case of smartphones – our pockets.

BOX 1

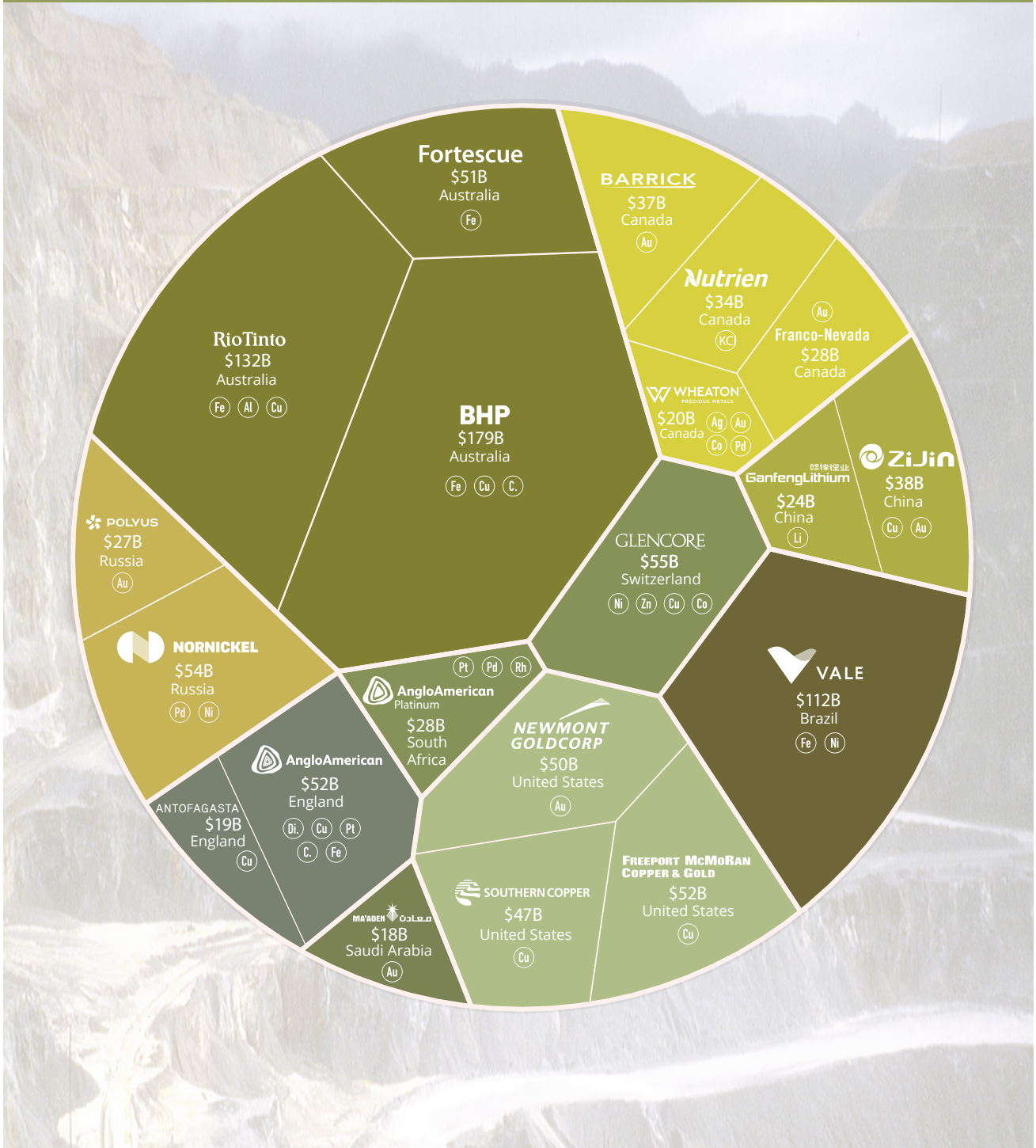
As with any industry, it is important to differentiate between the size of firms, because different sized firms have different types of strategies available to them in their pursuit of profit.² Within the mining industry, a distinction according to different levels of market capitalization and product market share can be made between what are called the majors, mid-tiers and juniors.³ In this piece, we focus primarily on the activities of the majors, i.e. large-scale transnationally organized companies. We also exclude the major state-owned Chinese mining companies.

As is the case for all corporations under capitalism, ‘production is always initiated on the basis of prospective profit’.⁴ For this handful of transnational corporations, the current jargon so predominant at the recent COP26 around the need for an ‘energy transition’ promises huge prospective profits. As the CEO of the world’s largest mining company BHP recently noted, ‘decarbonization is a metal-intensive activity’.⁵ And he certainly has a point. Although gleeful celebratory statements around the rate of progression towards renewable energy sources are often overblown⁶, even the current inadequate substitution is leading to increasing demand for minerals: ‘[s]ince 2010, the average amount of minerals needed for a new unit of power generation capacity has increased by 50% as the share of renewables has risen’.⁷ If, as the

International Energy Agency argues, the share of renewables continues to rise, combined with a predicted switch to electric vehicles, it will mean the ‘scaling up [of] investment in new mining and processing facilities is vital’.⁸ This is because the expansion of non-fossil fuel technologies – from wind turbines to the batteries in electric vehicles – require so-called ‘transition minerals’, e.g. copper, nickel, manganese, lithium, cobalt and rare earth elements: ‘A typical electric car requires six times the mineral inputs of a conventional car, and an onshore wind plant requires nine times more mineral resources than a gas-fired power plant.’⁹ The mining industry is currently strategizing as to how to benefit from this rise in demand through rapidly expanding their production, while also purporting to down-size its involvement in fossil fuel production.

FIGURE 1

Top 20 mining companies in the world



BHP and **RioTinto** jointly own the Escondida mine in Chile, the top producer of copper, used in electrical equipment.

Vale is the world's largest producer of iron ore and pellets (small balls of iron ore) used to manufacture steel.

Anglo American owns **De Beers Group**, the world's leading diamonds company.

Data provided by Visual Capitalist

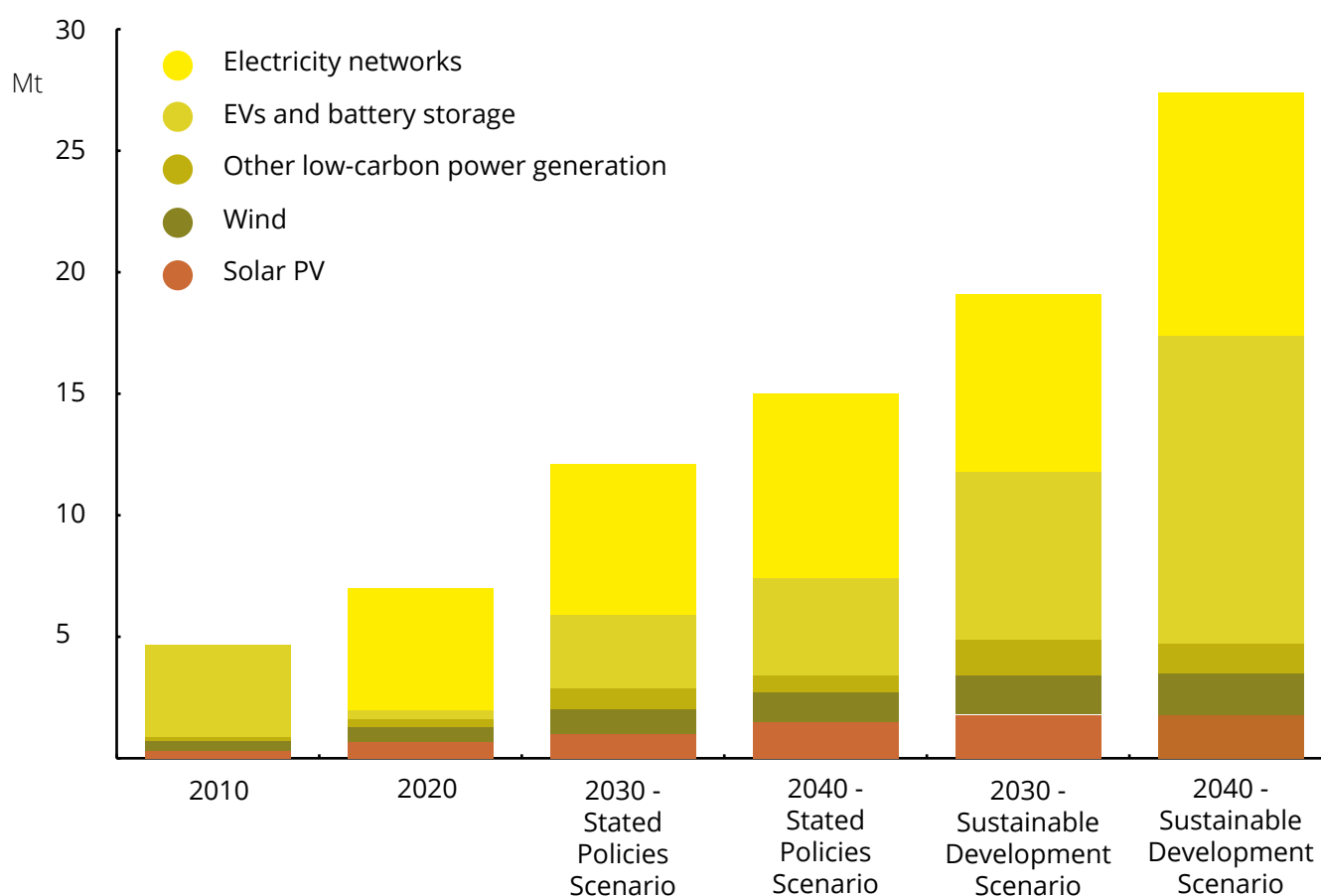
Any expansion will extend the already vast, global scale of operations of transnational mining corporations. Typically, we may think of mining just in terms of the specific sites of extraction, but today's mining industry encompasses related 'logistical infrastructures, transoceanic corridors,

networks of financial intermediation, and geographies of labour.¹⁰ As Martín Arboleda exemplifies by tracing copper from point of extraction in Chile through refining and production to final consumption and use:

Autonomous trucks and shovels working at nearly 4,000 meters above sea level put the metal into a semiautomated train, which then takes it to a smelting and electrorefining facility, where computerized ovens transform it into copper cathodes. The cathodes are put into containers and sent to one of the megaports of the mining industry in the Atacama Desert, where gantry cranes load the cargo into a container ship. After crossing the Pacific, our container is unloaded by the swiftness of the vast mechanical systems of capital-intensive Chinese ports. Finally, the copper cathodes end up in one of the infamous 'dark factories' of the Pearl River Delta. Here, robots and computer numerical control (CNC) machine tools operate in the dark, turning copper into the wires that hundreds of thousands of human laborers in electronics assembling factories will later etch in the electronic gadgets we carry in our pockets.¹¹

FIGURE 2

Total mineral demand for clean energy technologies by scenario, 2010–2040



Source: IEA (2021), The Role of Critical Minerals in Clean Energy Transitions, IEA, Paris <https://www.iea.org/reports/the-role-of-critical-minerals-in-clean-energy-transitions>

This immense infrastructure already has significant socio-environmental implications across the associated geographies, shaping the lives and environments of those involved from dispossessed peasants in Chile to migrant workers in China. How will these and other geographies, lives and environments across the world be impacted by the majors' strategies as they seek to position themselves to benefit from the energy transition?

Thinking through such implications requires first a scrutinizing of the strategies that the mining companies are deploying. As President of TNI, Susan George, has argued, studying the rich and powerful can help social movements develop counter-strategies. What follows takes a closer look at the mining industry's current investment and political strategies and concludes by raising pertinent questions for social movement strategies.



Image 1: Marcopper mine pit, Marinduque, Philippines. Photo by Catherine Coumans, MiningWatch Canada

Investment strategies: extensification and intensification of extraction

After an initial plummet in commodities prices in the months when Covid-19 was turning into a pandemic, 2021 saw a strong rise in prices particularly in the group of metals associated with so-called clean energy technology. This has spurred discussions in the financial press about whether we are entering into a new commodities 'super-cycle', i.e. a 'permanent step change in demand that cannot be met by supply leading to prices sitting above incentive levels for an extended period'.¹² The last commodities super cycle played out in the 2000s driven by China's urbanization. That super-cycle led to mining activity, in the words of David Harvey, 'accelerating everywhere. From India to Latin America to Australia, whole mountains are being removed in the search for minerals, with all sorts of deleterious political, economic and environmental consequences'.¹³

Not everyone is persuaded that we are approaching a super-cycle – others argue it may be a shorter-term boom (although price spikes caused by shortages based on Russia's invasion of Ukraine have now added further fuel to the fire of a potential super-cycle). But either way, the trend towards a massive expansion in demand for transition minerals (and hence rallying prices and profit opportunities for those engaged in extraction) is expected in the coming decade. As an analyst from Tribeca Investment recently noted, 'most metals, particularly the ones going into batteries – copper, nickel, lithium will be in structural deficits in the coming decade'.¹⁴

In response to such forecasts of prospective profits for mining companies that can meet this looming supply gap, investment strategies are taking shape in two variants: extensification and intensification. *Extensification* involves opening up new spaces of extraction, thereby extending the geographical area of mining activities. *Intensification* entails investing in new forms of technology and forms of organizing the labour involved in the extractive process in existing spaces of extraction.¹⁵ New technologies are also facilitating the extensification strategy, so there is some overlap between the two. Generally, the majors currently seem most interested in extensification and we therefore spend most time discussing that, but as we touch on towards the end of the section on technology, they are also exploring intensification.

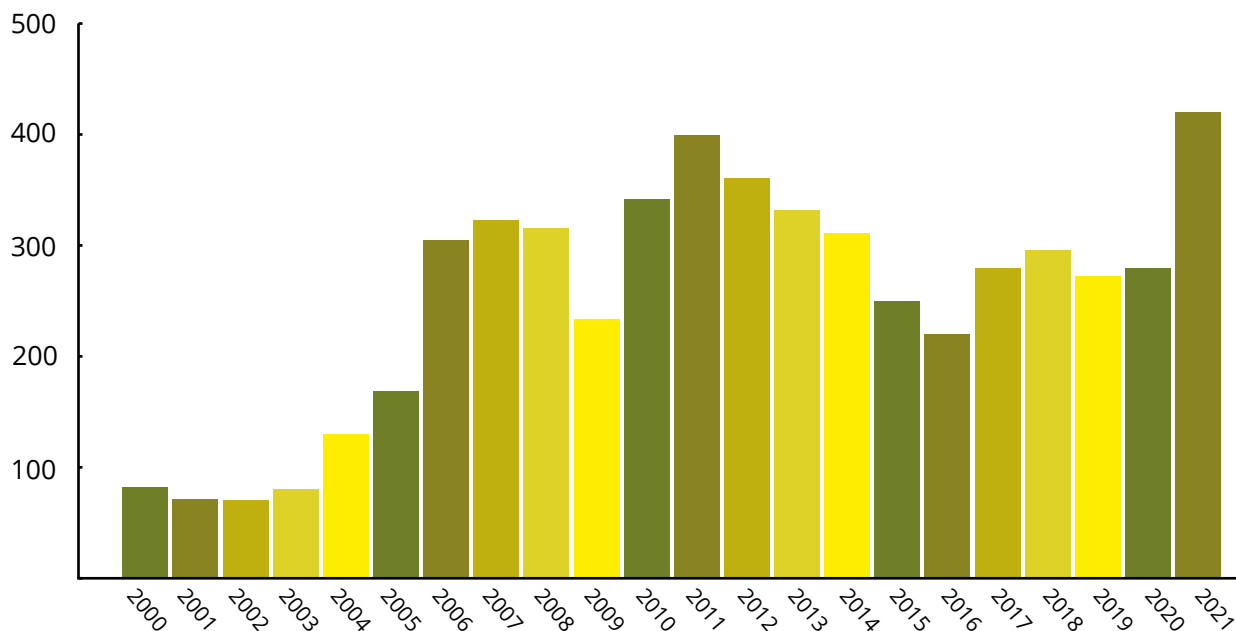
In tune with the *extensification* approach, the CEOs of the majors are increasingly focusing on expansion across a swathe of new territories. This represents a shift from the period following the Great Financial Recession in the last decade where 'exploration budgets were slashed across the industry'.¹⁶ Here 'exploration' covers identification, evaluation and gaining control over particular geographic areas, all three of which 'are central to accumulation in the mining sector'.¹⁷ The lower budgets for these industry-crucial activities remain a concern for the companies. So-called 'replacement of production' is ranked 8th out of 10 risks for the industry in Ernst & Young's 2020 risk assessment, due to budgets remaining 'half of what they were in 2012' and it is here emphasized that '[m]ore ore capital is required to increase exploration budgets'.¹⁸ Figures from the past two years do suggest a ramping up of these exploration budgets.¹⁹ As a representative from Anglo American has put it, there is an 'enormous amount of primary material that still needs to come to the market' and in light of the prospective profits, while 'capital may be slow to come, come it will'.²⁰

One form of this strategy to expand mining into new territories is to focus on opportunities in what the majors call 'high-risk' countries – especially on the African continent. 'Risk' here is seen from the perspective of companies as anything that negatively impacts on the potential for making profitable foreign investment in a given country. This could include the introduction of higher taxes (or 'royalties'), more stringent environmental or labour regulations as well as risks of outright expropriation (as several foreign companies in Russia are currently grappling with).²¹ These risks are constantly being monitored, as noted in Ernst & Young's risk assessment 2020, '[a] number of key elections and resultant government changes, particularly in Africa and Latin America, have created volatility for the sector and increased concern around future regulation of mining licenses and royalties'.²² Nonetheless, the current moment of surging prices means that countries that were previously considered too 'risky' to invest in are becoming attractive due to their expected mineral reserves and the significant profits to be made.

For the past decades – and in particular in the 2000s during the aforementioned commodities super cycle

FIGURE 3

LME price for high-grade copper from 2000 to 2021 (in U.S. cents per pound)



The copper price on the London Metal Exchange (LME) stood at an average of 420 U.S. cents per pound in 2021. This figure represents an increase of about 50 percent in comparison to the previous year and was the peak LME copper price in the period of consideration.

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– Latin America was the primary new frontier for mining. For example, where Chile in 2005 had exports of copper to China worth USD 3.9 billion, by 2012 they stood at USD 14.6 billion.²³ Similarly, in Peru, the geographic area of mining concessions in the six-year period from 2002-2008 expanded a whopping 77%.²⁴ Yet, as noted by a representative from the Mitsubishi Corporation's Mineral Resources Investment Division, both these jurisdictions now face considerable 'risk' with the recent resignation of Peru's prime minister and ongoing struggles regarding royalties in Chile.²⁵ Furthermore, high-grade copper mines here are increasingly scarce. So where especially Western miners have in recent decades pivoted towards Latin America as opposed to the African copper belt, today 'there is a momentum to go back into new jurisdictions with high risks [in the African copper-belt]. The question is how are you going to mitigate those risks, how are you going to share those risks with partners or create a framework that allows you to invest for the long-term.'²⁶ According to the CEO of Anglo-American, 'Africa is a tremendous opportunity'²⁷, while BHP has signaled a shift in its appetite for risk by negotiating a copper deal in the Democratic

Republic of Congo.²⁸ Indeed, the Democratic Republic of Congo in particular has a promising role in the majors' imaginations – not just for copper, which has historically been the focus, but also due to the vast reserves of cobalt in the country. As the CEO of Ivanhoe Mining put it, the country has the potential to become the 'Saudi Arabia of the energy transition'.²⁹ Such invoking of the seemingly magical qualities of certain resources for economic development (though emulating Saudi Arabia's petro-oligarchy may seem dubious to some) has also been seen in the so-called Lithium Triangle (covering Chile, Argentina and Bolivia).³⁰ Latin America therefore still looms large in the extensification strategy, due to the increasing pursuit of different minerals than those that have historically been pursued there (albeit lithium extraction also has a long history in Latin America).

The expanding frontiers will also include Asia, both within China, or exporting to China as in the case of rare earths in Myanmar, or in Indonesia, which is aiming to take advantage of its vast nickel reserves to become a key player in battery manufacturing.³¹ It will also include expansion in indigenous territories in colonial settler countries

such as the USA, Canada and Australia. Although these jurisdictions may be considered safer in terms of political risk, Native Americans have been leading concerted opposition to the proposed Thacker Pass lithium mine in Nevada and the Resolution copper mine in Arizona. Likewise, in Europe, local communities are currently resisting proposed lithium projects in countries including Spain, Portugal and Serbia, and rare earth mining in Sweden,

with some notable success in Serbia where licenses have been canceled. As Thea Riofrancos notes, these contested spaces offer new opportunities for solidarity across geographically and economically diverse regions, highlighting 'that despite power asymmetries between multinational mining companies and oftentimes marginalized communities, social movements can successfully shape the fate of extractive projects'.³²

BOX 2

The 'specter of China'?

At the end of 2021 polemic news reports concerning a consolidation of three Chinese rare earth companies into one state-owned corporation circulated in EU-countries' media.³³ The story neatly fit into a dominant interpretation of Chinese companies that 'because China is tightly controlled by an authoritarian regime, these companies must be directed by their political masters'.³⁴ Particularly concerning rare earth minerals, where Chinese production already dominates globally, this consolidation was seen as another example of the Chinese state taking control of corporate supply chains to extend Chinese geopolitical power. Within discussions on transition minerals more broadly, it justifies the expansion of Western capital in order to exert counter-control, and ironically – given the history of mining and colonialism in Africa – it allows Western mining companies to claim that they should be exploiting resources, rather than 'human rights abusing' Chinese companies. This 'specter of China' is essentially being invoked so that access to and control of production takes on a geopolitical character.

As argued by Lee Jones, however, this fundamentally misreads the practice of Chinese corporations – especially their practices abroad. As opposed to being driven by a heavy-handed state, in fact Chinese companies operating overseas 'are often very poorly controlled', which may in reality be more of a problem for vulnerable populations located in the areas where such investments are taking place.³⁵ Rather, as with all other companies under capitalism, Chinese state-owned enterprises also operate under the imperative of creating profit as they have become 'for-profit entities under arm's length supervision.' The state's approach then is one of an 'arms-length, regulatory approach, permitting these companies to pursue their own profits, not China's "national interest". Many government agencies typically have little or no idea what companies – even major SOEs – are doing, until scandals emerge.³⁶ The geopolitical framing then hinders a more nuanced understanding of the practices of Chinese companies – whether state-owned or private. While the practices of such companies may have geopolitical consequences, the drivers behind are ultimately economic in nature. As the Financial Times alluded in its coverage of the consolidation there also seems to be more immediate profit-concerns behind the consolidation, which has also taken place in other industries in order to 'prevent rival groups from undercutting each other when bidding for lucrative overseas contracts.³⁷ With Chinese companies continuing to play an increasing role in the mining industry, more careful analysis, as Lee Jones has called for, will be needed to 'unpack the Chinese party-state in order to understand the complex actors and interests at work and ultimately to improve Chinese companies' global conduct.³⁸

Technologies of extraction

As the majors compete amongst each other to be the first-movers into these new mining-territories, 'the development and adoption of technology is the arms race' in the war that is 'the struggle for profit growth and market share'.³⁹ One area of struggle is the development of new technologies to explore the earth's mineral resources. One of the actors involved in these processes is Kobold Metals – a Silicon Valley-based exploration company backed by the likes of Bill Gates and Jeff Bezos in an exploration alliance with BHP.⁴⁰ Kobold Metals aims to '[d]esign, invent and deploy advanced scientific computing technology' that can predict compositional anomalies within the earth's crust. Where discoveries of minerals in the previous half century have been detectable at the earth's surface, their technology allows for exploring the '300 to 1500-meter window that has [remained] largely unexplored that is explorable with new technology' potentially allowing for 'tremendous discoveries'.⁴¹ Such technological development has not previously been necessary, because the industry was able to supply existing demand with relatively low-tech means. However, the expected massive expansion of demand will require technological development to open up new territories, because 'the easy stuff has been found'.⁴²

There are also technological developments that are truly trying to open up new frontiers, such as deep-seabed mining, the mining of asteroids or phyto-mining, where plants are harvested for their metals. Currently though, it is smaller companies and researchers who are trying to develop these financially riskier alternatives. The majors are keeping a respectful distance for now, and only if advances prove profitable are they likely to try to buy their way into viable ventures.

Technology being pursued by Jetti Resources facilitates the *intensification* strategy by aiming to get more out of existing copper mines through the application of chemical processes on existing low-grade sources of copper. With the likes of Anglo American, Rio Tinto and BHP on the advisory board, and with the Mitsubishi Corporation as one of their strategic shareholders, the company claims it will 'deliver much needed "green copper" to meet the world's needs for a low-carbon electrified future'.⁴³ The plan is to develop copper from stocks that had previously been considered waste, turning those waste-streams 'into revenue streams in a very low-capital intensive way

to 'make a dent at the demand-supply gap in the coming years'.⁴⁴ As a result, it has been noted how generally within the mining industry, '[m]ines that had been abandoned are therefore being reopened, and deposits that were deemed uneconomical are being transformed into large open-cast extraction sites across all stretches of the planet'.⁴⁵ However, this is still a form of extraction, and even where mining of waste land-fills, to access discarded metals, is being considered there are still the inherent environmental and social impacts associated with mining; very few of the majors are looking at a meaningful shift to supporting re-use, repurposing or recycling.⁴⁶

Rio Tinto's 'Mine of the Future' is one where data and automation replace the need for on-site, and indeed, most workers.⁴⁷ This is an example of the intensification strategy's focus on reorganizing the labour process allowing the company greater control of the overall production process and thereby profits, by seeking to minimize the role of labourers and consequently reduce their power. The 'Mine of the Future' reflects a broader push whereby mining companies have benefitted from developments in artificial intelligence, big data and robotics allowing for the introduction of 'automated trucks, drills, shovels, and locomotives'.⁴⁸ As some of these tools (e.g. trucks and shovels) are fully robotic (i.e. not remotely controlled requiring human intervention), they can be in operation 24/7 opening up the opportunity of constant mining.⁴⁹

Both through the extensification and intensification investment strategies in extraction, mining companies are becoming a formidable force in the currently-dominant vision for the energy transition.



Political strategies: Rebranding, stakeholder engagement and setting the rules of the game

'The mining sector historically has not done itself any favours.'

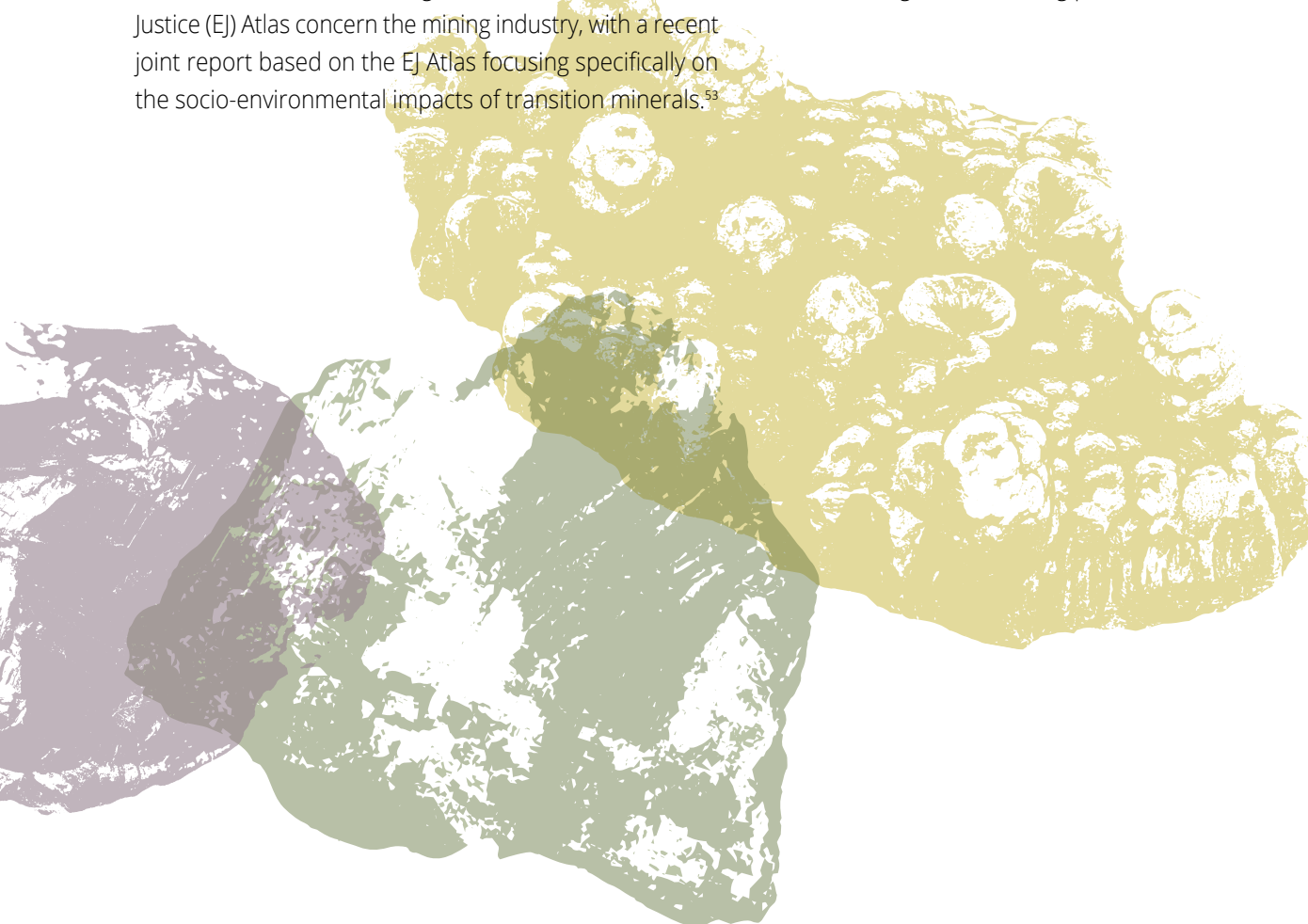
(Anglo American)⁵⁰

'We're trying to make mining sexy!'

(Foran Mining)⁵¹

Mining executives are acutely aware that their investment strategies face challenges in the real world. According to Deloitte's industry-wide evaluation of trends in mining, the key challenge that industry actors themselves identify is the 'trust deficit with local communities'.⁵² Recent years have seen a number of widely reported incidents involving several of the majors which include the deadly dam failures at Samarco and Brumadinho in Brazil, involving Vale and BHP, and the egregious destruction of the culturally significant Juukan Gorge caves in Australia by Rio Tinto. Beyond these recent more high-profile cases, socio-environmental conflicts are ubiquitous within the mining industry and have been for decades. For example, over a fifth of the conflicts registered in the Environmental Justice (EJ) Atlas concern the mining industry, with a recent joint report based on the EJ Atlas focusing specifically on the socio-environmental impacts of transition minerals.⁵³

Particularly as the industry is pursuing the extensification investment strategy, they are increasingly focused on what in the age of Corporate Social Responsibility is called their 'license-to-operate' – i.e. 'the ongoing approval or acceptance of a company's activities by the local community and other stakeholders'.⁵⁴ As noted by Ernst & Young, '[a]s mining and metals companies adopt new ways of mining and seek out ever more remote locations to find the next big resource, it's going to be essential to pay greater attention to license-to-operate concerns'.⁵⁵ The political strategies adopted by companies to address such concerns include: rebranding themselves; increased 'stakeholder' engagement; and challenging the power of states in setting the rules of the game for mining practices.



Rebranding

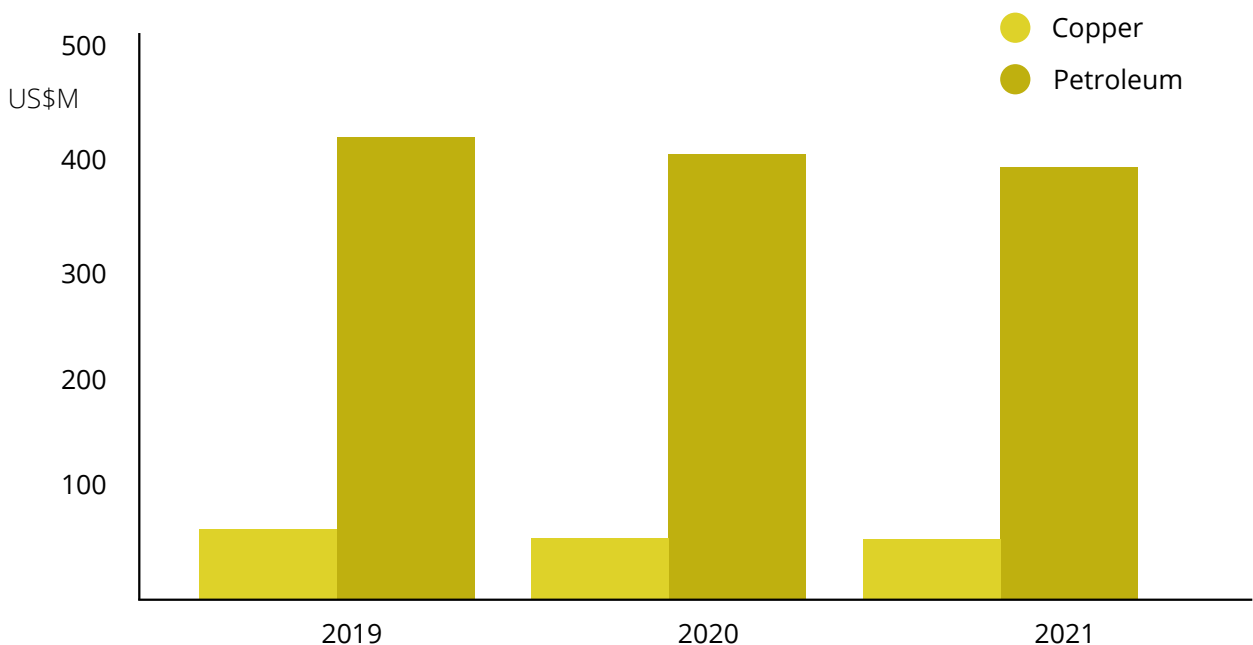
The mining industry's most recent rebranding of itself is as minerals solutions or materials solutions companies. This follows up on earlier efforts at rebranding mining as 'sustainable' and a 'vehicle for development'.⁵⁶ The latest rebrand is akin to what we also see in the oil and gas sector, where companies like BP and Total represent themselves as actively transitioning away from fossil fuel extraction and production towards renewables. However, closer examination of their actual investment practices suggests otherwise, '[t]he profit levels the oil majors would like to see in renewables are generally not there; and the companies [BP, Total and Shell] are hesitant to take the investment risks'.⁵⁷ In the case of BHP, the world's largest miner, the company website is rife with pictures of wind turbines, electric vehicles and solar panels and visitors are met with messages of how BHP's 'products help build a better, clearer future.'

In fact, the central activity of mining is hard to come by in the major's representation of themselves. Rather, the mining companies are now suppliers or deliverers of 'products' as the BHP website notes. In this manner,

BHP emphasizes that 'the world needs companies, good companies ... to deliver these future-facing commodities' – and BHP argues it is uniquely positioned to do so.⁵⁸ Anglo American's former CEO frames the company similarly: 'In 2013 we thought of ourselves as a mining company... The biggest issue facing the globe today will be the minerals required to support growth and to improve everyone's lives. With that we will have to go beyond primary mining and produce a whole range of products or provide access to products and that's why we think of ourselves more as a minerals solutions company in the long-run.'⁵⁹ How exactly these mining companies' will be 'going beyond primary mining' remains somewhat unclear. To the extent that this 'range of products' remains metals that are currently in the ground no amount of new branding will change the fact that these metals will be mined out of the ground. Moreover, despite the eagerness to present themselves as feeding into the renewable energy sector, in 2020 BHP spent well over five times as much on exploration for petroleum as it did for copper – leading Bloomberg to note that copper exploration is the equivalent of 'pocket change' for the company.⁶⁰

FIGURE 4

BHP's spending on petroleum vs copper



Source: BHP (2021), BHP Annual Report 2021: The future is clear, https://www.bhp.com/-/media/documents/investors/annual-reports/2021/210914_bhpannualreport2021.pdf

Our products help build a better, clearer future.

What we produce is essential for the world to continue to grow and many of our products will help make the transition to cleaner energy possible.

Image 2: Screenshot from BHP's website

One of the companies perhaps most adept at this rebranding is a notorious proposed deep-seabed miner: The Metals Company. The company's CEO, Gerard Barron made part of his fortune from a failed attempt at deep-seabed mining in the coastal waters of Papua New Guinea, exiting before the company involved went bankrupt, at least partly due to local opposition.⁶¹ Now, The Metals Company is leading the rush to initiate mining in international waters of the Clarion-Clipperton Zone in the Pacific Ocean. Deep seabed mining is a contentious issue due to

the expectations of environmental damage and species loss and particularly because of a lack of knowledge of the extent of this damage. Growing concern has led an interesting coalition of actors (from Greenpeace to Google) to come out in favour of a moratorium on deep seabed mining. To counter this effort, Mr Barron, who started his business career in marketing, is actively branding the proposed mining as 'harvesting' to 'build a carefully managed metal commons'. As he put it in an interview,

'Personally, I get very uncomfortable when people describe us as deep sea miners. At DeepGreen [now The Metals Company], we don't think of ourselves as developing a mining business. We are in the transition business—we want to help the world transition away from fossil fuels with the smallest possible climate change and environmental impact. This is the global public good we hope to create'⁶²

Stakeholder engagement

The notion of 'stakeholders' increasing importance in questions of resource management and control reflects a broader shift in governance processes away from clearly defined and delimited rights and responsibilities determined by states with accountability towards citizens. Instead, stakeholder engagement and 'multistakeholderism' as a form of governance entails 'bringing together [...] actors that have a potential "stake" in an issue and

ask[ing] them to collaboratively sort out a solution.'⁶³ In this manner, mining companies are taking the lead in bringing together actors that can be said to have a stake in a particular mining project e.g. local 'communities' (another often ill-defined term), Indigenous peoples, NGOs, government representatives, etc. As Deloitte points out, improving this engagement is key to countering 'the public perception that mining companies are prospering at the expense of

society' – and improved engagement can in turn anticipate and forestall a 'tumultuous stakeholder relations landscape' thereby avoiding 'community protests, anti-mining advertising campaigns, abrupt tax increases, and dramatic changes in regulatory regimes.'⁶⁴

Consequently, in interviews and public relations materials, mining companies have very adeptly incorporated such considerations into the framing of their practices. Indeed, improving their brand in this manner is considered part of the competitive struggle between companies.⁶⁵ As the former CEO of Anglo American (Anglo) has explained: 'one thing that differentiates us as a company is that the standards, we are developing for our operations are being developed with local communities [and] with NGOs, so we are developing those standards with our stakeholders and making sure that the expression of those standards meets their expectations.'⁶⁶

These are fine words, but to what extent has this translated to changes on the ground in their practices? Although the company has come a long way from its South African origins - with an office in London, a primary listing on the London Stock Exchange and participation in what is arguably the most truly multistakeholder standard – Initiative for Responsible Mining Assurance⁶⁷ - it still faces justified criticism from communities across the globe. It is dealing with large legacy issues from its dominant position during South Africa's apartheid regime. It has faced costly legal action over historic cases of ex-mine workers who contracted silicosis, and although settlement has been reached there are ongoing disputes regarding compensation.⁶⁸

In order to promote its green mining image Anglo has demerged its thermal coal operations into a new company called Thungela Resources. However, it has faced criticism that such a move does not reduce fossil fuel production, but simply ensures that Anglo is no longer associated with it. Researchers at Boatman Capital also allege that this

Setting the rules of the game

In the face of challenges from some governments around royalties, another aspect of this stakeholder engagement entails reshaping the relation between companies and governments. This is part of the shift towards multistakeholderism in global governance processes noted above. Multistakeholderism departs from the post-WWII multilateral system, whereby 'governments, as representatives of their citizens, take the final decisions on global issues

move allows Anglo to escape accountability for its historic liabilities, including for the pollution impacts of coal mining. Boatman Capital further accuses the company of underestimating its environmental liabilities by up to a third, leaving the newly spun off company with effectively more liabilities than assets.⁶⁹

Anglo's coal mining was not just in South Africa, as it was also a one-third partner, with BHP and Glencore, of the giant Cerrejon mine in Colombia. The company has faced consistent criticism over difficulties involving displacement of indigenous Wayuu and African descent communities, accusations of severely damaging the natural environment, including the destruction of local water sources, and contamination from air and water pollution from the mine. There are real concerns Anglo will not take responsibility for the damage already caused by the mine, including the consequences from the diversion of the Bruno river and the eviction of the Tabaco community in 2001, who are still waiting for proper redress.⁷⁰

Anglo American is also under fire from local communities near its Minas Rio copper mine in Brazil. There are accusations of water pollution caused by mining waste spills, and genuine concerns regarding a large tailings dam which poses a high risk to communities living downstream.⁷¹ In Chile, the Los Bronces Integrado project is accused of contributing to the destruction of glaciers, while the El Soldado mine has greatly impeded the ability of the nearby El Melón community to access drinking water.⁷²

Finally, as an example of the difference between words and action when the company has been challenged regarding its commitment to respect for indigenous rights, it has only committed to *seeking* free, prior and informed consent (FPIC), not to actually *obtaining* it before starting operations. There is clearly a huge gap in respectful relations between consulting with indigenous peoples and accepting the right to consent.⁷³

and direct international organizations to implement these decisions'.⁷⁴ By contrast, in multistakeholder initiatives vaguely defined 'stakeholders' become the central actors – treating diverse actors (from local 'communities' to transnational corporations) as equals, glossing over power imbalances and questions of legitimacy and democratically determined mandates. In tune with the broader language of partnerships in sustainable development, mining



Image 3: Senior Traditional Owner Yvonne Margarula, Ranger uranium mine, Mirrar Country, Australia.
Photo by Dominic O'Brien

companies now claim partnerships with governments and other 'stakeholders' in the pursuit of the energy transition. As suggested in the quote from Anglo American above, this shift in relation also entails a move towards industry actors themselves playing a more active role in voluntary standard setting at a global level for their practices – challenging the role of states as rule-setters. Simultaneously, mining companies are increasingly active in the use of Investor-State Dispute Settlement mechanisms, directly challenging state regulations that may impede on their profits.

The challenge to state authority then comes on the one hand in the form of industry organisations setting their own voluntary standards for mining practices. For example, the International Council on Mining and Metals (ICMM) is an 'international organization dedicated to safe, fair and sustainable mining and metals industry'.⁷⁵ Its members consist of 28 mining and metals companies along with 35 national, regional and commodity associations that

have set up 10 mining principles, which members must adhere to in their practices. The organization has its roots in the multistakeholder process Mining, Minerals and Sustainable Development (MMSD), which sought to present the mining industry through a sustainable development lens⁷⁶ and led to 'a small group of mining and metals company CEOs' coming together to deal with the 'growing community unrest, criticism from civil society and broader public opposition [which] threatened the industry's 'social license to operate''.⁷⁷ As with multistakeholderism in other industries, initiatives like the ICMM serve to narrow debates around the mining industry writ large 'from one of tackling the full environmental and social impacts of corporations to one of seeking to improve standards within a supply chain'.⁷⁸ In this manner, the purpose of both MMSD and ICMM is to avoid any type of firmer government regulation to prevent environmental and social harm, with the companies themselves developing standards for the industry.⁷⁹

The challenge to state authority, however, also comes in a firmer format through mining company's use of Investor to State Dispute Settlement (ISDS) mechanisms. Should governments introduce any type of rules or regulations that may impinge on current or expected profits, ISDS allow companies to sue governments. ISDS mechanisms are part of a global infrastructure of investment protection that has its roots in the post-colonial period, where foreign investors needed new mechanisms to protect their profits against any decisions of the newly independent states.⁸⁰ That protection came via Bilateral Investment Treaties (BITs) that created a system of arbitration outside of national courts where companies could sue states. A global infrastructure has subsequently developed through BITs, International Investment Agreements (such as the Energy Charter Treaty, or ECT) and investment protection chapters in Free Trade Agreements all of which now include ISDS. And this infrastructure has been used very actively by the mining companies. Figures from 2016 show that the mining industry had by then sued governments for USD 53 billion and that the mining industry was amongst the most active sectors using ISDS-mechanisms against governments on the African continent.⁸¹ As of the

Challenging questions

We close this piece with what we think are some hopefully challenging questions for social movements and their allies in developing strategies for confronting the mining sector and its dominant position within current social conditions.

As the investment strategies of the majors show, they are positioning themselves centrally in the current vision for the energy transition, which is based purely on a substitution in the source of energy – allowing the majors to maximize profits from this transition. This approach to the energy transition hinges on their extensification and intensification of extraction opening up entirely new, and deepening existing, mining landscapes. As noted in the introduction, beyond the immediate sites of extraction, this will also require an expansion in the broader mining infrastructure. The challenge here is to think in similarly expansive terms about who is impacted by and may have an interest in changing the practices of mining. For those who have historically focused on holding the mining industry to account at points of production, focusing on questions of labour and environmental impacts, there is a challenge to link with those who, in the context of the climate crisis, are challenging the very model of capitalism

end of 2021, the mining industry is second only to the fossil fuel industry, accounting for 11% of known ISDS-cases globally.⁸² In the context of the energy transition and the shift in geographies of extraction noted above, the 'silent expansion' of this investment protection infrastructure, especially through the ECT, to countries on the African continent is cause for concern.⁸³ While the ECT has so far been used mainly by the fossil fuel industry to undermine an energy transition, it could just as well be used as a weapon by the mining industry to challenge any attempt at regulating the future extraction of transition minerals.

From what we might call the softer tools of rebranding and stakeholder engagement to the much firmer and bolder tools of ISDS-mechanisms, mining corporations are very directly pursuing their interests politically doing what they can to pave the way for their investment strategies. This includes denying communities and workers the right to be rights-holders and instead turning them into simply 'stakeholders', while also actively challenging any state regulations through ISDS-arbitration that may impede on their profits.

arguing for entirely new ways of organizing production and consumption (such as decommodifying transport, energy, healthcare, etc.). Forging such alliances may be challenging, but necessary in order to shift power away from the transnational companies seeking to control, and profit from, transitions minerals.

While the global nature of the mining sector is overwhelming, it also opens up new opportunities for solidarity, learning and acts of resistance across the global supply chains emanating from an expanding mining frontier. In the first instance though, this requires more concrete analysis of the specific situations across the different geographies implicated in this mining infrastructure, i.e. analysis that seeks to 'connect the dots and make visible what is otherwise invisible.'⁸⁴ In the context, of the majors' strategies noted above, this could include more analysis of how geographically disconnected constituencies may be affected by the same forces and actors (e.g. 'workers labouring at the opposite poles of global supply chains') and hence have an interest in strategizing together to overcome these forces and actors, which due to their position in processes of production they are strategically positioned to challenge.⁸⁵ There are real opportunities given new

geographical areas or technologies within supply chains to unite previously unconnected potential allies. New communication technology also makes such connections theoretically easier. When acted upon, such analysis can become a 'powerful political method for revealing and building solidarities.'⁸⁶ If the majors and their strategies are to be seriously challenged, a much broader coalition of counter-forces will be necessary.

This connects with another challenge of the need to confront the dominant vision around the energy transition of purely being an energy substitution, as opposed to

a transition in the use of materials. Alternative visions abound (from *buen vivir*⁸⁷ to food sovereignty to transformative visions of just transition and Green New Deals), but at the moment there is not so much dialogue between these different visions and – perhaps more importantly – how they will be achieved and can become a real alternative to extractive 'business as usual'. Strategic discussions around an alternative vision that can mobilise and organise people to bring about the political alignment necessary for real change are fundamental, and sticky questions to be seriously thought about include:

- In whose name are these visions being created and who stands to benefit?
- What does a more democratic and post extractivist vision look like? Beyond resistance to the practices of the mining sector, as currently organized, should movements also be strategizing around reclaiming and restructuring the sector so it can play a role in a post-extractivist vision? How can this be done without alienating those in resistance on the ground?
- What are the opportunities for repurposing existing infrastructure and technology towards servicing human needs, rather than profits? Grappling with this question could potentially draw inspiration from similar discussions in the energy sector more broadly of repurposing fossil fuel landscapes in the struggle against climate change.⁸⁸
- What are the strategic pressure points to move the present system in that direction?
- How can other existing sectors, such as transport, be concretely reorganized so as to avoid the rise in metals demand that individualized transportation systems will require – and, again, how do we get there?
- Which alliance of different constituencies in society can shift the balance of forces away from mining capital determining the pace and nature of the energy transition?
- What is the role of the state in all this? Notwithstanding the historical legacies of expanding extraction under left-leaning governments in Latin America, struggles to capture the state should not be given up.

Related to this, but on a more immediate time-scale perhaps, is the need to challenge the mining industry's attempt at re-branding itself. This re-branding should not simply be shrugged off: the majors and their allies are waging a sophisticated PR-battle that leaves possible resisters vulnerable to accusations that any questioning of an energy transition implies opposition to climate change solutions. The mining industry has frequently tried in the past to divide its critics, and this form of re-branding could potentially drive a wedge between the green and climate movements, and those affected by mining of transition minerals.⁸⁹ As we have tried to show there is, as there always has been, a considerable gap between the latest company rhetoric and their actions and impacts at mine

sites. Publicising, and further exposing, these dichotomies will be essential in ensuring people can see through such sophistry. However, given the resources at their disposal, how can we best collectively counter the industry's energy transition branding?

Last, but certainly not least, coalitions of constituencies that form should place those who are most impacted at the very center of future coalition building. In a time where multistakeholderism often exists to give a 'democratic veneer' to industry dominated processes, a key question is how to practically ensure that those who are the prime rights-holders are genuinely front and center in any movement building?

Endnotes

- 1 Interview during Financial Times' Mining Summit (FTMS), 07.10.2021:<https://mining2021.live.ft.com/agenda/session/487510>
- 2 See L. Campling's The corporation and resource geography (p. 190) in (eds.) Himley, M., E. Havice and G. Validivia (2021), *The Routledge Handbook of Critical Resource Geography*, London: Routledge. Throughout the piece we use firm, corporation and company interchangeably
- 3 For distinction around major, mid-tier, junior see e.g. Julie de los Reyes (2017), Mining shareholder value: Institutional shareholders, transnational corporations and the geography of gold mining. *Geoforum*, 84, 251-264
- 4 Shaikh, A. (2016). *Capitalism: Competition, conflict, crisis* Oxford: Oxford University Press, p. 615
- 5 Interview during FTMS, 07.10.2021
- 6 See e.g. Sweeney et al. (2021). *Energy transition or energy expansion?* Amsterdam: TNI & Trade Unions for Energy Democracy
- 7 International Energy Agency, (2021a). *The role of critical minerals in clean energy transitions*, IEA World Energy Outlook Special Report, France: IEA p. 5
- 8 International Energy Agency (2021b). *World Energy Outlook 2021*, France: IEA
- 9 IEA 2021a, p. 5
- 10 Arboleda, M. (2020). *Planetary Mine: Territories of extraction under late capitalism*. London: Verso, p. 5
- 11 Arboleda, p.16
- 12 Kettle, J. (2021), Supercycle demand: are we there yet?, Wood Mackenzie (retrieved 10.05.2022) <https://www.woodmac.com/news/opinion/supercycle-demand-are-we-there-yet/> And for discussions in financial press, see for example: Hume, N. & H. Sanderson (2021). Copper boom: how clean energy is driving a commodities supercycle. *The Financial Times*, 8 June (retrieved 10.05.2022) <https://www.ft.com/content/40907aa6-354e-42f8-8d51-8cc01f0e9687>
- 13 Harvey, D. (2018). *Marx, Capital and the Madness of Economic Reason*, Oxford: Oxford University Press, p. 180
- 14 Tribeca representative, *Bulls vs. Bears panel* at FTMS, 07.10.21: <https://mining2021.live.ft.com/agenda/session/487512>
- 15 Campling, L. & E. Baglioni, 2020. The Political Economy of Natural Resources, *International Encyclopedia of Human Geography* 2nd Edition, Elsevier, p. 259-266
- 16 Kobold representative, *Tech in mining panel* at FTMS, 08.10.21: <https://mining2021.live.ft.com/agenda/session/608569> And for year-on-year evolution of exploration budgets from 2001-2021, see: S&P (2021), The Big Picture: 2022 Metals and Mining Industry Outlook, S&P: <https://pages.marketintelligence.spglobal.com/Big-Picture-2022-Metals-Mining-Outlook-Request.html>
- 17 Banoub, D. et al. 2021. Industrial dynamics on the commodity frontier: Managing time, space and form in mining, tree plantations and intensive aquaculture. *Environment and Planning E*, Vol 4 (4), p. 1547
- 18 EY, 2020. *Top 10 business risks and opportunities - 2020*. p. 18-19 Report available at: https://www.ey.com/en_dk/mining-metals/10-business-risks-facing-mining-and-metals
- 19 S&P Global. 2021, *Corporate Exploration Strategies 2021*, <https://www.spglobal.com/marketintelligence/en/events/webinars/corporate-exploration-strategies-2021>
- 20 Anglo American rep. in Buy, build, recycle panel at FTMS, 07.10.2021:<https://mining2021.live.ft.com/agenda/session/487517>
- 21 As examined by Quinn Slobodian (2021, 6), the Federal Reserve Bank of New York in 1978 included 'risks of political or social upheaval, nationalization or expropriation' in its risk indicators for different countries in the Global South. For an analysis of the emergence and rise of risk indicators see Slobodian, Q. (2021), World Maps for the Debt Paradigm: Risk ranking and the poorer nations in the 1970s. *Critical Historical Studies*, 8 (1)
- 22 EY, 2020, p. 4
- 23 Arboleda, p. 64
- 24 Ibid
- 25 Bulls vs. Bears panel at FTMS, 07.10.2021
- 26 Ibid
- 27 Anglo American CEO interviewed during FTMS, 07.10.2021
- 28 On BHP, see T. Biesheuvel & J. Attwood (2021), BHP Discussing Congo Copper Deal in Shift in Strategy, *Bloomberg*, 4 October (retrieved 10.05.2022) <https://www.bloomberg.com/news/articles/2021-10-04/bhp-said-to-discuss-congo-copper-deal-with-billionaire-friedland>
- 29 Interviewed during FTMS, 07.10.2021
- 30 See Voskoboynik, D.M. & D. Andreucci. (2021). Greening extractivism: Environmental discourses and resource governance in the 'Lithium Triangle'. *Environment and Planning E: Nature and space*, Online: early view. On the invoking of magical qualities in relation to natural resources, see also Coronil, F. (1997). *The Magical State: Nature, Money and Modernity in Venezuela*. University of Chicago Press
- 31 On Myanmar, see e.g. *Frontier Magazine's* reporting: <https://www.frontiermyanmar.net/en/global-demand-for-rare-earth-elements-fuels-environmental-destruction-in-kachin-state/> On Indonesia, see: Rusydi, M. et al., *Fast and Furious for Future: The dark side of electric battery vehicle components and their impacts in Indonesia*, Rosa Luxemburg Stiftung: <https://www.rosalux.de/en/publication/id/44154/fast-and-furious-for-future> For a visual overview of selected struggles around these transition minerals across the world see p. 16-17 in War on Want (n.d.) *A Material Transition: Exploring supply and demand solutions for renewable energy minerals*. London: War on Want https://waronwant.org/sites/default/files/2021-03/A%20Material%20Transition_report_War%20on%20Want.pdf
- 32 Riofrancos, T. 2022. *Shifting mining from the global South misses the point of climate justice*, Foreign Policy, https://foreignpolicy.com/2022/02/07/renewable-energy-transition-critical-minerals-mining-onshoring-lithium-evs-climate-justice/?tpcc=recirc_latest062921
- 33 A good example can be found here: Oliver, M. (2021) China tightens its grip on rare earths, *The Telegraph*, 23 December (retrieved 10.05.2022) <https://www.telegraph.co.uk/business/2021/12/23/china-tightens-grip-rare-earths/>
- 34 See Lee Jones' analysis of Chinese corporations in TNI's 2020 *State of power*: <https://longreads.tni.org/stateofpower/understanding-chinese-companies-beyond-china-inc>
- 35 Ibid
- 36 Ibid
- 37 See S. Yu & T. Mitchell (2021), China merges 3 rare earths miners to strengthen dominance of sector, *Financial Times*, 23 December (retrieved 10.05.2022): <https://www.ft.com/content/4dc538e8-c53e-41df-82e3-b70a1c5bae0c>
- 38 Jones, 2020
- 39 Shaikh, 2016 p.15
- 40 See: <https://www.koboldmetals.com>
- 41 Kobold rep., Tech in mining panel at FTMS, 08.10.21
- 42 Ibid
- 43 See: <https://jettiresources.com/wp-content/uploads/2021/06/Jetti-Series-C-Fundraising-06-04-21-.pdf>
- 44 Jetti rep., Tech in mining panel at FTMS, 08.10.21
- 45 Arboleda, p. 4
- 46 On mining for landfills see: <https://ensia.com/features/landfill-mining/> An exception to the point on recycling is Glencore where the company has recently joined with UK battery manufacturer BritishVolt to build a battery recycling plan see C. Jamasmie (2022), Glencore, Britishvolt to jointly build battery recycling plant in the UK, *mining.com*, 3 February (retrieved 10.05.2022) <https://www.mining.com/glencore-britishvolt-to-jointly-build-battery-recycling-plant/>

- 47 Barbaschow, A. (2018) Rio Tinto preparing for the Mine of the Future. *ZDNet*, 26 February (retrieved 10.05.2022) <https://www.zdnet.com/article/rio-tinto-preparing-for-the-mine-of-the-future-with-automation/>
- 48 Arboleda, p. 4
- 49 Ibid
- 50 Anglo rep., Closing the trust deficit panel at FTMS, 08.10.2021, <https://mining2021.live.ft.com/agenda/session/487529>
- 51 Foran Mining rep., Mining and Race to Net Zero panel at FTMS, 07.10.2021, <https://mining2021.live.ft.com/agenda/session/487514>
- 52 Deloitte (2021). *Tracking the trends 2021: Closing the trust deficit*. Deloitte Insights, quote from p. 31
- 53 EJ Atlas & MiningWatch Canada (2022). Backgrounder: Mapping community resistance to the impacts and discourses of mining for the energy transition in the Americas, https://miningwatch.ca/sites/default/files/en_backgrounder_mapping_the_mining_impacts_of_the_energy_transition.pdf
- 54 As defined by ICMM: <https://www.icmm.com/en-gb/about-us/our-history>
- 55 EY, p. 19
- 56 Coumans, C. (2019) Minding the "governance gaps": Re-thinking conceptualizations of host state "weak governance" and re-focussing on home state governance to prevent and remedy harm by multinational mining companies and their subsidiaries. *The Extractive Industries and Society*, Vol 6 (3), 675-687
- 57 Christophers, B. (2021). Fossilised Capital: Price and profit in the energy transition. *New political economy*, 27 (1), p. 146-159 quote from p. 155
- 58 BHP CEO interviewed at FTMS, 07.10.21
- 59 CEO Spotlight with Anglo American at FTMS, 07.10.21
- 60 T. Biesheuvel (2021), BHP Spent Just Half a Day's Profit Looking for Copper Last Year, Bloomberg, 14 September (retrieved 11.05.2022), <https://www.bloomberg.com/news/articles/2021-09-14/bhp-spent-just-half-a-day-s-profit-looking-for-copper-last-year>
- 61 Kaschinski, K. et al. 2019, *Solwara 1: Experimental Deep Sea Mining in the Bismarck Sea: History, Consequences, Resistance*. Bremen: Fair Oceans and Bread for the World
- 62 Quoted in <https://www.theassay.com/videos/interview-gerard-barron-deepgreen/> For an analysis of the company's changing branding strategy and the political implications thereof, see: Grunnet, C. R. *Diving into the power of the narrative: A critical discourse analysis of corporate discourse on deep sea mining*, Master's Thesis, Lund University
- 63 TNI 2019. *Multistakeholderism: a critical look*. Amsterdam: Transnational Institute, p. 2
- 64 Deloitte 2021, p. 33
- 65 Ibid
- 66 CEO Spotlight with Anglo American at FTMS, 07.10.21
- 67 For info, see: <https://responsiblemining.net/>
- 68 Molelekwa, T (2021) Silicosis payouts are 'symbolic justice' for South Africa's miners. *Mail & Guardian*, 21 September (retrieved 11.05.2022), <https://mg.co.za/news/2021-09-21-silicosis-payouts-are-symbolic-justice-for-south-african-miners/> For further info on the case from one of the groups involved see: <https://www.leighday.co.uk/latest-updates/cases-and-testimonials/cases/anglo-american-silicosis/>
- 69 See - <https://theboatmancapital.com/2021/06/02/thunge-la-resources-ltd-drowning-in-liabilities/>
- 70 Dupre-Harbord, J. (2017) *Conflict over water and mining: The case of the Cerrejón coal mine in La Guajira, Colombia*. London: London Mining Network, <https://londonminingnetwork.org/wp-content/uploads/2017/09/Policy-Brief-Mining-and-water-in-La-Guajira-Justin-Dupre-Harbord-2017.pdf>
- 71 IBASE, PWYP UK and PWYP International Secretariat (2021), *Report summary - In search of transparency: Ending opacity in Brazil's extractive sector - An action-research case study of the Minas-Rio iron ore mine*. https://ibase.br/wp-content/uploads/2021/10/IBASE_PWYP_Summary_MinasRio_Brazil_EN.pdf
- 72 Martinez, J. (2020) Anglo American's impact on Chile, *London Mining Network*, 8 December (retrieved 11.05.2022) <https://londonminingnetwork.org/2020/12/anglo-americans-impact-in-chile/> & Martinez, J. (2021). Continued impunity for Anglo American despite its impacts on the community of El Melón, *London Mining Network*, 12 February (retrieved 11.05.2022) <https://londonminingnetwork.org/2021/02/continued-impunity-for-anglo-american-despite-its-impacts-on-the-community-of-el-melon/>
- 73 See LMN's coverage of Anglo's 2021 Annual General Meeting: <https://londonminingnetwork.org/2021/05/next-question-please-anglo-americans-2021-agm-wednesday-5-may/> For discussion of potential and pitfalls of FPIC generally, see, Franco, J. 2014. *Reclaiming Free Prior and Informed Consent (FPIC) in the context of global land grabs*. Amsterdam: Transnational Institute https://www.tni.org/files/download/reclaiming_fpic_0.pdf
- 74 TNI 2019, p. 3
- 75 See: <https://www.icmm.com>
- 76 Coumans, C. 2019
- 77 For further info on ICMM, see their website: <https://www.icmm.com/en-gb/about-us/our-history> & for critical analysis of its history and roots in the MMSD process, see Coumans, C (2019).
- 78 TNI 2019, 10
- 79 Coumans, C. 2019
- 80 Salvatore, L. 2021. *Investor-State Disputes in the Fossil Fuel Industry*. Manitoba: International Institute for Sustainable Development
- 81 See Olivet, C. et al. (2016). *Signing away sovereignty: How investment agreements threaten regulation of the mining industry in the Philippines*, Amsterdam: TNI <https://www.tni.org/en/publication/signing-away-sovereignty> & TNI (2019) *ISDS in numbers: Impacts of investment arbitration against African states*, Amsterdam: TNI https://www.tni.org/files/publication-downloads/isds_africa_web.pdf
- 82 Salvatore 2021
- 83 For more on the ECT and its expansion, see Eberhardt, P. & C. Olivet 2020, *Silent expansion: Will the world's most dangerous investment treaty take the global south hostage?* Amsterdam: TNI & CEO, <https://www.tni.org/en/silent-expansion>
- 84 Baglioni et al. 2022. Exploitation and labour regimes: production, circulation, social reproduction, ecology. In (eds.) Baglioni, E., L. Campling, N.M. Coe & A. Smith, *Labour regimes and global production*, Newcastle upon Tyne: Agenda Publishing Limited.
- 85 Ibid
- 86 Ibid
- 87 *Buen Vivir* is a concept based in Latin American indigenous world views, which roughly translates as 'good living, but is based on a closer relationship to nature, consuming less and developing a sense of collective purpose - <https://www.theguardian.com/sustainable-business/blog/buen-vivir-philosophy-south-america-eduardo-gudynas>
- 88 On the key role of unions in such struggles for energy democracy, see Sweeney, S. 2013. *Resist, Reclaim, Restructure: Unions and the Struggle for Energy Democracy*. New York: Rosa Luxembourg; as well as Hampton, P. 2015, *Workers and Trade Unions for Climate Solidarity: Tackling climate change in a neoliberal world*. London: Routledge. And for related discussion around the emerging technology of carbon capture, see: Malm, A. & W. Carton 2021, *Seize the Means of Carbon Removal: The Political Economy of Direct Air Capture*. *Historical Materialism*, 29 (1), 3-48
- 89 Important work to counter such divisions is already being done, see e.g. proceedings from Mining Watch's 2019 conference: https://miningwatch.ca/sites/default/files/mining-watch_review_page.pdf



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