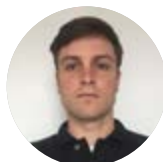


# Mineral Extraction and the World's Self-deception



**Max Farmiloe** studied theology and philosophy at King's College London. He wrote this report out of concern that things often touted as 'solutions' for a sustainable future still have damaging consequences that need to be considered if such 'solutions' are to have credibility. He is thrilled to be working with Green House, and hopes that this new report will stimulate debate in this area.




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## Summary

This report explores the impacts of mineral extraction on human rights around the world and shows that none of us are disconnected from the destructive repercussions of the global economy.

The current push towards a sustainable future in the United Kingdom and Europe could well keep us closely tied to problems related to the mining of minerals, including metals and their ores. Renewable energy production and demand for batteries are driving increased metal extraction in many poorer countries. This report examines the ethical and environmental consequences of mining metals on a green future. Starting with the example of West Papua, this report explores how the world's untrammelled appetite for metals and other minerals via cheap consumer goods leads to collusion, corruption and complicity with far-reaching human and environmental consequences. This deeply rooted compromise of values, especially on the part of rich countries, can be rectified only by reform and stricter regulation, not simply by a change in consumer behaviour. The related cases of coltan and cobalt mining in the DRC, phosphate mining in Western Sahara and the looming threat of deep-sea mining are also explored.

The report concludes that governments of countries consuming these minerals, including the UK, must set a precedent that is more than merely symbolic through better regulation of mineral extraction. Whether through depriving future generations of necessary resources or wreaking social and environmental havoc that will come back to haunt us in the form of political instability, corruption, oppression or even terrorism – the current model of mineral extraction is not sustainable. These issues extend, and are already well documented, across a range of industries: not only rare minerals, but also oil and logging. The cost of continuing without serious political action is the risk that humanity arrives at a point of no return. This paper concludes with three key recommendations to strengthen the ethical and environmental governance of supply chains of raw materials such as minerals, including metals and their ores, as follows:

1. **Require transparency** – The requirement for full disclosure of the provenance of goods and their components.
2. **Adopt ethical supply chain standards** – The regulation of production and trade that enables the UK and other governments to take action for breaches of mineral extraction standards.
3. **Compliance and enforcement** – Governmental and corporate commitment to act.

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## Introduction

It does not take an assiduous observer of global affairs to see how profoundly compromised we are as UK citizens when we reflect upon the far-reaching tentacles of our modern consumption-driven lifestyles. The actions of citizens, corporations and governments have far-reaching environmental, political and social consequences that are often uncomfortable to consider, especially in relation to many of the products we have become so accustomed to and even dependent on. The number of electronic and ‘connected’ devices in the world is exploding. A recent report by Oxfam estimated that by 2025, there will be 75 billion connected devices, compared with 7 billion in 2018.<sup>1</sup> With a growing demand for such devices comes a growing demand for the extraction of natural resources, which includes rare minerals such as lithium, gold, copper and cobalt. This is particularly significant when we reflect on the fact that at present, for many governments, a widely accepted solution to reducing carbon emissions lies in rapidly improving battery technology, including to power a new global fleet of electric vehicles. On average, Europeans possess five times as many connected devices per capita as those in low-income countries.<sup>2</sup> This stark figure clearly indicates that if we are to tackle the problems connected to mineral supply chains, such as child labour and toxic pollution, we should start in the place where demand is highest.

It would appear then that there is a certain cognitive dissonance, or mental discomfort, in countries like Britain, where we would rather not delve into the consequences of a rising demand in rare minerals for fear of what we might find. Nearly a century ago, in typically penetrating style, George Orwell pointed out a similar cognitive dissonance when criticising left-wing parties in industrialised countries:

*All left-wing parties in the highly industrialised countries are at bottom a sham, because they make it their business to fight against something which they do not really wish to destroy. They have internationalist aims, and at the same time they struggle to keep up a standard of life with which those aims are incompatible. We all live by robbing Asiatic [workers], and those of us who are ‘enlightened’ all maintain that those [workers] ought to be set free; but our standard of living, and hence our ‘enlightenment’, demands that the robbery shall continue.’<sup>3</sup>*

Even though the issue of mineral extraction now applies to all countries where demand is high, regardless of the government’s political affiliation, the parallel is striking. We, both as consumers and governments, would all like a simple ‘hi-tech’ solution to deal with problems like our over dependence on fossil fuels. However, as can be the case with apparently simple solutions, this vision unfortunately has its own inherent set of profound problems. The aim of this report is twofold. Firstly, it will attempt to set out some of these problems and to raise awareness of them, especially

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1 Sennholz-Weinhardt, B., Meynen, N., and Wiese, K., 2021, ‘Towards A Wellbeing Economy That Serves People And Nature’, Oxfam Germany e.V. and European Environmental Bureau, p.40. Available: [climateofchange.info/wellbeingeconomyreport.pdf](https://climateofchange.info/wellbeingeconomyreport.pdf).

2 Ibid, p.40.

3 Orwell, G. 1936. ‘Rudyard Kipling’. The Orwell Foundation. Available: [www.orwellfoundation.com/the-orwell-foundation/orwell/essays-and-other-works/rudyard-kipling/](https://www.orwellfoundation.com/the-orwell-foundation/orwell/essays-and-other-works/rudyard-kipling/). ‘Worker’ replaces a word in Orwell’s original quote that we at Green House Think Tank do not wish perpetuate given the potential for harm.

their inextricable connection to things that are often touted as 'solutions'. In order to do this, it will look at cases from West Papua (Indonesia), the DRC, Western Sahara and deep-sea mining. Secondly, it will suggest that the most cogent solution to these problems is strong government regulation of minerals at the level of domestic government, and that the UK government should implement such regulation in order to set a global precedent for high standards in mineral extraction.

## 1. Mining in West Papua

### 1.1 West Papua: context

West Papua, also known as Western New Guinea, is not a well-known place and this is not surprising, given that it is not technically a country. It is part of Indonesia, forming its two most easterly provinces, and it makes up the western half of the island of New Guinea, the other half being the independent country of Papua New Guinea. Nonetheless, its fascinating and complex political history is a stark reminder of how, to a certain extent, we are all unknowingly complicit in the extensive abuses of our international economic and human order.

In a conflict active since the 1960s it is estimated that about 100,000 Papuans have been killed<sup>4</sup> and numerous human rights abuses have been reported.<sup>5</sup> In addition, up to 7,000 Papuans have been forced to flee across the border to neighbouring Papua New Guinea in search of refuge.<sup>6</sup> Sadly, the tale is one all too common in the modern world. West Papua shares the fate of many other naturally beautiful and biodiverse countries rich in natural resources, whose people are at the mercy of internal political strife and multinational corporations. In the case of West Papua, deep veins of gold and copper run through its mountains in the interior. For centuries these remained as untouched as the many tribes that inhabit lands above them, but today they serve as the location of the Grasberg mine. The Grasberg mine is the biggest gold and second biggest copper mine in the world and it is so immense that it can be seen from space. This crater in the landscape is but one of the innumerable marks of human activity on earth's surface that reflects a disheartening story. The well-known but far less well-acknowledged story is one of how, in a wealthy society such as ours, a huge proportion of the things we own begin their lives in murky ethical circumstances.

### 1.2 Mining in West Papua

This region of Indonesia should hold a place in our mind when we think of how natural resources find their way into our apparently far-removed lives in the shape of consumer products. These two provinces are rich in natural resources, most notably

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4 Crocombe, R.G., 2007, 'Asia in the Pacific Islands: Replacing the West', IPS Publications, p.287.

5 Pagiwa, L., 2021, 'West Papua, Indonesia: Failure to implement human rights protections in law contributes to violations', Civicus. Available: [www.civicus.org/index.php/fr/medias-ressources/122-news/interviews/3417-west-papua-indonesia-failure-to-implement-human-rights-protections-in-law-contributes-to-violations](https://www.civicus.org/index.php/fr/medias-ressources/122-news/interviews/3417-west-papua-indonesia-failure-to-implement-human-rights-protections-in-law-contributes-to-violations) [Accessed: 16-Apr-2021].

6 Chandler, J., 2019, 'Refugees on their own land: the West Papuans in limbo in Papua New Guinea', The Guardian. Available: [www.theguardian.com/world/2019/dec/01/refugees-on-their-own-land-the-west-papuans-in-limbo-in-papua-new-guinea](https://www.theguardian.com/world/2019/dec/01/refugees-on-their-own-land-the-west-papuans-in-limbo-in-papua-new-guinea) [Accessed: 16-Apr-2021].

copper and gold, which generate billions of dollars for Indonesia.<sup>7</sup> The Grasberg mine was first opened in 1967, under the new Suharto-led administration's foreign investment laws designed to help rebuild Indonesia's wrecked economy. A thirty-year licence was sold to Freeport-McMoRan and the company still operates the mine today. Since its inception the mine has been controversial and over the years has been subject to a number of attacks at the hands of the separatist Free Papua Movement (OPM), who have sought to sabotage the operation as a means of promoting their cause.<sup>8</sup> The local population are kept under a brutally repressive regime by the Indonesian government and in 2019, the Pacific Island's Forum asked the UN High Commissioner for Human Rights to visit and report on any abuses, as access for human rights organisations and foreign journalists is highly restricted.<sup>9</sup> Therefore, as it is currently governed, the territory bears a striking resemblance to a police state.

It is known that in order to secure the contract for the Grasberg site, James R. Moffett, the company chairman, curried favour with Suharto and his powerful friends. Freeport paid for their holidays and some of their children's tuition fees, and included them in deals that made many of them rich.<sup>10</sup> Freeport says that between 1992 and 2004, it provided the Indonesian government with \$33 billion, nearly 2% of the country's GDP.<sup>11</sup> So, for Freeport and the Indonesian government the mine has been a huge economic success. However, for the environment and the local Papuan tribes, the consequences have been disastrous, and since 1997 Indonesia's own environment ministry has warned that Freeport has been in breach of environmental laws. According to Freeport's own estimates, the mine will create six billion tons of waste before it is finished, which is twice the amount of earth that was dug up for the Panama Canal.<sup>12</sup> Large amounts of that waste have already been dumped in the mountains around the mine or in the river system that flows down to the wetlands close to Lorentz National Park, a virgin rainforest bestowed with a special status by the UN. A study in 2002 by Parametrix, an American consultancy company, was funded by Freeport and its Australian partner Rio Tinto. The report noted that the rivers upstream of the wetlands and the wetlands themselves are now so polluted that they are 'unsuitable for aquatic life'.<sup>13</sup>

The destruction of the environment caused by the mine led the Government Pension Fund of Norway, the second largest pension fund in the world, to remove Freeport and Rio Tinto from its portfolio in 2009.<sup>14</sup> Besides helping us reflect on the almost impos-

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7 Doherty, B., 2019, 'Why are there violent clashes in Papua and West Papua?' The Guardian. Available: [www.theguardian.com/world/2019/aug/22/why-are-there-violent-clashes-in-papua-and-west-papua-explainer](http://www.theguardian.com/world/2019/aug/22/why-are-there-violent-clashes-in-papua-and-west-papua-explainer) [Accessed: 16-Apr-2021].

8 Business & Human Rights Resource Centre, 2009, 'Attacks near Freeport's Grasberg mine, West Papua, Indonesia'. Available: [www.business-humanrights.org/en/latest-news/attacks-near-freeports-grasberg-mine-west-papua-indonesia-jul-2009/](http://www.business-humanrights.org/en/latest-news/attacks-near-freeports-grasberg-mine-west-papua-indonesia-jul-2009/) [Accessed: 16-Apr-2021].

9 Doherty, B., 2019, 'Why are there violent clashes in Papua and West Papua?' The Guardian, 2019. Available: [www.theguardian.com/world/2019/aug/22/why-are-there-violent-clashes-in-papua-and-west-papua-explainer](http://www.theguardian.com/world/2019/aug/22/why-are-there-violent-clashes-in-papua-and-west-papua-explainer) [Accessed: 16-Apr-2021].

10 Ibid.

11 Ibid.

12 Ibid.

13 Ibid.

14 Regjeringen.no, 2008, 'Statens Pensjonsfond trekker seg ut av gruveselskap'. Available: [www.regjeringen.no/no/dokumentarkiv/stoltenberg-ii/fin/Nyheter-og-pressemeldinger/pressemeldinger/2008/statens-pensjonsfond-trekker-seg-ut-av-g/id526030/](http://www.regjeringen.no/no/dokumentarkiv/stoltenberg-ii/fin/Nyheter-og-pressemeldinger/pressemeldinger/2008/statens-pensjonsfond-trekker-seg-ut-av-g/id526030/) [Accessed: 16-Apr-2021].



sible task facing investors who want an ethical return on their capital, it also draws our attention to the sources of the raw materials that make up swathes of everyday products and that are in many ways the lifeblood of our technologically advanced age. The Grasberg mine is on top of the biggest gold reserve and the third largest copper reserve in the world.<sup>15</sup> Taking a brief moment to think about how many things you own contain gold or copper is a good way to bring sharply into focus the moral complexity of the world that our lifestyles, by their very nature, are embodied in. For example, searching through the average UK home is likely to unearth a wide range of devices from cameras and radios to televisions and remote, not to mention smart phones – all of which can contain copper and gold. The case of Freeport and West Papua certainly does not mean that we should renounce consumerism any more than we should renounce markets. Yet perhaps it can aid us in contemplating the role that both companies and consumers play in contributing to the ills of the global economy.

There are clearly major problems around the lack of transparency of corporate supply chains and their seeming lack of desire to make long lasting products (think particularly of electronic devices). This, teamed with our insatiable desire for cheap consumer goods causes extensive collateral damage across even the remotest parts of the world. West Papua and its people are just one example of this collateral, but one could easily mention endless other cases, such as the horrendous fate of many oil rich countries such as Iraq or Libya.

## 2. Mining in the Democratic Republic of Congo (DRC)

### 2.1 Coltan mining in the DRC

Equally, one could turn attention to the vast reserves of coltan in eastern DRC, which feeds our voracious appetite for everything from laptops to smartphones, at the cost of the enslavement and subjugation of the local people. The phones in our pockets contain precious metals such as gold, silver, copper, platinum and palladium.<sup>16</sup> A quick overview of these metals tells us that South Africa has the second largest gold reserves in the world,<sup>17</sup> Mexico has the highest silver production,<sup>18</sup> Chile and Peru are the top copper producers,<sup>19</sup> while Zimbabwe is the third largest producer of platinum and fifth largest producer of palladium.<sup>20</sup> Even minimal knowledge of the human rights records of these countries would suggest that not all of these resources were extracted through the happiest of conditions. We have seen how in West Papua, the demand for two metals that end up in electronic devices such as our mobile phones contributes to

15 Perlez, J., and Bonner, R., 2005, 'Below a Mountain of Wealth, a River of Waste', The New York Times. Available: [www.nytimes.com/2005/12/27/world/asia/below-a-mountain-of-wealth-a-river-of-waste.html](http://www.nytimes.com/2005/12/27/world/asia/below-a-mountain-of-wealth-a-river-of-waste.html) [Accessed: 16-Apr-2021].

16 Nogrady, B., 2016, 'Your old phone is full of untapped precious metals', BBC, 2016. Available: [www.bbc.com/future/article/20161017-your-old-phone-is-full-of-precious-metals](http://www.bbc.com/future/article/20161017-your-old-phone-is-full-of-precious-metals) [Accessed: 16-Apr-2021].

17 Bernhardt, D., and Reilly, J.F., 2019, 'Mineral Commodity Summaries 2019', U.S. Geological Survey. Available: [prd-wret.s3-us-west-2.amazonaws.com/assets/palladium/production/atoms/files/mcs2019\\_all.pdf](http://prd-wret.s3-us-west-2.amazonaws.com/assets/palladium/production/atoms/files/mcs2019_all.pdf) [Accessed: 16-Apr-2021].

18 U.S. Geological Survey, 2020, 'Mineral Commodity Summaries, January 2020: Silver'. Available: [pubs.usgs.gov/periodicals/mcs2020/mcs2020-silver.pdf](http://pubs.usgs.gov/periodicals/mcs2020/mcs2020-silver.pdf) [Accessed: 16-Apr-2021].

19 Barrera, P., 2021, 'Top Copper Production by Country', Investing News Network. Available: [investingnews.com/daily/resource-investing/base-metals-investing/copper-investing/copper-production-country/](http://investingnews.com/daily/resource-investing/base-metals-investing/copper-investing/copper-production-country/) [Accessed: 16-Apr-2021].

20 USGS, no date, 'Platinum-Group Metals Statistics and Information'. Available: [www.usgs.gov/centers/nmic/platinum-group-metals-statistics-and-information](http://www.usgs.gov/centers/nmic/platinum-group-metals-statistics-and-information) [Accessed: 16-Apr-2021].



the repression of the local population and widespread environmental damage. Many of the other metals in our phones come from similar, if not worse, circumstances and the West Papuan ‘model’ is sadly one that is replicated in many countries where these minerals are extracted.

Looking specifically at the example of coltan, we can see how a lack of regulation has disastrous human and environmental consequences for the people of the DRC. Coltan is a metallic ore that contains the minerals niobium and tantalum. It is highly valued due to the necessity of these minerals in manufacturing tantalum capacitors, which are essential for producing all our everyday electronic devices. It is estimated that Congo has up to 80% of the world’s global coltan reserves<sup>21</sup> and the continuous global growth in demand for consumer technology products helps to finance the conflict in this poverty-stricken country. This means that most coltan used to produce the smart-phones, laptops or other technology products that we all use is likely contributing to the widespread conflict in the Congo, which has resulted in extreme violence, widespread rape and the death of an estimated 5.4 million people.<sup>22</sup> Much of the financing of the civil war is directly linked to the profits from coltan mining<sup>23</sup> and the UN estimates that, in some regions of the Congo, about 30% of schoolchildren are forced to work in the mines.<sup>24</sup> Even if we work with a more conservative estimate, Amnesty International states that around 40,000 children are at work mining minerals in the DRC.<sup>25</sup> This means that around 40,000 children are being deprived of an education under barbaric conditions, often due to forced labour. Therefore, any Congolese coltan that ends up in our electronic devices could potentially be contributing, in practical terms, to the enslavement of nearly 40,000 children.

In many countries, coltan mining does not only have adverse effects for local populations but also on the natural environment. In 2009, coltan reserves were found in the eastern provinces of Colombia, close to the border with Venezuela and Brazil. It has been reported that both the FARC and drug cartels have been working this area to mine coltan, often smelting it down illegally over the border in Brazil in order to sell it on the black market.<sup>26</sup> From the black market it then makes its way into supply chains all over the world, and ultimately, just like the coltan from the DRC, into the very products we use every day. Colombia is thought to have 5% of the world’s coltan reserves<sup>27</sup> and with most of this being located in areas covered by indigenous reserves, mining has already started to damage protected natural areas. In particular the Estrella Fluvial del Inírida (Inírida Fluvial Star), a wetland protected under the UNESCO Ramsar treaty, has

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21 Sourt, C., 2008, ‘The Congo’s blood metals’, The Guardian, 2008. Available: [www.theguardian.com/commentisfree/2008/dec/25/congo-coltan](http://www.theguardian.com/commentisfree/2008/dec/25/congo-coltan) [Accessed: 16-Apr-2021].

22 International Rescue Committee (IRC), 2021, ‘Democratic Republic of Congo’. Available: [www.rescue.org/country/democratic-republic-congo](http://www.rescue.org/country/democratic-republic-congo) [Accessed: 16-Apr-2021].

23 Schouten, P., 2018. ‘How Roadblocks, Not Just Minerals, Fund Rebels And Conflict In The Congo’, The Conversation. [theconversation.com/how-roadblocks-not-just-minerals-fund-rebels-and-conflict-in-the-congo-101124](http://theconversation.com/how-roadblocks-not-just-minerals-fund-rebels-and-conflict-in-the-congo-101124).

24 ‘Is there blood on your mobile phone?’, DanChurchAid, 2021. Available: [www.danchurchaid.org/articles/is-there-blood-on-your-mobile-phone](http://www.danchurchaid.org/articles/is-there-blood-on-your-mobile-phone) [Accessed: 16-Apr-2021].

25 Amnesty International, 2021, ‘Is my phone powered by child labour?’ Available: [www.amnesty.org/en/latest/campaigns/2016/06/drc-cobalt-child-labour/](http://www.amnesty.org/en/latest/campaigns/2016/06/drc-cobalt-child-labour/) [Accessed: 16-Apr-2021].

26 Semana, 2021, ‘Carteles mexicanos estarían detrás de coltán incautado en Colombia’. Available: [www.semana.com/nacion/articulo/carteles-mexicanos-estarian-detras-coltan-incautado-colombia/264667-3/](http://www.semana.com/nacion/articulo/carteles-mexicanos-estarian-detras-coltan-incautado-colombia/264667-3/) [Accessed: 16-Apr-2021].

27 Ibid.

already suffered the effects of pollution and deforestation caused by illegal mining.<sup>28</sup> This delicate and diverse ecosystem contains 1,172 species of plant, more than 253 species of bird and 473 species of fish. The harm to it caused by coltan mining represents as much of a threat to the natural world as it is to the local people's livelihoods, and it again underlines the extensive network of problems that our need for rare minerals drives.

## 2.2 Cobalt mining in the DRC

Another metal high in demand due to its importance for a green future brings us back to the DRC. Cobalt is an essential element for making the lithium-ion batteries needed to power smartphones and electric cars. Many people see developing more efficient battery technology as a key step in solving the climate emergency we face but in order to do this, more cobalt is needed. Again, Congo has the misfortune of producing an estimated 60%<sup>29</sup> of the world's cobalt and the mining of it already has already taken a heavy toll on both miners and the surrounding environment. It is already well documented that high concentrations of cobalt can have devastating effects on people and the natural world.<sup>30</sup> For those working in the mines, including children as young as seven, exposure to cobalt without adequate equipment can lead to heart problems and impaired vision. Equally, high concentrations in soil have been linked to the death of crops and worms (which are needed to maintain soil fertility) and to the pollution of rivers and drinking water.<sup>31</sup>

According to Amnesty International, cobalt from the Congo ends up in products sold by brands such as Apple, Microsoft and Vodafone.<sup>32</sup> In the case of cobalt, perhaps more so than with any other rare metal, we can clearly see the awkward tension in the vision of a carbon neutral future made possible by advancing battery technology. This irony is further reflected by the fact that most of the world's top renewable energy companies have been linked with cases of abuses in mines in countries like the DRC.<sup>33</sup> If we do not want to abandon our expectation of finding hi-tech 'solutions' to all our over-consumption, better regulation of such resource extraction is needed.

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28 Jaccard, N., 2016, 'Las Estrellas del Inírida', El Espectador. Available: [www.elespectador.com/noticias/medio-ambiente/las-estrellas-del-inirida/](http://www.elespectador.com/noticias/medio-ambiente/las-estrellas-del-inirida/) [Accessed: 16-Apr-2021].

29 Mucha, L., Frankel, T.C., and Domb Sadof, K., 2018, 'The Hidden Costs of Cobalt Mining', The Washington Post. Available: [www.washingtonpost.com/news/in-sight/wp/2018/02/28/the-cost-of-cobalt/](http://www.washingtonpost.com/news/in-sight/wp/2018/02/28/the-cost-of-cobalt/) [Accessed: 16-Apr-2021].

30 Watts, J., 2019, 'How the race for cobalt risks turning it from miracle metal to deadly chemical', The Guardian. Available: [www.theguardian.com/global-development/2019/dec/18/how-the-race-for-cobalt-risks-turning-it-from-miracle-metal-to-deadly-chemical](http://www.theguardian.com/global-development/2019/dec/18/how-the-race-for-cobalt-risks-turning-it-from-miracle-metal-to-deadly-chemical) [Accessed: 16-Apr-2021].

31 Kelly, A., 2016, 'Children as young as seven mining cobalt used in smartphones, says Amnesty', The Guardian. Available: [www.theguardian.com/global-development/2016/jan/19/children-as-young-as-seven-mining-cobalt-for-use-in-smartphones-says-amnesty](http://www.theguardian.com/global-development/2016/jan/19/children-as-young-as-seven-mining-cobalt-for-use-in-smartphones-says-amnesty) [Accessed: 16-Apr-2021].

32 Amnesty International, 2017, 'Industry giants fail to tackle child labour allegations in cobalt battery supply chains'. Available: [www.amnesty.org/en/latest/press-release/2017/11/industry-giants-fail-to-tackle-child-labour-allegations-in-cobalt-battery-supply-chains/](http://www.amnesty.org/en/latest/press-release/2017/11/industry-giants-fail-to-tackle-child-labour-allegations-in-cobalt-battery-supply-chains/) [Accessed 13-Sept-2021].

33 Hodal, K., 2019, '"Most renewable energy companies" linked with claims of abuses in mines', The Guardian. Available: [www.theguardian.com/global-development/2019/sep/05/most-renewable-energy-companies-claims-mines](http://www.theguardian.com/global-development/2019/sep/05/most-renewable-energy-companies-claims-mines) [Accessed: 16-Apr-2021].

### 3. Phosphate mining in Western Sahara

The destructive consequences of mineral extraction are not limited to resources needed for the production of electronic devices, and for this reason this report will examine a case linked to another mineral that is of great importance to our future on this planet. The mineral in question is phosphate and one location where it is found in abundance is Western Sahara. Unlike gold, copper, coltan or cobalt, which are essential in the technology sector, phosphate is an essential mineral in the agriculture sector. Without phosphate, the world's ever-growing population would struggle to feed itself. NPK (the chemical symbols for nitrogen, phosphorus and potassium) fertilisers are one of the most important inputs to agriculture needed to achieve the yields necessary to feed a rapidly growing global population. In order to obtain the phosphorus, unless an alternative source can be found (such as recycling it from sewage or relying on organic source), one has to mine phosphate. Therefore, as the world's population continues to grow, the pressure on extracting phosphate will continue to increase. Unfortunately, for somewhere like Western Sahara, which is rich in phosphate, this will most likely mean an increase in the sufferings of a region already racked with political instability and human rights abuses.

Western Sahara is a North African 'region' currently controlled by Morocco. The pre-colonial inhabitants of the region, the Sahrawi people, have been fighting for independence ever since Morocco took control in 1975. Spain had allowed Morocco and Mauritania to divide the region between them, but Mauritania later abandoned their claim. Morocco denies the Sahrawi people's claim to self-determination and has essentially transformed the region into a police state in order to completely crush any rumblings of Sahrawi nationalism. Steven Zunes, professor of International Studies at the University of San Francisco, says that he has 'been to 70 countries, including Iraq under Saddam and Indonesia under Suharto' and Western Sahara 'is the worst police state that I've ever seen'.<sup>34</sup> Even though the current price of phosphate is not high enough for countries to rely on Western Sahara's supply, if other countries' supplies begin to dwindle in the coming decades, Western Sahara's reserves could prove decisive. As a finite resource essential for global food production, these reserves could be at the centre of a conflict in an already politically unstable region. As with the other cases examined in this report, the world needs to remove its dependence on this resource to avoid not only the exhaustion of the resource, but also the escalation of the subsidiary problems tied to its extraction. The situation in Western Sahara is yet another example that underlines the far-reaching consequences of the mineral extraction 'needed' to meet the demand of the growing global economy.

In many ways, Western Sahara is a striking parallel to West Papua insofar as it is a contested region rich in natural resources that was annexed by a newly independent neighbouring country. In Western Sahara's case the natural resource is phosphate and the neighbouring country is Morocco. A study by the United States Geographical Survey estimated Morocco has more than 72% of all phosphate rock reserves in the world if you include the Western Sahara region within its borders.<sup>35</sup> Quite predictably, Morocco claims all these phosphate reserves as its own and denies that Western

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<sup>34</sup> Ibid.

<sup>35</sup> USGS, 2021, 'Phosphate Rock Statistics and Information'. Available: [www.usgs.gov/centers/nmic/phosphate-rock-statistics-and-information](https://www.usgs.gov/centers/nmic/phosphate-rock-statistics-and-information) [Accessed: 16-Apr-2021].

Sahara has any right to independence, often using violence to enforce this. As a result, like West Papua, Western Sahara has seen its people subjected to human rights abuses at the hands of the occupying government.<sup>36</sup> The similarities between Western Sahara and West Papua clearly highlight the all too common close correlation between ecological ransacking, unstable governance and the oppression of local peoples.

## 4. Wider challenges and a way forward

### 4.1. The prospect of deep-sea mining

Just as the Grasberg mine in West Papua shows us the scale of damage caused by extracting gold and copper above ground, the soaring demand for cobalt in recent years has brought with it the prospect of another grave environmental threat in a much less visible place: the ocean floor. The ocean floor hosts one of the largest unexploited sources of minerals, including metals and their ores, and our thirst for battery-powered products has made it a prime target for the extraction of many highly valued metals.<sup>37</sup> These rare earth elements are found in trillions of polymetallic nodules across the ocean floor and form an essential part of the marine ecosystem. It is estimated that there are over one million square miles of abyssal plain covered in these polymetallic nodules that are between 12,000 and 15,000 feet below the ocean surface.<sup>38</sup> The prospect of harvesting these potato shaped nodules is already been widely investigated and in 2019, a start-up called DeepGreen from Vancouver announced it was raising 150 million dollars to explore deep-sea mineral wealth.<sup>39</sup> This is a clear reflection of the confidence in the future of this industry; however, the general consensus of marine scientists is that deep-sea mining could be catastrophic for delicately balanced marine ecosystems that are essential for the overall health of the oceans.<sup>40</sup>

The nodules where these elements are found are an irreplaceable habitat for many of the creatures living on the ocean floor. 'For most of the animals in the direct vicinity, mining will be lethal. It will wipe out most of the large animals and everything that's attached to the nodules. That's a given, I would say', says Henko de Stigter, an ocean-systems scientist from the Royal Netherlands Institute for Sea Research in Texel.<sup>41</sup> This assessment is shared by most researchers and there are further concerns around not only the immediate damage caused, but also the impact that sediment could have on ecosystems. Sediment stirred up by mining could be dispersed as far as 10,000 kilometres and when it settles sediment plumes could bury and smother

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36 Kasprak, A., 2016, 'The Desert Rock That Feeds the World', The Atlantic. Available: [www.theatlantic.com/science/archive/2016/11/the-desert-rock-that-feeds-the-world/508853/](https://www.theatlantic.com/science/archive/2016/11/the-desert-rock-that-feeds-the-world/508853/) [Accessed: 16-Apr-2021].

37 Letman, J., 2018, 'The Race Is On to Mine the Deep Ocean, But Scientists Are Wary', National Geographic. Available: [www.nationalgeographic.com/environment/article/news-race-to-mine-deep-sea-drones-seafloor-environmental-impact](https://www.nationalgeographic.com/environment/article/news-race-to-mine-deep-sea-drones-seafloor-environmental-impact) [Accessed: 16-Apr-2021].

38 Ibid.

39 Heffernan, O., 2019, 'Seabed mining is coming – bringing mineral riches and fears of epic extinctions', Nature. Available: [www.nature.com/articles/d41586-019-02242-y](https://www.nature.com/articles/d41586-019-02242-y) [Accessed: 16-Apr-2021].

40 Letman, J., 2018, 'The Race Is On to Mine the Deep Ocean, But Scientists Are Wary', National Geographic. Available: [www.nationalgeographic.com/environment/article/news-race-to-mine-deep-sea-drones-seafloor-environmental-impact](https://www.nationalgeographic.com/environment/article/news-race-to-mine-deep-sea-drones-seafloor-environmental-impact) [Accessed: 16-Apr-2021].

41 Heffernan, O., 2019, 'Seabed mining is coming – bringing mineral riches and fears of epic extinctions', Nature. Available: [www.nature.com/articles/d41586-019-02242-y](https://www.nature.com/articles/d41586-019-02242-y) [Accessed: 16-Apr-2021].



animals on the seabed, causing further damage to marine life. The extent to which deep-sea mining would harm the oceans is still being investigated.<sup>42</sup> The question being posed by researchers does not seem to be whether there will be damage, but just how bad that damage will be. As a 2019 report states, ‘the scarce data that exist suggest that deep-sea mining will have devastating, and potentially irreversible, impacts on marine life’.<sup>43</sup>

It is worrying then, that the increasing demand for the metals on the ocean floor seems to be linked to the fact that China controls such a large proportion of rare earth metals. Rare earth metals are a group of seventeen metals found in the earth’s crust that are essential not only for making the batteries needed for a ‘green’ future, but also for wind turbines, solar panels, fibre-optic cables and a wide range of defence technology. China is reported to account for 58% of the global production of rare earths and about 95% of their processing.<sup>44</sup> As Chris Williams, managing director of UK Seabed Resources, says, ‘The risk is that China uses its position in the supply chain to put pressure on other economies, and that the UK doesn’t have any reliable alternatives’.<sup>45</sup> Similarly, a report by Dr Dwayne Ryan Menezes, of the Polar Research and Policy Initiative, warned that ‘significant restrictions to the supply of rare earths can severely affect British and American defence and aerospace firms’.<sup>46</sup> The UK government and a number of other countries, such as South Korea, Germany and France, are all exploring the possibility of deep-sea mining for rare earth metals in the Pacific to develop an alternative to supply from China. If tensions between China and the West continue to rise, the concern is that this would further accelerate the ecological havoc that could be wrought by a dangerously unregulated new addition to global mineral extraction.

## 4.2 Challenges posed by global supply chains

One serious problem posed by current global supply chains is the disposal of the minerals, especially metals, that are contained in everyday consumer products. The cost not only of extracting but also of disposing of these metals is often high. The speed at which electronic devices are manufactured today has led to a culture in which UK citizens are used to throwing away devices either when they break or become obsolete. The statistic cited in the introduction, that Europeans on average possess five times as many connected devices as those in low-income countries, highlights that much of the high turnover of electronic devices lies in the demand of wealthier countries. Thus, our desire for a regular phone upgrade, teamed with tech companies’ apparent refusal to manufacture products that do not become redundant over time means a large amount of electronic waste ends up being dumped in countries like China, where low paid workers and children are employed to break up old devices and use harmful chemicals to extract the precious metals.<sup>47</sup> A report from the BBC states: ‘One town

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<sup>42</sup> Ibid.

<sup>43</sup> Ibid.

<sup>44</sup> Brown, L., 2021, ‘Britain on the offensive in race with China for crucial rare earth minerals’, The Times. Available: [www.thetimes.co.uk/article/britain-on-the-offensive-in-race-with-china-for-crucial-rare-earth-minerals-lff7sppng](https://www.thetimes.co.uk/article/britain-on-the-offensive-in-race-with-china-for-crucial-rare-earth-minerals-lff7sppng) [Accessed: 16-Apr-2021].

<sup>45</sup> Ibid.

<sup>46</sup> Ibid.

<sup>47</sup> Nogrady, B., 2016, ‘Your old phone is full of untapped precious metals’, BBC, 2016. Available: [www.bbc.com/future/article/20161017-your-old-phone-is-full-of-precious-metals](https://www.bbc.com/future/article/20161017-your-old-phone-is-full-of-precious-metals) [Accessed: 16-Apr-2021].

in south-eastern China called Guiyu has claimed the dubious distinction of being the *largest e-waste site in the world*. It's causing terrible health problems for its residents and polluting the soil, rivers and air with mercury, arsenic, chromium and lead'.<sup>48</sup> Similarly one could look to Agbogboshie, the huge e-waste processing site near Accra in Ghana. There is debate around whether most of the waste is produced locally or imported, but regardless of this there are deep environmental and human concerns around the burning of waste, which releases toxins into the air. These toxins are known to be harmful to the reproductive system, the nervous system and the brain, which is especially damaging for children.<sup>49</sup> This is another example of how the human cost of our consumer-oriented society reverberates through all corners of the planet.

Another major problem that we face when trying to regulate the extraction and origin of these minerals is the complexity of the supply chains. They are notoriously murky and in real terms there is almost no evidence to say if the elements used in our products are from a conflict zone or not. Further to this, companies are often able to fall back on the excuse of ignorance rather than dedicating more resources to thoroughly investigate supply chains. Multinational corporations can often carefully construct a shield of ignorance to hide behind, and claim that they are not aware of the origin of the minerals that they purchase. By carefully avoiding carrying out investigations that may reveal the truth, companies often deliberately fail to perform due diligence on their suppliers. However, we know from companies such as Fairphone that rigorous, multi-faceted due diligence processes from the level of the mines through to the level of the component manufacturers is possible.<sup>50</sup>

Of the many attempts to increase international corporate responsibility, one of the furthest reaching in recent years has been the United Nations Guiding Principles on Business and Human Rights (UNGPs), more commonly known as the 'Ruggie Principles' after the Special Representative of the Secretary-General, John Ruggie. This framework has been praised and endorsed by states, NGOs and even the private sector but in spite of the undoubted utility of these principles in protecting against abuses, on their own they fail to uncover the intricacies of global supply chains. One solution could be to try to make frameworks like the Ruggie Principles more binding, but unless one can guarantee the cooperation of all parties involved, there remains ample room for human rights abuses and environmental damage. At present, corporate commitment to implement the Ruggie Principles is still voluntary. Further to this, Ruggie himself has noted the implementation challenges posed by the framework, particularly with regard to Guiding Principle 2, that 'States should set out clearly the expectation that all business enterprises domiciled in their territory and/or jurisdiction respect human rights throughout their operations'.<sup>51</sup> He acknowledges the 'challenge of providing effective remedy for victims, particularly judicial remedy'.<sup>52</sup> He recognises that even though the

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48 Ibid.

49 Hirsch, A., 2013, "This is not a good place to live": inside Ghana's dump for electronic waste', The Guardian. Available: [www.theguardian.com/world/2013/dec/14/ghana-dump-electronic-waste-not-good-place-live](http://www.theguardian.com/world/2013/dec/14/ghana-dump-electronic-waste-not-good-place-live) [Accessed: 16-Apr-2021].

50 Fairphone, 2020, 'Supply Chain Engagement: from risk to impact'. Available: [www.fairphone.com/wp-content/uploads/2020/11/Supply-Chain-Engagement-2020-final.pdf](http://www.fairphone.com/wp-content/uploads/2020/11/Supply-Chain-Engagement-2020-final.pdf).

51 Ruggie, J.G., 2015, 'Life in the Global Public Domain: Response to Commentaries on the UN Guiding Principles and the Proposed Treaty on Business and Human Rights', SSRN, p.6. Available: [ssrn.com/abstract=2554726](https://ssrn.com/abstract=2554726) or [dx.doi.org/10.2139/ssrn.2554726](https://dx.doi.org/10.2139/ssrn.2554726).

52 Ibid, p.7.

guiding principles ‘identify obstacles, and urge states to take steps to overcome them’, ‘clearly this is not enough to ensure that it happens in practice’.<sup>53</sup> Unless there is a large scale uptake of such principles, it is clearly impossible to provide effective judicial remedies for victims, or to penalise companies involved with human rights abuse or environmental damage.

To find evidence of Ruggie’s point in practice, one only has to look at the example of the Kimberley Process, which was implemented in 2003 to prevent conflict diamonds from entering the market. The human rights organisation Global Witness left the process in 2011 and reported that the governments of Zimbabwe, Ivory Coast and Venezuela have all failed to meet the requirements of the Kimberley process without facing any penalties or consequences for their breaches.<sup>54</sup> Again, this shows how a lack of enforcement of the process was critical to its failure. This echoes Ruggie’s concern that a set of guiding principles without enforcement is not good enough to tackle the convoluted international supply chains of minerals.

### 4.3 Current efforts to clean up supply chains

Perhaps the recent class action lawsuit against the top five tech companies including Tesla and Apple<sup>55</sup> offers a glimmer of hope when it comes to cleaning up supply chains. It includes allegations of ‘aiding and abetting in the death and serious injury of children who claim they were working in cobalt mines in their supply chain’.<sup>56</sup> In Tesla’s case, this would be welcome as after promising to eliminate cobalt from the mix used to make batteries for electric cars due to ethical and environmental concerns, Elon Musk signed a deal to buy 6,000 tonnes of the metal each year from mining company Glencore over five years.<sup>57</sup> Clearly the company’s promise is at odds with its long-term plans. It seems that the publicity and pressure generated by this case led Glencore to back a new initiative to support informal miners in the DRC to reassure consumers that its cobalt is ethically sourced. One could accuse Glencore of running a PR exercise but, in August 2020, it also announced that it was joining the FCA (Fair Cobalt Alliance). This is perhaps a promising sign that with more legal actions, public attention and consumer demand, multinational companies can move in the direction of being more accountable.<sup>58</sup> However, the key question remains as to how we can create an effective legislative framework, rather than rely on voluntary commitments of companies.

Equally, on the issue of deep-sea mining, greater scientific consensus and public awareness can lead to better regulated industries. When discussing the current ISA

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53 Ibid, p.7.

54 Cheeseman, G., 2011, ‘Global Witness Says Kimberley Process Not Preventing Blood Diamonds’, TriplePundit. Available: [www.triplepundit.com/story/2011/global-witness-says-kimberley-process-not-preventing-blood-diamonds/70786](http://www.triplepundit.com/story/2011/global-witness-says-kimberley-process-not-preventing-blood-diamonds/70786) [Accessed: 16-Apr-2021].

55 Kelly, A., 2019, ‘Apple and Google named in US lawsuit over Congolese child cobalt mining deaths’, The Guardian. Available: [www.theguardian.com/global-development/2019/dec/16/apple-and-google-named-in-us-lawsuit-over-congolese-child-cobalt-mining-deaths](http://www.theguardian.com/global-development/2019/dec/16/apple-and-google-named-in-us-lawsuit-over-congolese-child-cobalt-mining-deaths) [Accessed: 16-Apr-2021].

56 Ibid.

57 Williams, K.A., 2020, ‘Tesla to eliminate cobalt from electric vehicles’, The Northern Miner. Available: [www.northernminer.com/news/elon-musk-says-tesla-will-eliminate-cobalt-from-its-electric-vehicles/1003822783/](http://www.northernminer.com/news/elon-musk-says-tesla-will-eliminate-cobalt-from-its-electric-vehicles/1003822783/) [Accessed: 16-Apr-2021].

58 Sanderson, H., 2020, ‘Glencore backs cobalt mining pact in DR Congo’, Financial Times. Available: [www.ft.com/content/9194c7ee-9726-4462-ae04-e7c72c0818d4](http://www.ft.com/content/9194c7ee-9726-4462-ae04-e7c72c0818d4) [Accessed: 16-Apr-2021].

(International Seabed Authority) regulations being developed for potential deep-sea mining, Matthias Haeckel, a biogeochemist at the GEOMAR Helmholtz Centre for Ocean Research Kiel in Germany says, 'this is much better than we have acted in the past on oil and gas production, deforestation or disposal of nuclear waste'.<sup>59</sup> This parallel with fossil fuels is important because, while part of the solution includes managing and ideally reducing demand for natural resources, some extraction will continue – and this is inescapably linked to exploitation and environmental destruction. Therefore, if we cannot stop extraction, the efforts of governments must be directed towards regulating extraction so that it does not lead to exploitative and harmful practices.

We have seen how changes in consumer attitudes and greater awareness of issues are insufficient to tackle these deep problems. Greater regulation from governments is therefore necessary. This, though, leads us back to the fundamental challenge of achieving a global consensus that ensures corporate responsibility is enforced everywhere. Even if it is difficult to guarantee the unified collaboration of governments and corporations, this report argues it is of the utmost importance that countries like the UK set a precedent that is more than merely symbolic. The UK and other consuming countries must lead in taking the provenance of minerals seriously, and in doing so implement strategies that other governments can follow and emulate.

In the field of corporate sustainability, it has rightly been pointed out that a firm is no more sustainable than its suppliers.<sup>60</sup> When a company becomes aware that its suppliers are falling short of sustainability standards, it essentially has two choices: to invest in and work with the supplier to improve its sustainability performance, or to look for different suppliers. If we are to work towards a global model of greater accountability, it is essential that firms invest in and work alongside suppliers in achieving and maintaining high environmental and ethical standards. Sancha *et al.* point out the supply chain management practices of both assessment and collaboration must be implemented together in order to establish socially responsible supply chains.<sup>61</sup> Supplier assessment generally involves the firm that buys goods or raw materials controlling supplier's outputs from a distance based on performance criteria. It involves analysis of the supplier's performance on social issues, such as child labour or compliance with human rights, in the form of questions or audits. It also entails the buyer cooperating with the seller and aiming to jointly improve social performance. However, assessing suppliers only from afar is not enough to make them more sustainable. This has been clearly demonstrated by events such as the Rana Plaza incident in April 2013, when a garment factory in Dhaka collapsed and killed over a thousand people due to poor safety standards. In spite of companies such as H&M, GAP and Inditex making efforts to assess or collaborate with their suppliers in Bangladesh leading up to the disaster, poor working conditions persisted.

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59 Heffernan, O., 2019, 'Seabed mining is coming – bringing mineral riches and fears of epic extinctions', *Nature*. Available: [www.nature.com/articles/d41586-019-02242-y](https://www.nature.com/articles/d41586-019-02242-y) [Accessed: 16-Apr-2021].

60 Krause, D., Vachon, S., and Klassen, R., 2009, 'Special topic forum on sustainable supply chain management: introduction and reflections on the role of purchasing management', *J. of Supply Chain Management* 45 (4), pp.18–25.

61 Sancha, C., Gimenez, C., and Sierra, V., 2016, 'Achieving a socially responsible supply chain through assessment and collaboration', *J. Clean. Prod.* 112, p.1935.



Research has shown that when buying firms collaborate with suppliers in this way, the supplier's operational and social performance both improve.<sup>62</sup> Collaborating with suppliers of materials like mined metals should include investing in the supplier, such as through training and education of the supplier's personnel, secondment of personnel to the supplier and cooperating with suppliers on applied research to improve the sustainability of practices. Directing such collaboration at reducing environmental impact would help improve practices and reduce the environmental damage caused by corporations overseas. A much more hands-on approach is needed from companies who source goods and services from less regulated countries. Simply being part of international agreements and assessing suppliers from a distance is just not good enough in today's extensive and intertwined supply chains. As Sancha *et al.* explain, 'if companies aim to achieve a truly socially responsible supply chain (i.e., they need their suppliers to be sustainable) they need to collaborate with them. Suppliers' social performance only improves with the adoption of collaborative practices (e.g., training suppliers, visiting their premises...)'.<sup>63</sup> Clearly, this requires not only an unprecedented shift in corporate practices and consumer habits, but also a hitherto unforeseen amount of political will.

## 5. Recommendations and conclusion

### 5.1 Key recommendations

1. **Require transparency** – The requirement for full disclosure of the provenance of goods and their components.

Based on the cases examined above, this report's first key recommendation is that governments need to introduce a requirement to disclose the provenance of imported minerals (or goods containing minerals). Just as we have strict regulation around declaring the provenance of foodstuffs that enter the UK, so too we should have for minerals or products that contain minerals. Without greater transparency, neither the government or the consumer are empowered to act should goods or minerals fall short of high environmental or ethical standards. With the Modern Slavery Act of 2015, the government has already shown that it is possible to make companies produce a slavery and human trafficking statement for a particular financial year. If companies fail to comply, they can be punished by an unlimited fine.<sup>64</sup> Even though regulating mineral extraction is not the same as modern slavery, this shows that the government could enact a similar legal framework for declaring the provenance of minerals or, in the case of electronic devices, the products and the components they contain. If countries where mineral demand is high, like the UK, were to lead the way, this could provide the basis for an international standard.

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62 Akamp, M., and Muller, M., 2013, 'Supplier management in developing countries', *J. Clean. Prod.* 56 (1), pp.54–62 and Klassen, R.D., and Vereecke, A., 2012. 'Social issues in supply chains: capabilities link responsibility, risk (opportunity), and performance', *Int. J. Prod. Econ.* 140 (1), pp.103–115.

63 Sancha, C., Gimenez, C., and Sierra, V., 2016. 'Achieving a socially responsible supply chain through assessment and collaboration', *J. Clean. Prod.* 112, p.1944.

64 Home Office (UK), 2021, 'Transparency In Supply Chains: A Practical Guide'. <https://www.gov.uk/government/publications/transparency-in-supply-chains-a-practical-guide/transparency-in-supply-chains-a-practical-guide#who-is-required-to-comply>.

Clearly, a major problem when declaring the provenance of goods is the convoluted nature of supply chains and the supposed 'ignorance' of corporations around the ultimate origin of many of the minerals that end up in their products. This paper does not suggest that this problem has an easy solution. It does however argue that the UK government must take the lead in supporting companies and countries where minerals are mined to improve supply chain transparency. Based on the cases examined in this report, the government must dedicate more resources to collaborating with governments and suppliers in the countries where minerals are mined. The UK must lead the way in this as a country where demand for minerals is high.

One potential avenue could be for governments, supported by the private sector, to set up an international regulatory fund. This then in turn would support higher environmental and ethical standards and greater supply chain transparency in countries where, for example, metals or minerals are mined. The OECD has worked with the governments of countries such as Colombia and the DRC to enact legislation to implement its Due Diligence Guideline, which was adopted as an international standard for mineral extraction in 2011. Even though mining in such countries still remains largely unregulated, there have been some improvements. For example, in 2015 the Colombian government launched its main mechanism to track the provenance of gold, the Single Registry for Mineral Traders (Registro Unico de Comerciantes Mineros – RUCOM).<sup>65</sup> As the Colombian example shows, legislation implemented in line with international guidelines represents a step in the right direction, which the UK government could build upon to enable companies greater transparency when declaring the origin of imported goods or products. The UK government could use the OECD guidelines as the basis for its own regulatory fund, which would dedicate further resources to improving global extraction practices and increasing awareness of the origins of minerals. On its own, the British government cannot rewrite the rules of international trade. But it could, however, lead by integrating compliance with such customs declarations for imports into both existing and new trade agreements. This is especially pertinent as the UK government looks to make trade deals around the world post-Brexit.

## **2. Adopt ethical supply chain standards** – The regulation of production and trade that enables the UK and other governments to take action for breaches of mineral extraction standards.

On top of the requirement to declare the provenance of goods entering the UK, the government should then apply the same legal requirements for mining within their borders (e.g., prohibition of child labour or human rights abuses) to the import of any minerals or products containing those minerals. In this way, any gold, cobalt or phosphate entering the UK would have to reach the requirements that any locally extracted mineral would. If failing to comply resulted in goods being confiscated and sold back into the UK at market price, this would have the double-edged effect of incentivising companies to do proper due diligence at risk of financial loss and incentivising the government to seek out violations in order to gain revenue from seized goods. It would also make importing countries like the UK responsible for enforcing the regulation for

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<sup>65</sup> Masse, F., and Munevar, J., 2017, 'Due diligence in Colombia's gold supply chain: overview', OECD, p.26. Available: [mneguidelines.oecd.org/Colombia-gold-supply-chain-overview.pdf](https://mneguidelines.oecd.org/Colombia-gold-supply-chain-overview.pdf).

all trading activities involving minerals. The UK government could set out a transition period that would allow companies to align themselves and their supply chains to the new regulations. It could issue enforcement notices to make sure companies are doing all they can to meet these new requirements. The UK government could then seize goods at its borders and potentially collaborate with other countries to seize goods owned by UK companies abroad. This is already done by Interpol when they assist countries in recovering and returning goods obtained corruptly, so such a system is not a new or radical idea when applied to imported minerals or the products containing them.

On the issue of adopting ethical supply chain standards, one potential solution being suggested is the reopening of mines in countries where demand for minerals is high. Such a proposal has the double advantage of ensuring that minerals are extracted to high ethical and environmental standards, while also creating local jobs for citizens of those economies. One such example is in Cornwall where there are large reserves of lithium. Like cobalt, lithium is an element used for producing batteries, and two mining companies are already preparing to mine the mineral from either hard rock or geothermal brine.<sup>66</sup> The Dutch green think tank GroenLinks Wetenschappelijk Bureau have pointed out that this could be an attractive prospect for Western governments going forward, especially for areas like Cornwall that have a history of copper and tin mining while facing a lack of decent jobs and high levels of poverty.<sup>67</sup> Even though we can still expect the majority of metals needed for batteries to come from existing mines in Australia, China and Latin America, supply chain transparency and high extraction standards will be far easier to regulate, if not guaranteed. It is beyond the scope of this report to explore this solution in more detail. However, lithium extraction begins in Cornwall in 2024 as planned,<sup>68</sup> it could represent a positive step towards setting higher ethical supply chain standards for extracted minerals.

As the key focus of this report's solutions is regulation, it also does not consider the highly fruitful strategies of metal recycling or other circular strategies that would reduce the global demand for extracted minerals. This is, however, the subject of the GroenLinks report, 'Metals for a Green and Digital Europe – An Agenda for Action'.<sup>69</sup>

### 3. Compliance and enforcement – Governmental and corporate commitment to act.

To be sufficient, the passing of such legislation needs to be accompanied by the commitment to act upon any known breaches. Enforcing such legislation would not only potentially generate revenue but, more importantly would clearly signal to other governments and corporations around the world that the UK is serious about enforcing high environmental and ethical standards for any minerals entering its territory. This would take us closer to what constitutes progress on the issue of how to effectively govern complex and intertwined global supply chains. In light of this, the EU's new

66 GroenLinks, 2021, 'Metals For A Green And Digital Europe: 6. Mining in Europe', Wetenschappelijk Bureau Groenlinks. Available: [www.wetenschappelijkbureaugroenlinks.nl/metals-for-europe-6#](http://www.wetenschappelijkbureaugroenlinks.nl/metals-for-europe-6#).

67 Ibid.

68 Bliss, D., 2021, 'In Cornwall, Ruinous Tin And Copper Mines Are Yielding Battery-Grade Lithium. Here's What That Means.' National Geographic. Available: [www.nationalgeographic.co.uk/science-and-technology/2021/05/in-cornwall-ruinous-tin-mines-are-yielding-battery-grade-lithium-heres-what-that-could-mean](http://www.nationalgeographic.co.uk/science-and-technology/2021/05/in-cornwall-ruinous-tin-mines-are-yielding-battery-grade-lithium-heres-what-that-could-mean).

69 See [www.wetenschappelijkbureaugroenlinks.nl/metals-for-europe](http://www.wetenschappelijkbureaugroenlinks.nl/metals-for-europe). The full report is due to be published later in 2021.

conflict minerals regulation that came into force in January 2021 is a promising step in the right direction, but is not sufficient both in its coverage of minerals and in its enforcement requirements (see **Box 1**).<sup>70</sup> This example clearly illustrates the need for not just having the correct legislation in place, but a commitment to enforcement when such legislation is broken, such as by confiscating goods that do not meet its ethical and environmental standards.

### **Box 1. The EU's new conflict minerals regulation – highlighting the need for enforcement**

The EU's conflict minerals regulation requires the creation of a 'white list' of global smelters and refiners which source responsibly, in line with this report's first recommendation. The legislation also permits EU country authorities to examine documents and audit reports and carry out on-the-spot inspections of an importer's premises. This is similar to this report's recommendations, albeit at the importer's premises rather than at the border. If a company does not comply, the EU country can 'order the firm to address the problem within a given deadline' and 'follow up to make sure it does so'.<sup>71</sup> It is on this point, however, where the recommendations made here and the EU legislation diverge. The legislation does not clearly expand on how it can 'follow up'. It must have a clear enforcement policy in place to give such a system any teeth. In addition, the regulation should be expanded from covering tin, tantalum, tungsten and gold to include more minerals such as cobalt.

## **5.2 Concluding remarks – Taking an 'embrasive' approach to regulating mineral extraction**

Together these three recommendations must bring forth a change in attitudes. When writing from the perspective of corporations moving beyond the Ruggie Principles with regard to human rights compliance, Robert Blitt has endorsed what he calls an 'embrasive' approach.<sup>72</sup> Blitt argues that although corporations have made some progress on human rights compliance, they still have the freedom to choose to what extent they wish to comply with the Ruggie Principles. They can choose to stick to the 'pre Ruggie Principles' status quo or fulfil the minimum recommendations established by the principles. However, both these options mean corporations may have to accept any costly liabilities, either due to not meeting the guiding principles at all or not meeting them adequately. It is on these grounds that he advocates an 'embrasive' approach whereby corporations get behind the 'moving target' of human rights compliance.<sup>73</sup>

<sup>70</sup> European Commission, 2021, 'The regulation explained [Conflict Minerals Regulation]'. Available: [ec.europa.eu/trade/policy/in-focus/conflict-minerals-regulation/regulation-explained/index\\_en.htm](https://ec.europa.eu/trade/policy/in-focus/conflict-minerals-regulation/regulation-explained/index_en.htm) [Accessed: 16-Apr-2021].

<sup>71</sup> Ibid.

<sup>72</sup> Blitt, R.C., 2012, 'Beyond Ruggie's Guiding Principles on Business and Human Rights: Charting an Embrasive Approach to Corporate Human Rights Compliance', *Texas International Law Journal* 48 (1), pp.33–62.

<sup>73</sup> Ibid, p.60.



In his own words: ‘In practical terms, this means instead of observing select “lowest common denominator” human rights principles as envisioned by the SRSG (Special Representative of the Secretary-General), corporations should seek out higher ground by complying with all applicable human rights treaty norms’.<sup>74</sup> Even though this report is not dealing specifically with human rights compliance, if the global community is to move towards a well-regulated and less damaging mineral trade, the UK government must take a similar ‘embractive’ approach to regulating mineral extraction and seek out ‘higher ground’ rather than being content with the bare minimum.

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<sup>74</sup> Ibid, p.60.

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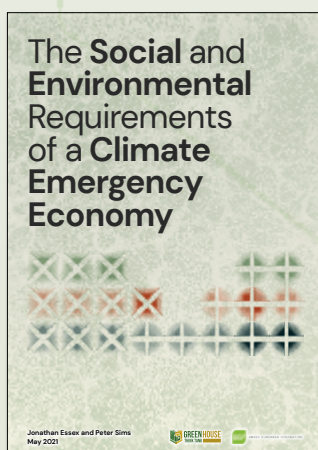
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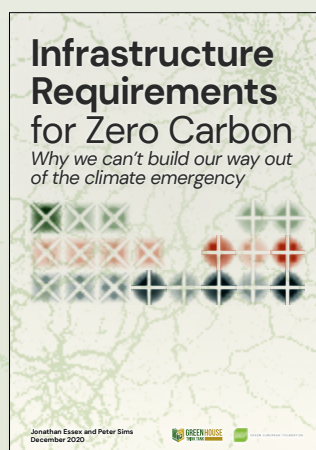
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This report explores the link between global consumer demand, corruption and political instability in the countries where significant amounts of minerals are mined. It suggests that the only way to reduce the suffering of the people in countries negatively affected by such mineral extraction is regulation on the part of countries where demand for such minerals is high.

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