

# Strengthening Links

**How the sustainability of EV supply chains can be transformed**

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By Charles Winter

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# Contents

Executive summary	3
Introduction	5
Section 1: Sustainability in EV Supply Chains – In Theory	7
Section 2: Sustainability in EV Supply Chains – The Reality	12
Section 3: Inefficiency of Current UK Legislation	23
Section 4: Policy Recommendations	29
Conclusion	37
Acknowledgements	39

## About the Report

Rapidly increasing demand for EVs in the UK has led to poor practices within global supply chains negatively impacting on sustainability of the final products. However, calls for governments to take supply chain sustainability seriously are beginning to rise. Supply chain sustainability as a concept incorporates three focus areas:

1. Economic sustainability
2. Environmental sustainability
3. Social sustainability

If all three of these areas are achieved, a supply chain is wholly sustainable. However, the sustainability of supply chains is a topic rarely discussed in Parliament. The Home Office under the Conservatives even initially stated that slavery in supply chains should not be revealed by businesses when making the 2015 MSA as it creates “additional burdens”. It is about time to ask whether sustainability within EV supply chains is being taken seriously by policy makers.

British EV importers and manufacturers currently maintain almost all responsibility for the sustainability of their supply chains with full knowledge of the issues prevalent within the creation of their products. China’s virtual monopoly on almost all battery manufacturing exposes EV supply chains to potentially significant financial shocks, requiring immediate diversification of supply chains. The environmental concerns in EV supply chains are also significant. Lithium mining in South America is significantly degrading water sources essential for biodiversity and surface water supplies. In the Democratic Republic of Congo (DRC) toxic contaminants from mining waste are seeping into soil and water sources. Despite containing over half of Africa’s freshwater supplies, 48% of the DRC’s population lack access to uncontaminated water. Also in the DRC, conflict, child labour and poor working conditions are rife, seeping into EV supply chains. Since writing this report, the conflict in the DRC has escalated significantly. In China, there are an estimated 1.8 million Uyghur and Turkic Muslims in internment camps, with many of them being used for forced labour. In Indonesia, indigenous rights are being severely violated with the destruction of indigenous livelihoods by nickel mining operations which violate various UN doctrines.

Britain’s supply chain laws are among the weakest in developed nations. The 2015 Modern Slavery Act has been found to be ineffective, and the government

has been advised to alter or renew the act in order for it to serve its intended purpose. The implementation of the 2021 Environment Act lacks urgency and has raised questions with its eligibility thresholds. Other countries have implemented far more effective legislation, including the USA banning imports from the Uyghur Region of China, Canada implementing comprehensive anti-slavery laws and the EU creating extensive supply chain due diligence requirements for all large businesses operating within the EU.

This report provides a set of recommendations to the Government based upon this research.

1. Create mandatory human rights and environmental due diligence requirements for all large businesses operating within the UK with sensible thresholds and strict enforcement.
2. Improve the diversification of EV supply chains by banning imports made in part or in whole from areas with significant environmental and human rights abuses.
3. Improve the diversification of EV supply chains by establishing free trade agreements with non-dominant countries in the EV supply chain, or those with potential to be dominant.

# Introduction

In the production process of any good, a supply chain is the flow of resources, activities, individuals, technologies and organisations that lead from the sourcing of raw materials to the final sale of an individual product to the consumer.<sup>1</sup> Whilst supply chains for vehicles using internal combustion engines (ICEs) are not perfect, they are well established and well regulated. However, with the emergence of zero-emission vehicles (ZEVs), this is not the case. The new technology in these vehicles demands the sourcing of different resources from ICEs in much larger quantities than ever previously required. This is currently causing, and will continue to cause, large amounts of damage to ecosystems and to the lives of individuals in contact with these supply chains on an international scale. Supply chains are sensitive. When fluctuations occur in supply and demand, supply chains often end up completely altering their structure to meet these changes. Often times this means quickly sourcing raw materials at far lower costs in much higher quantities to meet new, unexpected demand. However, it takes time for technology, infrastructure and policy to catch up with regulating and streamlining these supply chains. In the meantime, new production methods can unintentionally be inefficient and harmful to people and the environment as a result.

In October 2021, the Conservative Government under the Johnson administration released their Net Zero Strategy – a long-term plan to end the UK's domestic contribution to climate change. The plan acts on the UK's legally binding commitment to reduce greenhouse gas emissions to net zero by 2050<sup>2</sup> and contains a variety of policies to reach this goal. Under the transport section of the Net Zero Strategy, the government has pledged a ZEV mandate. This commits the UK to end sales of new petrol and diesel cars by 2035.<sup>3</sup> However, Labour have committed to changing this deadline to 2030. Since the announcement of the mandate, the total percentage of UK-registered battery electric vehicles (BEVs) has risen from 396,497 in 2021 to 1,337,636 as of

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<sup>1</sup> TechTarget WhatIs website, Supply Chain Definition, accessed 28 November 2024.

<sup>2</sup> UK Government Legislation, Climate Change Act 2008, accessed 28 November 2024.

<sup>3</sup> Department for Business, Energy and Industrial Strategy, Net Zero Strategy, October 2021.

November 2024 and demand is expected to continue rising.<sup>45</sup> The batteries used in these BEVs are lithium-ion batteries. These generally contain elements such as lithium, nickel, cobalt and manganese, all of which lack the infrastructure to be sourced safely at the required quantities. The current methods of mining and producing these minerals are plagued with forced labour/slavery, illegal deforestation, destruction of communities, excessive pollution, child labour and various levels of corruption and bribery of local officials to look the other way. Yet very little legislation exists within the UK to help prevent these issues from seeping into supply chains.

One of the few pieces of legislation that has tried to enforce corporate due diligence within supply chains is the 2015 Modern Slavery Act (MSA). This legislation featured a clause requiring businesses with an annual turnover of over £36 million to release a yearly statement on the steps they are taking to prevent human trafficking and slavery both within their business and their supply chains. For the time, it acted as groundbreaking legislation. However, it is now bordering on archaic. The rest of the world has moved on from the MSA, and has developed their own policies that are far more thorough to ensure supply chain sustainability. The MSA has been found to be ineffective, and the government has been advised to alter or renew the act in order for it to serve its intended purpose.<sup>6</sup> This is a microcosm for all British policy on supply chain sustainability – it is wildly inefficient, ineffective and outdated. This paper aims to provide research-based policy recommendations to the government to secure necessary sustainability within Britain's supply chains and bring our policy back on track with the rest of the world.

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<sup>4</sup> Society of Motor Manufacturers and Traders, EV and AFV registrations data, accessed 28 November 2021.

<sup>5</sup> Zapmap website, EV market stats 2024, accessed 28 November 2024.

<sup>6</sup> Home Department, Independent Review of the Modern Slavery Act 2015: Final Report, May 2019.

# Section 1: Sustainability in EV Supply Chains: In Theory

## Electric Vehicle (EV) supply chains in the UK: how do they work?

EVs are quickly becoming more than just an alternative to ICE cars, but the replacement. Parliament plays a vital role in the sustainability of supply chains. It is government policy that is currently influencing UK demand for BEVs, and it is up to government policy to ensure supply chains are managed sustainably.

The majority of this paper will be focused on the supply chains for batteries used in BEVs rather than for the rest of the vehicle. The chassis and body (the structural interior and exterior panels) of BEVs are roughly identical to those of ICE vehicles and therefore use the same, if not similar supply chains. The supply chains for batteries are a new addition to car production. Batteries typically account for 30-40% of the value of BEVs. As a result, they make up the main new disruption to vehicle supply chains and therefore should receive the majority of focus.<sup>7</sup>

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<sup>7</sup> International Energy Agency, Global Supply Chains of EV Batteries, July 2022.



To understand how supply chain sustainability can be better enforced, it is important to understand how these supply chains work within the context of BEVs. Box 1 explains the main sections of supply chains for batteries. The rest of

**Box 1: Global Battery Supply Chains**

**Upstream Activities:** The upstream section of EV supply chains involves the extraction of raw materials used in battery production from mines. These materials are typically lithium, nickel, cobalt, manganese and graphite.

Upstream countries generally include the Democratic Republic of Congo, China, Indonesia, Chile and Australia.

**Midstream Activities:** The midstream section involves the purification and refinement of raw materials to develop the pure materials required to create batteries. The majority of midstream activities take place in China; however South Korea, Japan and Indonesia all play important roles, along with parts of the EU.

**Downstream Activities:** This is the actual manufacturing of the end product for consumers. China is the main producer of batteries; however, the USA and Europe are also involved in downstream production.

The final product of the battery is then implemented into an EV. The majority of developed nations, including Britain, now have EV manufacturing plants.

this section explores the various methods of policing these supply chains to ensure sustainability from the UK's perspective.<sup>89</sup>

## Supply Chain Sustainability

Supply chain sustainability is about managing supply chains with the goal of long-term benefit. It provides an ethical focus on three dimensions within supply chains. These three dimensions should be harmonised for a wholly sustainable supply chain:<sup>10</sup>

1. **Environment:** Sustainable supply chains must be conscious of the environment. Damage to ecosystems and excess pollution must be contained and negated.
2. **Economics:** Supply chains cannot be sustainable without being profitable. The sustainable use and distribution of cash and

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<sup>8</sup> Rocky Mountain Institute, The EV Battery Supply Chain Explained, accessed 30 November 2024

<sup>9</sup> International Energy Agency, Batteries and Secure Energy Transitions, April 2024.

<sup>10</sup> Johnsen, T.E., Howard, M. and Miemczyk, J., Purchasing and Supply Chain Management: a Sustainability Perspective, (2) p.1-25

investment to improve supply chains should not have large negative effects on return on investment.

3. **Social:** The rights of all people within supply chains should be protected. This includes labour rights, indigenous rights and general human rights.

## UK's impact on Supply Chain sustainability

In the UK, supply chains are monitored, regulated, invested in and policed by various actors. Laws, self-regulations, NGOs and Parliament all have an impact on supply chain sustainability.

### 1. The Government

British trade is largely shaped by international free trade agreements. The 2021 Trade Act established a framework for the UK to manage its trade policy independently post-Brexit. While it overlooks social and environmental rights in trade deals, it gives Britain the tools to create progressive trade policies for supply chain sustainability. The department for business and trade for example has the power to establish tariffs and sanctions in line with government policy. The government also has the ability to provide incentives for sustainability. However new supply chain sustainability policies have been slow to establish themselves within the UK's trade policies. Existing legislation offers some regulation, accountability and oversight:

- **Modern Slavery Act 2015 (MSA):** The MSA attempts to target forced labour within the UK and abroad. Section 54 specifically focusses on transparency within supply chains. It requires organisations with an annual turnover of £36 million or more to publish an annual slavery and human trafficking statement. It requires the publication of steps the organisation is taking to prevent slavery and human trafficking in their supply chains. If no steps are taken, this must also be published.<sup>11</sup>
- **Environment Act 2021:** The Environment Act attempts to prevent the use of illegal "forest risk" commodities by UK businesses. Forest risk commodities are cocoa, maize, palm oil, soy, beef, leather, rubber and coffee and are all associated with mass deforestation. If a business has a turnover of over £50 million and uses over 500 tonnes of forest risk commodities annually, they must conduct due diligence to ensure illegal deforestation does not occur within their supply chains. Due

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<sup>11</sup> Home Office, Modern Slavery Act 2015, (last updated) July 2018

diligence is the process of taking reasonable steps to ensure compliance and mitigate legal and ethical risks. They must produce an annual statement on their due diligence exercise. It should be noted that this law has not yet been enforced.<sup>12</sup>

## 2. IGOs

Intergovernmental organisations (IGOs) can keep countries in agreement with one another over trade and supply chain practices. Various intergovernmental agreements are in place to ensure supply chains are kept ethical.

- **WTO:** The most important IGO with an effect on supply chain sustainability is the World Trade Organisation (WTO). The UK generally abides by WTO trade rules, including standards and tariff rates. The WTO generally allows member states to set their own rules when agreeing on sustainability-based trade laws. The WTO's main objective is to avoid protectionism by solving trade disputes and providing agreements on trade policies and trade rules which can often clash with sustainability policy in trade as sustainable practices may require protectionism. However, since Brexit, the UK has regained its ability to negotiate independently within the WTO, and therefore determine its own specific obligations.<sup>13</sup>
- **UN:** The United Nations (UN) is the world's largest IGO by size and political influence. The UK is a founding member and has ratified and supported multiple UN resolutions. Those with the most impact on supply chain sustainability are the Universal Declaration on Human Rights (UDHR), the International Covenant on Civil and Political Rights (ICCPR), UN Guiding Principles on Business and Human Rights (UNGPs), the United Nations Declaration on Rights of Indigenous Peoples (UNDRIP) and the UN Sustainable Development Goals (UNSDGs). The UK is not legally bound by all of these, but they often help shape and form domestic and foreign policy.

## 3. NGOs:

Over recent years, non-governmental organisations (NGOs) have begun to play larger roles within the supply chain sustainability debate. They help hold government and businesses accountable for lack of action and provide their own independent research which can influence policy. With businesses they

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<sup>12</sup> Department for Environment, Food and Rural Affairs, Environmental Improvement Plan 2023, February 2023.

<sup>13</sup> Peres, A., WTO: Challenges and Opportunities, March 2024

often work to develop sustainability solutions and provide expertise.<sup>14</sup> They are divided into three types:

- **Issue-Centric:** NGOs focused on specific issues; this includes Anti-Slavery International, Greenpeace, Amnesty International etc. They shine a spotlight on specific issues and hold organisations and government to account.
- **Demand-Centric:** NGOs based closer to consumer demand within a supply chain usually formed by large manufacturers, retailers and non-profits. NGOs such as The Sustainability Consortium allow businesses to collaborate on sustainable supply chain management.
- **Supplier-Centric:** NGOs that represent the interests of suppliers, mostly in developing nations. They establish standards that must be adhered to to pass their audits and achieve their certifications. The Fair Trade certification is possibly the best example.

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<sup>14</sup> Shah, P., Supply Chain Management – An Integrated Approach, 2024.

## Section 2: Sustainability in EV Supply Chains: The Reality

The sustainability of supply chains is a topic rarely discussed in Parliament. The Home Office under the Conservatives even initially stated that slavery in supply chains should not be revealed by businesses when making the 2015 MSA as it creates “additional burdens”.<sup>15</sup> It is about time to ask whether sustainability within EV supply chains is being taken seriously by policy makers.

EV supply chains are rife with environmental and human rights violations, and UK investment is perpetuating these issues through mismanagement and exploitation. British firms often operate in supplier nations in violation of local and international laws, while domestic UK legislation fails to prevent such practices.<sup>16</sup>

Compared to more extensive policies from abroad with proven positive impacts, Britain’s supply chain laws are among the weakest in developed nations. The next two sections will outline research highlighting these inadequacies, demonstrate the need for stronger legislation, and examine foreign laws that surpass existing UK policies.

### Current Issues Within Supply Chains

#### Economic Concerns

The main threat to the financial integrity of EV supply chains is the lack of import diversification. The heavy reliance on specific nations for extracting and refining critical minerals creates a large vulnerability within the EV industry. China controls most of the global refining capabilities for all four of the five assessed minerals in Figure 1, with the exception of nickel in Indonesia. Over half of the global extraction of nickel, cobalt and graphite is controlled by Indonesia, the Democratic Republic of Congo and China respectively (Figure 1). Should one of these nations receive a shock that means they cannot extract or refine these critical minerals, the price of the minerals they extract/refine would skyrocket.

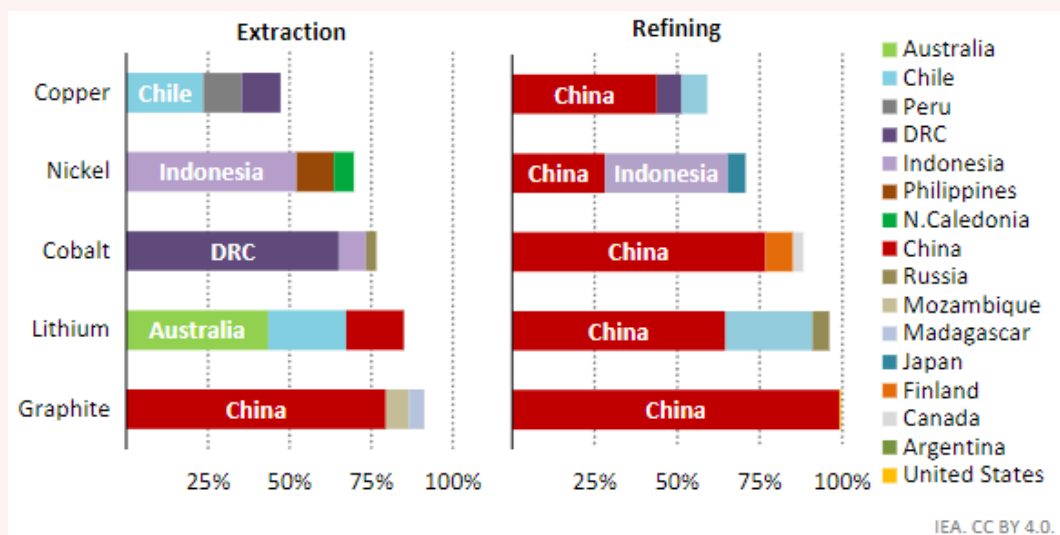
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<sup>15</sup> Mason, R., Companies not asked to report slavery in supply chains under new laws, *The Guardian*, June 2014.

<sup>16</sup> Pietropaoli, I., Smit, L., Hughes-Jennett, J. and Hood, P., A UK Failure to Prevent Mechanism for Corporate Human Rights Harms, February 2020.

Naturally this would have a huge impact on the supply and the price of EVs. A shock such as this could be significant enough to require a full review of the ZEV mandate. This could create uncertainty for Britain's Net Zero targets, and as a result reduce investment in Britain's developing green industries.

**Figure 1: Share of top-three countries in extraction and refining of critical minerals for batteries in 2023.<sup>17</sup>**

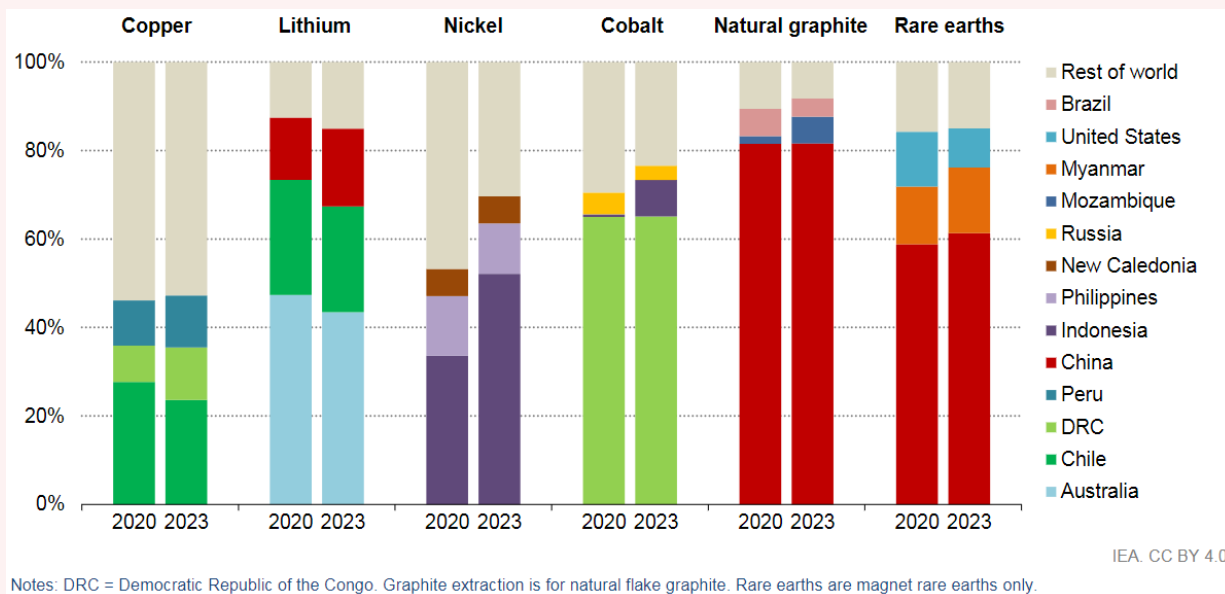


**Graph from International Energy Agency, Batteries and Secure Energy Transitions, April 2024.**

Even more concerning is the change in geographic concentration of extraction and refining. Between 2020 and 2023, the concentration of production for raw and refined minerals has become less diverse. The concentration of raw nickel and cobalt has shifted dramatically toward Indonesia. Indonesia's market share of mined nickel increased from 34% to 54% between 2020 and 2023 (Figure 2). China and Indonesia's production of refined minerals has also shifted, giving them a larger proportion of supply (Figure 3).

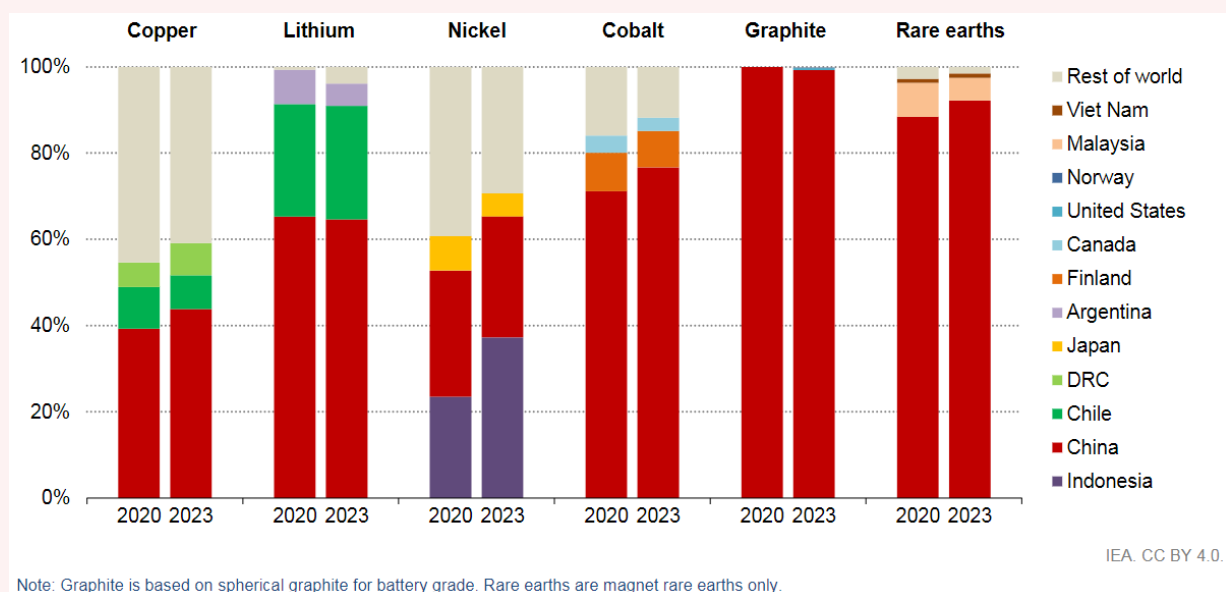
<sup>17</sup> International Energy Agency, Batteries and Secure Energy Transitions, April 2024.

**Figure 2: Share of mined or raw material produced by country 2020-2023.<sup>18</sup>**



**Graph from International Energy Agency, Global Critical Minerals Outlook 2024, May 2024**

**Figure 3: Share of refined material production by country 2020-2023.<sup>19</sup>**



**Graph from International Energy Agency, Global Critical Minerals Outlook 2024, May 2024**

<sup>18</sup> International Energy Agency, Global Critical Minerals Outlook 2024, May 2024.

<sup>19</sup> Ibid

Capital flight is when large quantities of cash flows out of a nation, in this case due to foreign ownership of mines in countries with large supplies of critical minerals. This can create significant political backlash in upstream nations, leading to forced import diversification for those downstream, especially when supply chains lack diversity in the first place. A large proportion of mines are owned by European, Chinese and American corporations, regardless of the country they are based in. For example, over 60% of cobalt is mined in the Democratic Republic of Congo (DRC), however Chinese and European companies own roughly a third of the global supply each. DRC-based companies own less than 5% of global cobalt production. Again, this further exposes the EV supply chain's vulnerabilities.<sup>20</sup> Disparities in ownership could create calls for resource nationalisation from countries such as the DRC where ownership disparities could be seen as unfair. Attempts to protect resources from foreign exploitation could create price rises for certain critical minerals. Resource ownership from large corporations in the global north could be perceived as neocolonialism, and political backlash could severely damage EV supply chains. This includes in the short term through physical conflict with the intent of supply chain disruption and consequential price shocks, and in the long term through forced import diversification.

## Environmental Concerns

The development of facilities to source and process minerals for EV batteries poses significant risks to biodiversity and water supplies worldwide. Key minerals like lithium, copper, nickel, aluminium, cobalt and manganese lack environmentally safe infrastructure to meet growing demand. Lithium extraction, in particular, generates high carbon emissions and extensive land and water use. Its two primary mining methods each present distinct environmental challenges, as seen in box 2.<sup>2122</sup>

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<sup>20</sup> Ibid

<sup>21</sup> Piedmont Lithium website, Lithium 101, accessed 4 December.

<sup>22</sup> Early, C., The new 'gold rush' for green lithium, BBC, November 2020.



**Box 2: Lithium Mining Techniques**

- 1. Brine Mining:** Brine mining involves extracting large amounts of saltwater from underground which is rich in dissolved lithium. This is then evaporated above ground in ponds until a higher purity is reached, after which it is processed in a chemical plant to produce lithium carbonate. The main issue with brine mining is land usage. Per tonne of lithium, 3,124m<sup>2</sup> is required, as opposed to 464m<sup>2</sup> through hard rock mining. It also requires 469m<sup>3</sup> of water per tonne, whereas hard rock mining requires just 170m<sup>3</sup>. This is primarily used in Chile and Argentina.
- 2. Hard Rock Mining:** Lithium is extracted from underground seams of lithium-rich ore called spodumene. It is mined traditionally using physical excavation. It produces higher concentrations of lithium than through brine mining and is more time, water and land efficient. It does however produce three times as much CO<sub>2</sub> per tonne of lithium (15,000kg compared to the 5,000kg from brine mining) due to the amount of fossil fuels used in extraction. It is likely that this will come down in the future as renewable energy becomes more efficient and available in mining. This is primarily used in Australia.

Brine mining for lithium in arid regions raises concerns about water depletion, desertification, and contamination of water sources. In areas like the Puna and High Andes of Argentina, Bolivia, and Chile, falling water tables threaten freshwater reserves, biodiversity, wetlands, and surface water supplies.<sup>23</sup> Efforts by corporations to block independent research have limited knowledge of the true environmental impact, keeping critical data largely undisclosed.<sup>24</sup>

Cobalt is another key element for EV batteries with arguably the largest impact on the environment. 40% of cobalt mined in 2022 was used in BEVs up from 34% in 2021, making up the largest use of the mineral. Extreme caution must be taken when mining to prevent environmental damage. 65% of cobalt is mined in the DRC.<sup>25</sup> An estimated 12% of all cobalt produced in the DRC is from artisanal and small-scale mining (ASM). This is the practice of freelance miners digging for cobalt by hand with minimal safety equipment. The cobalt is then sold into the export stream, mixing with industrially mined cobalt. Both industrial mining of

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<sup>23</sup> Sticco, M., Guerra, G., Kwaterka, V. and Valdés, S., Impactos ambientales de la explotación de litio en los humedales y recursos hídricos del Altiplano, July 2021.

<sup>24</sup> van Pampus, M., Hogenboom, B., Hoorn, C. and Seijmonsbergen, A.C., Uncertainties in the debate on the environmental impact of lithium brine extraction in the Salar de Atacama, (1) p1-6, December 2023.

<sup>25</sup> International Energy Agency, Global Critical Minerals Outlook 2024, May 2024.

cobalt and ASM are largely environmentally destructive, however ASM is unregulated and therefore creates more environmental and humanitarian risk.<sup>26</sup>

Inadequate waste storage has created significant damage to water supplies. Despite holding half of Africa's water supplies, 48% of the population lack access to uncontaminated water.<sup>27</sup> Congolese engineers assessing pollution concerns assessed 416 million tons of mining waste and determined they were a "critical environmental hazard".<sup>28</sup> Inadequate protection and waste management strategy means this mining waste is in a large number of cases "leaching" chemicals into the soil and water supplies through wind, rainwater runoff and direct infiltration of groundwater. Lack of resources and expertise from the Congolese government mean that known environmental hazards often go without scrutiny despite regulation.<sup>29</sup>

## Social Concerns

Recently social concerns within EV supply chains have grown. Research has found evidence that a large number of nations that are relied on for critical minerals contain extensive labour rights, indigenous rights and general human rights violations. There are too many to include within this report, however some of the most important to note are provided.

- **Human Rights Abuses in China**

Human rights violations, including the use of forced labour, slavery and a lack of access to a clean, healthy and sustainable environment, are occurring within EV supply chains. China is the largest producer and refiner of minerals used in EVs.<sup>30</sup> Significant evidence that forced labour and slavery is used to do this exists. Within the Xinjiang Uyghur Autonomous Region of China up to 1.8 million Turkic Muslims are being held in detention camps and subject to forced labour, political

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<sup>26</sup> World Bank, Cobalt in the Democratic Republic of Congo. Market Analysis. 1: p.1-41, June 2021.

<sup>27</sup> UNICEF Democratic Republic of Congo, Water sanitation and hygiene, accessed 7 December 2024.

<sup>28</sup> Kanika, A. T. and Tumba K., Management of mineral processing tailings and metallurgical slags of the Congolese copperbelt: Environmental stakes and perspectives, *Journal of Cleaner Production*, 210 p.1406-1413, February 2019.

<sup>29</sup> Rights and Accountability in Development, Beneath the Green: A critical look at the environmental and human costs of industrial cobalt mining in DRC, March 2024.

<sup>30</sup> International Energy Agency, Global Critical Minerals Outlook 2024, May 2024.

indoctrination and other human rights abuses.<sup>31</sup> 15% of aluminium produced in China and 9% of aluminium produced globally comes from the region. Much of this is used in EV car part production.<sup>32</sup> The UK Government has recognised that “in at least one instance... a factory purportedly became an extension of a political education camp; labourers live in dormitories, may be prohibited from returning home on a regular basis, and receive no pay for their work until they “complete their training”.” The FCDO also raised concerns that forced labour was being used, “affecting a range of industries”.<sup>33</sup> China has signed the ICCPR but is yet to ratify it so is not obligated to follow its provisions. Nonetheless this still violates up to six provisions including Article 8 (freedom from slavery and forced labour), Article 9 (right to liberty and security of person) and Article 27 (right to freedom for minorities).

- **Labour and Human Rights abuses in the DRC**

Alongside large environmental concerns within the DRC, human rights abuses are far too common. There is an abundance of child labour, unsafe working conditions and threats of conflict and violence. There are an estimated 200,000 miners in ASMs mining for cobalt within the Haut-Katanga and Lualaba regions.<sup>34</sup> Over ten assessed cobalt ASMs, 5,346 child miners were identified and are being monitored.<sup>35</sup>

The working conditions in these same ASMs are nothing short of abysmal. According to the Geneva Center for Business and Human Rights “the main safety hazard stems from the manual digging of narrow, deep shafts that are inadequately secured, poorly ventilated, and prone to collapse”. Efforts have been made to formalise ASMs through increased security, creation of open pits over tunnels and an identification system, however

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<sup>31</sup> US Congress, H.R.1155 - Uyghur Forced Labor Prevention Act, December 2022.

<sup>32</sup> Human Rights Watch, *Asleep at the Wheel: Car Companies' Complicity in Forced Labour in China*, February 2024.

<sup>33</sup> House of Commons, *UK supply chains and Uyghur and Turkic Muslim forced labour in China*, November 2024.

<sup>34</sup> World Bank, *Cobalt in the Democratic Republic of Congo. Market Analysis*. 1: p.1-41, June 2021.

<sup>35</sup> Bureau of International Labor Affairs, *Child Labor and Forced Labor Reports: Congo, Democratic Republic of the (DRC)*, 2024.

this is expensive and on a small scale with limited successes due to a lack of government support.<sup>3637</sup>

Critically, the DRC is a current conflict zone. Fighting over natural resources is one of the main drivers behind the current conflict that has been ongoing since the 1990s. There are over 100 active armed groups in the DRC.<sup>38</sup> As seen below in Figure 4 and Figure 5, violence within the DRC overlaps heavily with the mining of major commodities. Whilst the violence is not centralised over cobalt mining areas in particular, the existence of severe conflict within the DRC creates worry over the tainting of ASMs with conflict (not necessarily industrial mines which can afford extensive security).<sup>39</sup>

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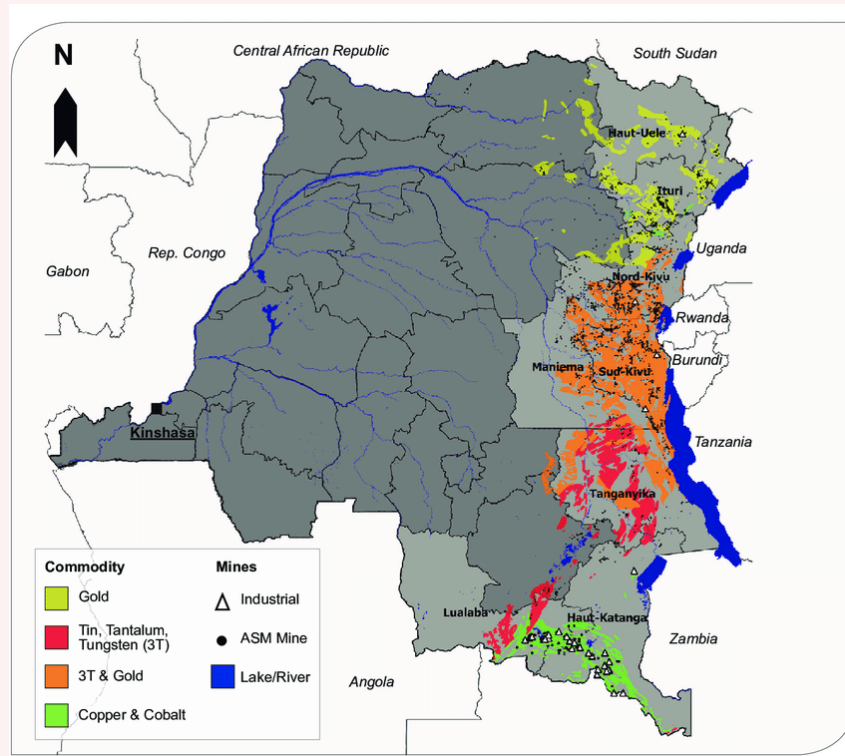
<sup>36</sup> Baumann-Pauly, D., Cobalt Mining in the Democratic Republic of the Congo: Addressing Root Causes of Human Rights Abuses, February 2023.

<sup>37</sup> Rose, L., Cobalt's Dark Cost: Human Rights and the Urgent Need for ASM Formalisation in the DRC, November 2024.

<sup>38</sup> Amnesty International, Why is the Democratic Republic of Congo wracked by conflict?, accessed 12 December 2024.

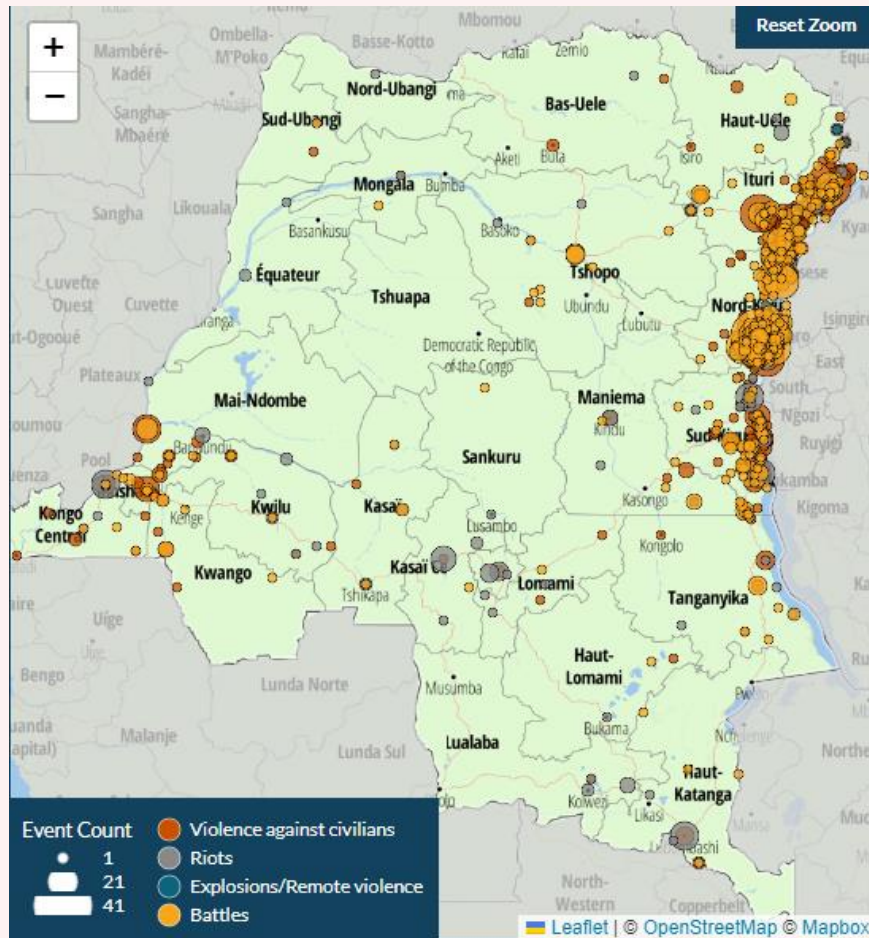
<sup>39</sup> Dasilva, J., Conflict implications of rising cobalt demand and the effects of classifying cobalt as a conflict mineral on the DRC, January 2022.

**Figure 4: Map of Major mining areas of important mineral commodities in the DRC<sup>40</sup>**



**Graph from Barume, B., Vetter, S., Schütte, P., Näher, U., von Baggehufwudt, U. and Franken, G. Covid-19 Crisis Threatens Responsible Mineral Supply Chains – A Case Study Based on the DR Congo, June 2020.**

<sup>40</sup> Barume, B., Vetter, S., Schütte, P., Näher, U., von Baggehufwudt, U. and Franken, G. Covid-19 Crisis Threatens Responsible Mineral Supply Chains – A Case Study Based on the DR Congo, June 2020.

**Figure 5: Map of Armed Conflict Locations in the DRC<sup>41</sup>****Graph from ACLED website, Conflict Watchlist 2023: Democratic Republic of Congo, accessed 16 December 2024.**

The DRC has ratified the ICCPR, but due to a lack of resources, the government lacks control over implementation. Human rights abuses take place most frequently within ASMs, which are completely unregulated. Up to 2,000,000 people rely on ASMs for their livelihood in the DRC.<sup>42</sup>

- **Indigenous Rights abuses in Indonesia**

The rush for nickel in Indonesia has led to the total violation of indigenous rights. Mining rights have been given to companies to mine on “small islands” (islands under 2000km<sup>2</sup>). Under Indonesian law it is illegal to mine on small islands when it effects the local environment or people

<sup>41</sup> ACLED website, Conflict Watchlist 2023: Democratic Republic of Congo, accessed 16 December 2024.

<sup>42</sup> ASM Database, Congo DRC, accessed 5 December 2024.



negatively. Loopholes have allowed permits to be granted regardless. 218 permits have been granted to 15 companies over 34 small islands. 11 mining permits for nickel have been issued on Wawonii island and 25 on Kabaena, both islands under 1000km<sup>2</sup> with large indigenous populations.<sup>43</sup> On Kabaena, 71.2% of the population have reported health conditions due to nickel mining. 82.7% of the population have reported experiencing a decrease in income from their livelihood, predominantly fishing. Prior to nickel mining, residents would need 2 liters of diesel to get to fishing grounds by boat. Now they require 15 liters due to waste polluting the water. It is likely that the indigenous people of Kabaena and surrounding islands will have to leave should action from countries downstream not be taken.<sup>44</sup> Although Indonesia has adopted the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), allowing nickel mining to destroy indigenous lives violates Article 8 (freedom from cultural destruction) and Article 29 (right to environmental and territorial conservation). Indonesia also fails to uphold Free, Prior, and Informed Consent (FPIC), which requires Indigenous consent before activities commence affecting their land. The government does not recognize Indigenous identities within its borders, further compounding these violations.<sup>45</sup>

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<sup>43</sup> Business & Human Rights Resource Centre, 2024. Powering Electric Vehicles: Human Rights Impact of Indonesia's Nickel Rush, July 2024.

<sup>44</sup> Satya Bumi, 2024. Kabaena Under the Shadow of Destruction Due to Nickel Ambition. Jakarta: Satya Bumi. Alfalah, D., Afra, S. and Hardiana, D., How the Nickel Rush Ravaged Kabaena Island and the Bajau People's Livelihood, October 2024.

<sup>45</sup> United Nations, United Nations Declaration on the Rights of Indigenous People, September 2007.

## Section 3: Inefficiency of Current UK Legislation

The issues within the previous section are testament to the current inefficiencies of global policy. A vast number of countries have adapted, and acknowledged the need for legislative change. This report has uncovered various inefficiencies with UK legislation aiming to improve supply chain sustainability. This section highlights these inefficiencies, whilst reviewing the attitudes of Parliament that are hindering supply chain sustainability improvements.

### Inefficiency of Modern Slavery Act 2015

The 2015 MSA was world leading for highlighting the issue of forced labour within supply chains, but with time its inefficiencies have become increasingly prominent. Independent review of the MSA has led to some action being taken to combat policy inefficiency, however this is largely performative and insignificant. More radical change is required for the MSA to fulfil its purpose.

- **Lack of Enforcement:**

The MSA lacks a solid enforcement strategy. If businesses that meet the eligibility criteria for publishing an annual slavery and human trafficking strategy fail to comply, punishment is unspecified. This has caused a lack of compliance, with 40% of eligible businesses not complying with the act at all.<sup>46</sup> The only sanction that can be taken against a company is by the Secretary of State issuing a court order for the businesses to comply with the act.

- **Relaxed Reporting Requirements:**

The required contents of a business's annual slavery and human trafficking strategy are incredibly non-specific. Eligible businesses are required to publish a statement with the steps that they are taking in their supply chains and in their own business, even if none are. No exact requirements or areas of mandatory focus are detailed in the act. This has led to some businesses avoiding

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<sup>46</sup> Anti-Slavery International website, Slavery in Supply Chains, accessed 12 December 2024.



meaningful engagement and treating it as a “check-the-box” exercise.<sup>47</sup>

- **Overfocus on Transparency:**

The main focus of Section 54 of the MSA is to ensure transparency within supply chains. Whilst it can be argued that even this is not achieved, the absence of enforced strategy to tackle modern slavery within supply chains is concerning. The objective of the MSA is to “fight modern slavery”, however there is no legal requirement for businesses to do this. Transparency is important however it is a half-measure; concrete due diligence strategies should be enforced.<sup>4849</sup>

Government review of the MSA led to the extension of these requirements to include public bodies. It also set up a register where businesses and public bodies are required to publish their annual statements. This was followed by the Procurement Act 2023, which prevents public contracts being awarded to suppliers if they are involved in labour market misconduct.<sup>50</sup> The enforcement of these is again lacking and superficial.

## **Inefficiency of Environment Act 2021**

The only UK legislation that ensures supply chain due diligence in respects to the environment is the 2021 Environment Act. However, it is not considered to be enough to achieve its own goals.

- **Lack of Urgency:**

The Act received Royal Assent in November 2021, however more than three years later no secondary legislation has been created to bring the outlined due diligence requirements into force. No timeframe has been given for when this will be. The government’s

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<sup>47</sup> Islam, M. A. and Staden, C. J. V., Modern Slavery Disclosure Regulation and Global Supply Chains: Insights from Stakeholder Narratives on the UK Modern Slavery Act, *Journal of Business Ethics*, 180, p.455-479, July 2021.

<sup>48</sup> Home Department, Independent Review of the Modern Slavery Act 2015: Final Report, May 2019.

<sup>49</sup> Home Office, Modern Slavery Act 2015, (last updated) July 2018.

<sup>50</sup> House of Commons, UK supply chains and Uyghur and Turkic Muslim forced labour in China, November 2024.

only response when pressed on this issue is that they are “committed to laying secondary legislation as soon as parliamentary time allows”. The government claims to recognise the importance of mandatory due diligence for improving environmental sustainability within supply chains. However, the lack of urgency suggests weak commitment to the issue.<sup>51</sup>

- **Concerns over Thresholds:**

The thresholds to meet eligibility for due diligence seem to lack foresight. By the Government’s own definition, a large business is one with an annual turnover of £36 million, whereas the act specifies a business must have an annual turnover of over £50 million to be eligible.<sup>52</sup> This excludes all but the largest businesses from due diligence and is inconsistent with existing legislation (i.e. 2015 MSA). Its consumption threshold is also concerning as each “forest risk commodity” has a different impact on deforestation. These commodities should be treated independently of one another.<sup>53</sup>

Whilst the act indicates positive steps, it requires secondary legislation urgently, and may require amendment to be effective. The act does not cover materials involved within the EV supply chain.

### **Overreliance on Business Self-Regulation**

Parliament often relies on businesses to regulate themselves rather than force them to act with enforced legislation. Often this works, however in the case of EV supply chain sustainability, this is not the case. In a recent report, Amnesty International have identified that whilst some EV companies have made progress with supply chain sustainability, even if it is slow, the majority fail to meet international human rights standards or effectively implement their own policies. The slow pace of improvements

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<sup>51</sup> Environmental Investigation Agency, Making the Law Work: The Environmental Investigation Agency’s response to the UK Government’s legislation on forest-risk commodities, April 2024.

<sup>52</sup> Department for Business, Energy and Industrial Strategy, BEIS small and medium enterprises (SMEs) action plan: 2022 to 2025 (accessible webpage), January 2023.

<sup>53</sup> Environmental Investigation Agency, Making the Law Work: The Environmental Investigation Agency’s response to the UK Government’s legislation on forest-risk commodities, April 2024.

to due diligence is evidence that for real change to take place, Parliament cannot continue relying on businesses to self-regulate. Amnesty argues that EV manufacturers are not adhering to the UNGPs, and the government must increase regulatory influence to ensure supply chains are made sustainable.<sup>54</sup>

Contradictory legal rulings also highlight inefficiencies within British legislation. UK courts have been inconsistent with rulings on British parent companies' liability for human rights within their subsidiaries, particularly in respect to critical mineral mining. There was success within the 2019 "Vedanta" case, however failures within the 2020 "African Minerals" case, for example. Both cases were tried in British courts on British parent companies for human rights and environmental abuses within their subsidiaries. Inconsistencies in rulings highlight the absence of clear legal standards to hold parent companies to account, and prove that businesses cannot self-regulate their supply chain impacts (Gillham 2020).<sup>55</sup>

## Legislation in Other Countries

Whilst legislation in the UK becomes increasingly outdated, foreign laws have modernised. Effective legislation should be viewed as alternative solutions to enforce supply chain sustainability within the EV sector that, where successful, can have a positive impact if applied in the UK.

- **USA Uyghur Forced Labor Prevention Act (UFLPA) 2022:** The UFLPA bans the import of goods produced by forced labour, specifically from China's Xinjiang region, where evidence shows widespread human rights abuses, including forced labour and detainment of 1.8 million Uyghur and Turkic Muslim minorities. The act requires importers to prove that their products do not contain forced labour.<sup>56</sup> This policy builds on Section 307 of the 1930 Tariff Act, under which it is illegal to import "goods, wares, articles, and merchandise mined, produced, or

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<sup>54</sup> Amnesty International, Recharge for Rights: Ranking the Human Rights Due Diligence Reporting of Leading Electric Vehicle Makers, October 2024.

<sup>55</sup> Morrison Foerster website, UK Companies Responsible for Business and Human Rights Violations Overseas, June 2020.

<sup>56</sup> US Congress, H.R.1155 - Uyghur Forced Labor Prevention Act, December 2022.

manufactured wholly or in part” by forced labour.<sup>57</sup> It has been seen as successful, with U.S. Customs seizing over 9,000 shipments worth \$3.4 billion between June 2022 and July 2024. The act has reduced demand for Xinjiang-made products and increased supply chain diversity, bringing products in from countries like Mexico, Vietnam and India.<sup>58,59</sup>

- **Canada Forced and Child Labor in Supply Chains Act 2024:** Canada’s 2024 Forced and Child Labor in Supply Chains Act takes a less protectionist approach than the US, focusing on inwardly directing measures to protect human rights domestically, similar to the UK’s Modern Slavery Act (MSA). However, the Canadian act addresses the MSA’s weaknesses by mandating detailed disclosure requirements, holding directors and officers personally liable for non-compliance, and imposing fines of up to \$250,000.<sup>60</sup> While its effectiveness is yet to be seen, the act’s comprehensive approach and stricter enforcement make it a clear improvement over the UK’s vague and less stringent legislation.
- **EU CSDDD 2024:** The **EU Corporate Sustainability Due Diligence Directive (CSDDD)** is the world’s most comprehensive legislation mandating corporate due diligence. It requires large businesses operating in the EU to identify and address human rights and environmental risks in their operations, supply chains, subsidiaries, and business partners worldwide. The directive establishes a harmonised legal framework to enhance social and environmental sustainability and mandates transition plans aligned with the Paris Agreement’s 2050 Net Zero targets and European Climate Law. The directive applies to EU-based companies with a global turnover exceeding €450 million and all non-EU based companies that have a net turnover of €450 million per year within the EU. Businesses must implement and fund due diligence processes, bear the costs of necessary improvements, and ensure compliance across their value chains. Enforcement will be managed by national authorities, coordinated through an EU-wide network, with penalties including fines and civil compensation for victims of due

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<sup>57</sup> US House Code, 19 USC 1307: Convict-made goods; importation prohibited, (last updated) February 2016.

<sup>58</sup> Department for Homeland Security, Fact Sheet: In Just Two Years, Forced Labor Enforcement Task Force and the Uyghur Forced Labor Prevention Act Have Significantly Enhanced Our Ability to Keep Forced Labor Out of U.S. Supply Chains, July 2024.

<sup>59</sup> Anti-Slavery International, What is the impact of the US Uyghur Forced Labor Prevention Act One Year On?, accessed 23 November 2024

<sup>60</sup> Public Safety Canada, 2024 Annual Report to Parliament on the Fighting Against Forced Labour and Child Labour in Supply Chains Act, October 2024.

diligence failures. The directive will be fully applied to all eligible companies by mid-2029.<sup>6162</sup>

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<sup>61</sup> European Commission website, Corporate sustainability due diligence, accessed 4 January 2025.

<sup>62</sup> European Parliament, Directive (EU) 2024/1760 of the European Parliament and of the Council of 13 June 2024 on corporate sustainability due diligence and amending Directive (EU) 2019/1937 and Regulation (EU) 2023/2859, 13 June 2024

## Section 4: Policy Recommendations

The reality within EV supply chains of human rights abuses, environmental concerns and economic mismanagement do not align with the idea of a sustainable Britain. Britain's legislation and attitudes on supply chain sustainability are incompatible with improvement. This section provides a set of recommendations to the Labour Government on policy that can be used to ensure the ZEV mandate is achieved equitably. New due diligence legislation must be created, with achievable but ambitious objectives, sensible eligibility criteria and a robust enforcement strategy. Policy to equitably and fairly diversify supply chains is also required. First, new due diligence measures must be enacted.

### 1. Mandatory Human Rights and Environmental Due Diligence Requirements

Organisations should be required to produce an annual report on steps that they are taking to tackle real and potential risks to the environment and human rights within their operations, domestically and abroad. An act such as this has the ability to not just clean up EV supply chains, but to put pressure on all businesses to improve supply chain sustainability. While it may seem extremely generalist, due diligence legislation of this kind would hold businesses with more risks in their supply chains – such as EV manufacturers – to the highest account.

- **Businesses should be given mandatory reporting requirements**

Corporate due diligence legislation aims to “identify, prevent and mitigate adverse human rights and environmental impacts” in domestic and international operations.<sup>63</sup> However, the Modern Slavery Act, the UK's only active legislation on due diligence, focuses on transparency rather than action. It has no exact requirements for contents, only recommendations on what it could include. It uses permissive language such as “may” instead of “must”. It also allows businesses to publish statements if no action has been taken. A new set of due diligence requirements should be more comprehensive.

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<sup>63</sup> Corporate Justice Coalition, Human rights and environmental due diligence, accessed 6 January 2025.

Firstly, a due diligence report should be mandatory. There should be no option to post a statement that the business has taken no steps to mitigate human and environmental rights within supply chains, as there is in the MSA. The report's requirements should incorporate more forceful language than that used in the MSA. The use of the word "may" should be replaced with the word "must", and this goes for other language that creates ambiguity. Due diligence legislation should be exact in its language to prevent misinterpretation and legal contradiction from businesses, and in the case of prosecution, from courts.

A list of requirements for the content of a due diligence report should be laid out by Parliament. This should include, but not be limited to:

- Exact measures for identifying and assessing actual and potential adverse impacts.
- Guidance for prioritisation of the most serious identified actual and potential adverse impacts.
- Prevention or adequate mitigation of adverse impacts.
- Bringing actual adverse impacts to an end.
- Remediation of actual adverse impacts to stakeholders.

Each of these sections should all contain their own clear and mandatory steps on how to achieve these objectives, alongside guidance. Whilst reporting requirements and appropriate action should be mandatory, they should not be over specific. These requirements and steps should be applicable to all sectors of business. They should, however, be detailed enough to avoid misinterpretation.

These reporting requirements should also be applicable to the public sector. Initial complaints that the public sector was not included within the MSA's Section 54 requirements led to the act being updated to include the public sector.<sup>64</sup> This should be an initial requirement of due diligence policy to avoid potential future amendments.

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<sup>64</sup> Home Department, Independent Review of the Modern Slavery Act 2015: Final Report, May 2019.

A positive amendment to the MSA was the 2021 creation of a modern slavery statement registry. It acts as a portal to access the modern slavery statements of organisations which have chosen to publish their statements. This is not mandatory, however. Organisations are only required to publish their statements “in a prominent place on their website”.<sup>65</sup> To enhance transparency and accessibility, all organisations should be required to publish their due diligence statements on a similar mandatory registry.

**The government must enforce mandatory due diligence reporting legislation with legal requirements for its contents. A publishing register should be created alongside this. This should apply to both the public and private sector.**

- **A solid enforcement strategy should be created**

As has been proven by the lack of engagement with Section 54 of the MSA, simply asking organisations to comply with due diligence legislation is not enough. Real consequences should be applicable to companies that do not abide by the legislation’s requirements. Canada, for example, has strong, enforceable strategies including set fines for punishing non-compliance with their Forced and Child Labor in Supply Chains Act. The EU is in the process of establishing national bodies to enforce their CSDDD strategy. Britain should turn to these countries as positive examples. Enforcement strategy should first determine responsibility for lack of compliance. This ensures that the correct people can be held accountable.

Within Canadas Forced and Child Labor in Supply Chains Act, the directors of companies can be held directly liable for providing a misleading or false statement. This should be mirrored within UK due diligence legislation to ensure organisations take the act seriously. A due diligence report should be signed by at least one company director or senior individual who has commissioned the report to ensure that they have confirmed that the report is correct, not misleading and does not contain any false statements.

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<sup>65</sup> HM Government website, UK Modern Slavery Register, accessed 8 January 2024.



Should prosecution for failure of compliance be required, exact punishment should be stated within legislation. A penalty should be applied to all eligible companies which fail to release a due diligence statement. The company's turnover should be considered when issuing fines for non-compliance. Canada's requirements include a fine of up to \$250,000 (~£150,000), whereas the EU's CSDDD punishments include a fine requiring a percentage of net turnover. Non-compliant companies should be "named and shamed", with their failings published on a registry.

**Compliance with due diligence legislation should be enforced through financial penalties. Directors of companies should be held directly accountable for non-compliance. An independent regulatory body should be established to monitor compliance.**

To enforce and manage the legislation, an independent regulatory body should be created. They should have power to monitor compliance, issue fines and prosecute for non-compliance, "naming and shaming" non-compliant organisations and ensuring compensation is provided to victims damaged by non-compliance.

- **A reasonable threshold for eligibility should be applied**

Current eligibility criteria should align with standardised government definitions. The Environment Act 2021 has an eligibility requirement for companies with a net turnover of £50 million, which does not align with any government definitions for businesses.

Eligibility for Section 54 of the MSA is an annual turnover of £36 million, which is the government definition of a "large business". This would be a reasonable threshold for eligibility. All businesses operating in the UK should be considered. If a foreign-based business earns over £36 million within the UK, this should make them eligible.

Canada's Forced and Child Labor in Supply Chains Act requires all businesses, regardless of turnover, to produce a due diligence statement. This could have a larger positive impact on supply chain sustainability, however may be financially more difficult for smaller businesses to implement, and could create backlash toward the law. This should be reviewed after a reasonable length of time.

**The threshold to qualify for mandatory due diligence should be an annual turnover within the UK of £36 million to align with the government definition of a "large business". This should be reviewed with time to determine if this legislation should be applied to smaller businesses.**

- **A reasonable and clear timeframe should be provided**

The 2021 Environment Act has come under scrutiny for its lack of timeframe. Whilst primary legislation was laid out to explain the purpose of the act and its requirements, no timeframe was given for when the requirements will be enforced. This should come as detailed secondary legislation, but more than three years on there has been no update on when this will happen. This creates uncertainty and a lack of faith in the act.

To ensure confidence is maintained in due diligence legislation, a reasonable and clear timeframe should be created. It should give milestones for secondary legislation, stages of implementation and a submission deadline for due diligence reports. Should government fail to meet targets, it should be clear in advance that targets will not be met. However, if appropriate preparation and reasonable dedication are applied, then there is less likelihood of missed deadlines.

If no timeline is set, a lack of faith in the government's commitment is created. This can lead to market uncertainty surrounding the legislation. It also does not allow businesses to set themselves realistic targets as they are left in the dark.

**A sensible timeframe with clear milestones should be created. It should note when all parts of the legislation will be implemented. It should avoid all uncertainty and be as realistic as research will allow.**

## 2. Improve the Diversification of the EV Supply Chain

As this report has shown, EVs require minerals that are sourced from an increasingly small number of countries. With China – and to some extent Indonesia – moving towards potential monopolisation of resources, it is important to create a bulwark against economic shocks. Diversifying supply chains is essential. Government policy should reflect this to ensure a just transition to Net Zero with as little economic risk as possible. This should have the objective of raising the ethical standards of critical mineral sourcing for BEVs, alongside improving the financial stability and competitiveness of EV supply chains.

- **Ban imports from areas with significant rights abuses**

Products produced wholly or in part in locations that are directly associated with either human rights abuses or severe environmental damages should not enter into the UK. The USA's UFLPA has been effective in preventing products created through forced labour from entering their country. Operating a similar law in the UK could have an effect on a similar scale.

The government should first assess regions where there is potential for human rights and intentional environmental abuses. If compelling evidence is found that significant abuses exist within these regions, there should be action taken to remove these abuses from supply chains. This should be done by fully prohibiting these imports.

Products that are produced wholly or in part within these regions should be identified and flagged as high-risk to require importers to prove that these products do not come from these regions. If they cannot prove that flagged products do not originate from blacklisted regions, they should not be allowed into the UK. In terms of critical minerals for EVs, flagged products could include those made with aluminum and cobalt. Whilst this may require extensive due diligence from importers, it is completely necessary for improving the sustainability of supply chains.

Banning imports from specific areas has the potential to diversify supply chains. Xinjiang-region goods being banned in the USA has led to products originally imported from the region (such as aluminium or cotton) being

imported from Mexico, India and Vietnam. Following suit with the USA could diversify EV supply chains for the UK and improve their integrity and transparency.

The government should have extremely compelling evidence to blacklist an area. If too many areas are blacklisted, prices of products could be significantly impacted. Diplomatic fallout could also be great.

The blacklisted areas should be reviewed annually to identify if original concerns still remain. If blacklisted areas have improved their rights, then they should be taken off the list and trade should continue as normal.

**Products from regions with large environmental and human rights abuses should be outright banned from the UK. Importers should have to prove at-risk products were not made in banned locations.**

- **Establish free trade agreements with non-dominant countries in the EV supply chain**

Stronger trade relationships with countries upstream and midstream in EV supply chains should be developed. Diversifying supply chains is essential to protect against economic shocks. By establishing free trade agreements (FTAs) with a larger variety of nations, EV supply chains can be financially protected.

As discussed previously, China's dominance within refinement of EV critical minerals is bordering on monopolistic. If China were to enforce large sanctions on the UK, the ZEV mandate timeframe would be damaged and EV prices would skyrocket. This applies to other dominant countries upstream within the EV supply chain, such as the DRC and its 60% market share of cobalt.

Creating free trade agreements via the WTO for EV components and critical minerals could strengthen supply chains. Countries that should be focused on should be those with large untapped supplies of critical

minerals such as Brazil, or the industrial capability to produce EV components and refine materials en masse, such as India.<sup>66</sup> ]

Creating EV-based FTAs would allow Britain to remain competitive through preferential tariff rates. This would allow for a green transition with a more financially robust supply chain. FTAs can also be used from Britain's side to reward countries with positive human rights and environmental sustainability records through more preferential contracts.

**Britain should create FTAs based on components in the EV supply chain. Countries with positive human rights and environmental records must be rewarded with FTAs. Investment in countries that aren't well established in EV supply chains but have the capability to be should be**

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<sup>66</sup> Ravi, K. and Naveenchandran, P., Automobile manufacturing in India by 2050 – War on EV, March 2023.

## Conclusion

As we charge forward toward a green horizon, we should have a quick look around. A green future with our net zero goals achieved is very much possible; however, there is a cost to this. To achieve the 2030/2035 objective of total zero emissions capability for all new cars sold, sourcing EVs and their components must rise nearly fivefold. The amount of critical minerals required for EVs must rise accordingly. As this report has found, this has created large concern for the sustainability of EV supply chains.

UK policy currently shies away from addressing the issues impacting EV supply chain sustainability – a severe lack of import diversity, massive human rights abuses and a total destruction of habitats and ecosystems all need tackling. This report has covered the many flaws with British policy for confronting these problems. Minimal due diligence is required by law, along with heavily conflicting political and legal definitions, creating an air of uncertainty and a lack of action.

The government needs to stop its lacklustre approaches to supply chain sustainability. Other EV importing nations and blocs have identified and acted upon the issues that this report has highlighted – including the USA, Canada and the EU. Britain must follow suit to help raise the standard in EV supply chains.

New environmental and human rights due diligence legislation should be created. This should be mandatory with specific and high standard requirements for all organisations with an annual turnover of £36 million and above. An independent regulatory body should be established to enforce the requirements, with directors facing direct and tangible consequences for non-compliance. A sensible timeframe for phasing in should be established to allow businesses to adapt to the changes.

Policies to encourage more diverse EV supply chains are necessary to both prepare against economic shocks, and to address social and environmental concerns. Firstly, the UK should begin by banning any goods made wholly or in part from regions with extremely poor human rights and environmental records, with a focus on specific high-risk products such as EV critical minerals. Importers should prove these products are not from banned regions.

Secondly, free trade agreements should also be established for EVs and their parts. These should specifically be arranged with countries with both strong human rights and environmental records, and from countries with large extraction and production capabilities for EVs and their critical minerals.

The Government should act quickly. As we drive forward, more and more problems will contaminate our EV supply chains. Preparation against this needs to start now to make a real impact down the line and help achieve an equitable and successful ZEV mandate.

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