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UNVEILING THE DARK SIDE OF INNOVATION: SUSTAINABILITY, COBALT MINING, AND MODERN-DAY SLAVERY

*Kaitlin Schleich**

ABSTRACT

As the need and demand for sustainability come to the forefront of innovative efforts by technology companies, the use of rechargeable batteries has only become more prominent. A critical mineral in the manufacture of such batteries is cobalt. Looking deeper into how manufacturers get their hands on cobalt exposes the troubling cobalt-mining practices largely taking place within the Democratic Republic of Congo (DRC). This article dives into the underbelly of the cobalt-mining industry, revealing the egregious human-rights abuses occurring in the DRC and examining the current legal and ethical landscape surrounding cobalt mining around the world.

In both small-scale artisanal mines and larger industrial mines, child labor, physical and verbal abuse, and non-livable, low wages are commonplace. As the mines expand, and the land, homes, and farms of Congolese residents are destroyed in the process, Congolese people wind up with little to no choice but to work in the mines. This article addresses how current legislation and initiatives in the United States and internationally miss the mark in responding to the increasing volume of problems in the DRC's cobalt mines, and how past cases involving human rights abuses in the supply chains of United States companies have panned out. Finally, this article emphasizes the need for change and reform as innovation efforts continue to increase worldwide.

INTRODUCTION

The era of technological advancements is upon us, and many of these advancements depend on the use of one critical mineral: cobalt.¹ Cobalt is essential for the production of many products consumers use every day.² Among other uses, cobalt is a vital element in making lithium-ion batteries, which are used to power phones, computers, electric vehicles, solar panels, watches, and

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1. Matthew Casey, *Cobalt: A Necessary Evil Within Tech Industries?*, (Apr. 22, 2021), <https://storymaps.arcgis.com/stories/2108eab0bd26476691e9463d5c73605e> [<https://perma.cc/74EG-X2HG>].

2. *Id.*

medical equipment.³ As the climate crisis continues to make headlines, more consumers are looking for companies to provide sustainable solutions.⁴ Because things like solar panels and electric vehicles are more sustainable than their alternatives, the demand for them is increasing, and with it, the demand for cobalt.⁵ Global cobalt production is expected to grow 585% by 2050.⁶ While the introduction of advancements in technology is seen as emblematic of progress in both innovation and sustainability efforts, looking behind the curtain into how such products are made paints a not-so-pretty picture.

The untold story behind these advancements lies in the cobalt mines of the Democratic Republic of Congo (DRC).⁷ About 70% of the world's cobalt comes from the DRC.⁸ Companies such as Tesla, Apple, Google, and Microsoft rely on this cobalt to make many of their products.⁹ Within these mines, tremendous amounts of human rights violations are taking place, comprised of child labor, violence, sexual assault, low wages, and long hours.

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3. *The Seven Top Uses For Rechargeable Lithium-Ion Batteries*, RELION BATTERY (Oct. 19, 2015), <https://www.relionbattery.com/blog/the-seven-top-uses-for-rechargeable-lithium-ion-batteries> [<https://perma.cc/4UVZ-3KRL>].
 4. Katherine White et al., *The Elusive Green Consumer*, HARVARD BUSINESS REVIEW, July–Aug. 2019, at 125, 126, <https://hbr.org/2019/07/the-elusive-green-consumer> [<https://perma.cc/9GJY-Q8C5>].
 5. Aphra Murray, *Cobalt Mining: The Dark Side of the Renewable Energy Transition*, EARTH.ORG (Sept. 27, 2022), <https://earth.org/cobalt-mining/> [<https://perma.cc/8DWR-V9R8>].
 6. Kirsten Lori Hund et al., *Changing Mining Practices and Greening Value Chains for a Low Carbon World*, INTERGOVERNMENTAL FORUM ON MINING, MINERALS, METALS & SUSTAINABLE DEVELOPMENT (Oct. 8, 2019), <https://www.igfmining.org/changing-mining-practices-and-greening-value-chains-for-a-low-carbon-world/> [<https://perma.cc/WY7Y-X64L>].
 7. RAID, *The Road to Ruin?: Electric Vehicles and Workers' Rights Abuses at DR Congo's Industrial Cobalt Mines*, RAID 10 (Nov. 2021), https://raid-uk.org/wp-content/uploads/2023/03/report_road_to_ruin_evs_cobalt_workers_nov_2021.pdf [<https://perma.cc/CJP8-MB3V>].
 8. Victoria Beaulé, *Artisanal Cobalt Mining Swallowing City in Democratic Republic of the Congo, Satellite Imagery Shows*, ABC NEWS (Feb. 8, 2023, 5:02 AM), <https://abcnews.go.com/International/cobalt-mining-transforms-city-democratic-republic-congo-satellite/story?id=96795773#> [<https://perma.cc/5TGA-JG2K>].
 9. Ewelina U. Ochab, *Are These Tech Companies Complicit in Human Rights Abuses of Child Cobalt Miners in Congo?*, FORBES (Jan. 13, 2020, 5:12 PM), <https://www.forbes.com/sites/ewelinaochab/2020/01/13/are-these-tech-companies-complicit-in-human-rights-abuses-of-child-cobalt-miners-in-congo/?sh=38c64c203b17> [<https://perma.cc/LSB8-KY3V>].

I. THE COSTS AND EFFECTS OF COBALT MINING

A. Modern-Day Slavery & the Environmental Effects of Cobalt Mining

Mining itself is already considered one of the most dangerous jobs, proven by toxic atmospheres and walls around mining pits collapsing.¹⁰ Those inherent risks only make up a small part of the challenges cobalt miners face. Miners in the DRC are often subject to astonishing human rights violations so severe that it has gained the status of modern-day slavery.¹¹ As mines expand, Congolese residents are forcibly evicted from their homes without notice and with little to no compensation.¹² Left with nothing, Congolese people are forced with the decision to either starve or work in the mines for around a dollar a day.¹³ Parents must choose between sending their children to school or eating that day, often bringing their young children with them to mine for a few more cents to put food on the table.¹⁴ And where their farmlands are converted for mining, food and crops can no longer grow.¹⁵

There is a clear dichotomy between cobalt mining's use to power efforts for sustainability and the environmental impact of cobalt mining in the DRC. While electric vehicles are being used to reduce greenhouse gases and carbon emissions around the world, the DRC takes on massive amounts of pollution and toxic dumping into its local communities.¹⁶ The pollution that comes from cobalt mining leads to the destruction of the nation's ecosystems and wildlife,

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10. *We Need to Talk About Mining: Death, Dangers & Prevention*, HOWDEN (Dec. 5, 2019), <https://www.howden.com/en-us/articles/mining/we-need-to-talk-about-mining> [https://perma.cc/QDV4-DH8K].
 11. Terry Gross, *How 'Modern-Day Slavery' in the Congo Powers the Rechargeable Battery Economy*, NPR (Feb. 1, 2023, 12:38 PM), <https://www.npr.org/sections/goatsandsoda/2023/02/01/1152893248/red-cobalt-congo-drc-mining-siddharth-kara> [https://perma.cc/Y7NE-2TT4].
 12. *Democratic Republic of the Congo: Industrial Mining of Cobalt and Copper for Rechargeable Batteries is Leading to Grievous Human Rights Abuses*, AMNESTY INTERNATIONAL (Sept. 12, 2023), <https://www.amnesty.org/en/latest/news/2023/09/drc-cobalt-and-copper-mining-for-batteries-leading-to-human-rights-abuses/#> [https://perma.cc/F6XZ-MCL4].
 13. Gross, *supra* note 11.
 14. *Id.*
 15. Amanda Morris, *Understanding Cobalt's Human Cost*, NORTHWESTERN NOW (Dec. 17, 2021), <https://news.northwestern.edu/stories/2021/12/understanding-cobalts-human-cost/> [https://perma.cc/HL28-W32M].
 16. Charlotte Davey, *The Environmental Impacts of Cobalt Mining in Congo*, EARTH.ORG (Mar. 28, 2023), <https://earth.org/cobalt-mining-in-congo/#> [https://perma.cc/Y9C8-P7DV].

and the contamination of its soil and water.¹⁷ Further, cobalt is toxic to humans, and the “particles emitted during cobalt mining consist of radioactive emissions, cancer-causing particles, and particles which may cause vision problems, vomiting and nausea, [and] thyroid damage.”¹⁸ Continued exposure can even lead to various lung, respiratory, and skin diseases.¹⁹

B. Conditions in Cobalt Mines

There are two types of cobalt mines: large-scale industrial mines and small-scale artisanal mines.²⁰ Although industrial and artisanal mines are different, there is “complete cross-contamination” between the two.²¹ Artisanal miners also work at the industrial mines and sell their own mined cobalt to industrial mining companies, so the lines between the industrial and artisanal mines are blurred with both contributing to the brutal working conditions for the Congolese miners.²²

Around 80% of the DRC’s cobalt is extracted from industrial mines.²³ While large-scale, industrial mines are often presented as “clean,” “sustainable,” and “ethical,” the reality provides a much different story.²⁴ Workers employed by these subcontractors have commonly reported low wages, excessive hours, inadequate safety measures, chronic health problems with inadequate healthcare, racism, discrimination, and degrading treatment.²⁵ Not only are Congolese workers verbally attacked, but many report being physically beaten,

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17. Shahjadi Hisan Farjana et al., *Life Cycle Assessment of Cobalt Extraction Process*, 18 JOURNAL OF SUSTAINABLE MINING 150, 150 (2019).
 18. *Id.*
 19. *Id.*; *The Toll of the Cobalt Mining Industry on Health and the Environment*, CBS NEWS (Mar. 6, 2018, 5:29 PM), <https://www.cbsnews.com/news/the-toll-of-the-cobalt-mining-industry-congo/> [<https://perma.cc/MKA7-8WCL>].
 20. Gross, *supra* note 11.
 21. *Id.*; Alan Ohnsman, *Battery Push by Tesla and Other EV Makers Raises Child Labor Concerns*, FORBES (Feb. 8, 2023, 12:00 AM), <https://www.forbes.com/sites/alanohnsman/2023/02/08/battery-push-by-tesla-and-other-ev-makers-raises-child-labor-concerns/?sh=664b60a67789> [<https://perma.cc/8PB6-WLWW>].
 22. Zachary Booth, *US Involvement in Central African Mining*, ACE (Sept. 12, 2023, 12:06 PM), <https://ace-usa.org/blog/research/research-foreignpolicy/us-involvement-in-central-african-mining/> [<https://perma.cc/6Q3F-LX3D>].
 23. RAID, *supra* note 7, at 3.
 24. *Id.* at 3, 56.
 25. *Id.* at 3.

slapped, and kicked for simple mistakes and misunderstandings, as well as for doing nothing wrong at all.²⁶

Large industrial mining companies such as Glencore's Kamoto Copper Company—where companies like Tesla, Google, Apple, and Microsoft source (or have sourced) their cobalt—have been found to be complacent with the conditions, at best, or exacerbate them, at worst.²⁷ Glencore has been the subject of “the highest number of human rights allegations in Africa,” and while they formally deny having any part of them, researchers and first-hand accounts have found Glencore taking part in such violations, including buying cobalt from artisanal mines where child labor is used.²⁸ Further, industrial mining companies typically use subcontracts with companies to supply the labor rather than the company hiring the labor itself.²⁹ This is done purposely to mitigate liability for the human rights abuses occurring with “minimal checks” on the subcontractors' activity.³⁰

Artisanal mines—small-scale, informal mines—make up the remaining approximate 20% of the DRC's cobalt production, and the conditions are even worse.³¹ In addition to the same human rights violations occurring in industrial mines, artisanal miners have reported mining cobalt with their bare hands, accelerating the health problems associated with cobalt, as well as the increased physical demands.³² Child labor is a huge issue in artisanal mines as

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26. *Id.* at 4; *DRC: Report Reveals Dire Working Conditions, Discrimination & Low Pay Across Cobalt Mines Supplying Electric Vehicle Manufacturers*, BUSINESS & HUMAN RIGHTS RESOURCE CENTRE (Nov. 7, 2021), <https://www.business-humanrights.org/en/latest-news/drc-report-reveals-dire-working-conditions-discrimination-low-pay-across-cobalt-mines-supplying-electric-vehicle-manufacturers/> [<https://perma.cc/5EYR-W8G2>].
 27. *See* Caroline Dumoulin, *Accountable for Corruption, But Not for Human Rights Abuse: The Case of Glencore*, INTERNATIONAL CORPORATE ACCOUNTABILITY ROUNDTABLE (Aug. 5, 2022), <https://icar.ngo/accountable-for-corruption-but-not-for-human-rights-abuse-the-case-of-glencore/#:~:text=Glencore%20has%20formally%20denied%20any,many%20of%20the%20alleged%20injuries> [<https://perma.cc/9E55-L46C>].
 28. *Id.*
 29. RAID, *supra* note 7, at 4.
 30. *Id.* at 16.
 31. *See* Michael Posner, *To Meet Global Cobalt Demand, Companies Must Reform Mining Practices in the Congo*, FORBES (Feb. 9, 2023, 1:40 PM), <https://www.forbes.com/sites/michaelposner/2023/02/09/as-demand-soars-for-cobalt-used-in-electric-car-batteries-heres-what-companies-need-to-do-in-the-democratic-republic-of-congo/?sh=16b900d26471> [<https://perma.cc/MC3P-GFP8>].
 32. *Id.*

well.³³ “Of the 255,000 Congolese mining for cobalt, 40,000 are children.”³⁴ The working conditions for the children are no better than for adults. They are subject to work over twelve hour days and are paid even less than adults.³⁵ Further, women working in the artisanal mines experience astounding amounts of violence.³⁶ In a study conducted by the Women’s International League for Peace and Freedom, “73.75% of women [they] met said that the women are subjected to sexual violence,” in addition to other violent undertakings by the men on site.³⁷

II. THE LEGAL LANDSCAPE OF COBALT MINING AROUND THE WORLD

A. The DRC’s Action

In an effort to reform the mining practices in the DRC, the nation revised its mining code in 2018.³⁸ The changes made were largely to increase royalties and taxes paid to the DRC from foreign mining companies.³⁹ In an ideal world, the increased money to the DRC would go towards the local Congolese people most affected by the mining.⁴⁰ However, corruption within the nation’s government has made it unlikely for any improvements to materialize.⁴¹ Given the DRC’s history of being deeply impoverished, and the amount of violence and war in the country, the money brought in by the country’s mining industry has only led to more corruption as the people and government alike are desper-

33. Michele F. Lawson, *The DRC Mining Industry: Child Labor and Formalization of Small-Scale Mining*, WILSON CENTER (Sept. 1, 2021), <https://www.wilson-center.org/blog-post/drc-mining-industry-child-labor-and-formalization-small-scale-mining> [https://perma.cc/ULM6-63YQ].

34. *Id.*

35. Eleonora Tria, *The Impact of Covid-19 on Child Labor in Cobalt Mines in the DRC*, HUMANIUM (May 4, 2021), <https://www.humanium.org/en/the-impact-of-covid-19-on-child-labour-in-cobalt-mines-in-the-drc/> [https://perma.cc/PC85-MVRV].

36. *Life at the Bottom of the Chain: Women in Artisanal Mines in DRC*, WOMEN’S INTERNATIONAL LEAGUE FOR PEACE & FREEDOM 17 (Aug. 2016), https://www.peacewomen.org/sites/default/files/WomenInArtisanalMinesInDRC_web.pdf [https://perma.cc/8X8W-RNVT].

37. *Id.*

38. Heidi Vella, *Overhauling the DRC’s Mining Code*, MINING TECHNOLOGY (Mar. 28, 2018), <https://www.mining-technology.com/features/overhauling-drcs-mining-code/?cf-view> [https://perma.cc/V9F5-CGHQ].

39. *Id.*

40. *Id.*

41. *Id.*

ate for money.⁴² With such a weak government, it is not hard to fathom how the laws and regulations in place have “not always [been] fully respected.”⁴³ The 2018 reform also set out penalties in order to prevent the use of child labor, yet child labor in the mines still persists.⁴⁴

B. The United States

“Today there is no regulation of the global cobalt market.”⁴⁵ In 2010, the United States Congress passed Section 1502 of the Dodd-Frank Act.⁴⁶ This conflict minerals provision requires public U.S. companies to “disclose their use of tin, tungsten, tantalum and gold (3TGs) in their products and determine if they are sourced in an ethical manner.”⁴⁷ Congress passed the provision in order to combat the conditions and exploitation in the DRC.⁴⁸ While the Act covers other minerals including titanium, gold, tin, and tungsten, cobalt is notably excluded from the act.⁴⁹ While activists are lobbying for cobalt to be added to the list of conflict minerals, no such change has been made.⁵⁰ With

42. Gross, *supra* note 11.

43. *Democratic Republic of Congo: Country Mining Guide*, KPMG INTERNATIONAL 1, 10 (2014), <https://assets.kpmg.com/content/dam/kpmg/pdf/2014/09/democratic-republic-congo-mining-guide.pdf> [<https://perma.cc/86VU-J76D>].

44. Oluwale Ojewale, *What Coltan Mining in the DRC Costs People and the Environment*, THE CONVERSATION (May 29, 2022, 4:26 AM), <https://theconversation.com/what-coltan-mining-in-the-drc-costs-people-and-the-environment-183159> [<https://perma.cc/R2RE-82XF>].

45. *Exposed: Child Labour Behind Smart Phone and Electric Car Batteries*, AMNESTY INTERNATIONAL (Jan. 19, 2016), <https://www.amnesty.org/en/latest/news/2016/01/child-labour-behind-smart-phone-and-electric-car-batteries/> [<https://perma.cc/6C94-E3K8>] [hereinafter *Exposed*].

46. *U.S. Conflict Minerals Law*, GLOBAL WITNESS (Nov. 15, 2017), <https://www.globalwitness.org/en/campaigns/conflict-minerals/dodd-frank-act-section-1502/> [<https://perma.cc/VT6M-4RAX>].

47. *What is Section 1502 of the Dodd-Frank Wall Street Reform & Consumer Protection Act?*, ASSENT, <https://www.assent.com/resources/knowledge-article/what-is-section-1502-of-the-dodd-frank-wall-street-reform-consumer-protection-act/> [<https://perma.cc/MY2A-7DEQ>] (last visited Nov. 2, 2023).

48. *See Disclosing the Use of Conflict Minerals*, U.S. SECURITIES AND EXCHANGE COMMISSION (Mar. 14, 2017), <https://www.sec.gov/opa/Article/2012-2012-163htm---related-materials.html> [<https://perma.cc/Y3KH-UBYJ>].

49. *Exposed*, *supra* note 45.

50. Hermes, *Modern Slavery: The True Cost of Cobalt Mining*, HUMAN TRAFFICKING SEARCH (2017), <https://humantraffickingsearch.org/resource/modern-slavery-the-true-cost-of-cobalt-mining/> [<https://perma.cc/55WN-SQWX>].

no other U.S. legislation regarding cobalt or ethical international mining practices, nothing has been done at the statutory level to address the pressing issues in the DRC's cobalt mining industry.

C. China

China is the biggest trade partner of the DRC, and many U.S. companies purchase cobalt from Chinese mining companies, so it is worth looking at the Chinese government's treatment of cobalt mining as it falls into U.S. companies' supply chains.⁵¹ The China Chamber of Commerce of Metals, Minerals, and Chemicals Importers and Exporters (CCCMC), issued its Guidelines for Social Responsibility in Outbound Mining Investment in 2014.⁵² These guidelines provide that "Chinese mining companies undertaking outbound mining investment, cooperation, and trade to strictly 'observe the UN Guiding Principles on Business and Human Rights during the entire life-cycle of the mining project.'"⁵³ In addition, the CCCMC has published its Chinese Due Diligence Guidelines for Responsible Mineral Supply Chains, setting out the steps and risks that Chinese mining companies must consider when making mining decisions.⁵⁴ However, these guidelines are generally treated as optional, as many of the guidelines are voluntary and enforcement is practically non-existent.⁵⁵ The only other relevant legislation in China is its Company Law, which simply requires companies included under the laws to "observe social morals and commercial ethics," and "assume social responsibility."⁵⁶ With such unspecific and unenforceable laws, many Chinese mining companies are repeatedly accused of causing and perpetuating the issues in the DRC, with corruption being at the center of the allegations.⁵⁷

51. See Alex Colville, *Mining the Heart of Africa: China and the Democratic Republic of Congo*, THE CHINA PROJECT (June 7, 2023), <https://thechinaproject.com/2023/06/07/mining-the-heart-of-africa-china-and-the-democratic-republic-of-congo/> [https://perma.cc/8J7N-LCMH].

52. Rodrigo Castillo & Caitlin Purdy, *China's Role in Supplying Critical Minerals for the Global Energy Transition: What Could the Future Hold?*, THE BROOKINGS INSTITUTION 16 (July 2022), https://www.brookings.edu/wp-content/uploads/2022/08/LTRC_ChinaSupplyChain.pdf [https://perma.cc/8F2S-BGNK].

53. *Id.*

54. *Id.*

55. *Id.*

56. Zhonghua Renmin Gongheguo Gongsifa (中华人民共和国公司法) [The Company Law of the People's Republic of China] (promulgated by the Standing Comm. National People's Cong., Oct. 27, 2005, effective Jan. 1, 2006), no. 42, 2005 P.R.C. LAWS.

57. Castillo & Purdy, *supra* note 52, at 16-17.

D. The European Union

The European Union (E.U.) has a conflict minerals law similar to the United States: The Conflict Minerals Regulation.⁵⁸ And like the United States, it does not apply to cobalt.⁵⁹ That being said, recent legislation throughout the E.U. has shown a bit more promise. In January of 2023, Germany enacted the Corporate Due Diligence Obligations in Supply Chains Act.⁶⁰ This Act directly addresses companies' obligations to ensure their direct suppliers are not committing serious human rights violations; however, in terms of scope, the law only applies to 0.001% of German companies and only requires companies to check with their direct suppliers.⁶¹ In France, the Corporate Duty of Diligence Law was passed in 2017, which requires large companies to “effectively manage their human rights and environmental risks,” and publish a vigilance plan every year.⁶² This Act, however, has proven difficult to implement.⁶³ The United Kingdom enacted the Modern Slavery Act in 2015, which requires companies under the purview of the act to publish “annual slavery and human trafficking statements[s],” where companies are required to pinpoint how the cobalt used in their products was mined.⁶⁴ The Dutch adopted the Child Labor Due Diligence Law requiring Dutch companies to prevent child labor in

58. *Conflict Minerals Regulation: The Regulation Explained*, EUROPEAN COMMISSION, https://policy.trade.ec.europa.eu/development-and-sustainability/conflict-minerals-regulation/regulation-explained_en [<https://perma.cc/9KBY-AYUC>] (last visited Nov. 2, 2023) [hereinafter *Conflict Minerals Regulation*].

59. *See id.*

60. *The German Supply Chain Act: Overview and the Practical Challenges for Companies*, NORTON ROSE FULBRIGHT (Feb. 2023), <https://www.nortonrosefulbright.com/en/knowledge/publications/ff7c1d04/the-german-supply-chain-act#:~:text=The%20Supply%20Chain%20Act%20imposes,human%20rights%20or%20environmental%20violations> [<https://perma.cc/JJA6-65CD>] [hereinafter *The German Supply Chain Act*].

61. Caspar Dohmen, *Holding Companies Responsible*, ZEITGEISTER (Oct. 2021), <https://www.goethe.de/prj/zei/en/art/22370005.html> [<https://perma.cc/J8EU-Y5ZN>].

62. *All You Need to Know About France's Corporate Duty of Vigilance Law*, WORLDFAVOR, <https://blog.worldfavor.com/all-you-need-to-know-about-frances-corporate-duty-of-vigilance-law#:~:text=What%20is%20the%20French%20Corporate,its%20subsidiaries%2C%20subcontractors%20and%20suppliers> [<https://perma.cc/67C2-6GZJ>] (last visited Nov. 2, 2023).

63. *French Vigilance Law—Latest from the Paris Court*, DEBEVOISE & PLIMPTON (Aug. 10, 2023), https://www.debevoise.com/-/media/files/insights/publications/2023/08/10_french-vigilance-law-latest-from-the-paris.pdf?rev=aa5a98c1d7c842188fb2b260a7c90bd0 [<https://perma.cc/N2Q5-GFXC>].

64. Hermes, *supra* note 50.

their supply chains.⁶⁵ In sum, the E.U. has taken more proactive steps than the United States in regulating companies' supply chains; however, the enforceability of the various international laws remains to be seen.⁶⁶

III. DEVELOPMENTS AND PROBLEMS

A. United States

1. New Legislation

Newly introduced U.S. legislation, that has yet to be enacted, purports to prohibit the importation of "goods, wares, articles, or merchandise containing metals or minerals, in particular cobalt and lithium and their derivatives, mined, produced, smelted or processed, wholly or in part, by child labor or forced labor in the DRC."⁶⁷ This legislation would also impose sanctions on, and prohibit transactions with, foreign companies that exploit child labor in the DRC.⁶⁸ Chinese mining companies are the most prominent in the DRC mining arena, holding the great majority of mining stakes and processing the most cobalt, as well as having an infamous reputation of perpetuating the exploitation and dangerous conditions within the mines.⁶⁹ As U.S. companies purchase much of their cobalt from such Chinese companies, this legislation targets those Chinese companies in an effort to have them improve their practices.⁷⁰

65. *Dutch Senate Votes to Adopt Child Labor Due Diligence Law*, BUSINESS & HUMAN RIGHTS RESOURCE CENTER (May 14, 2019), <https://www.business-humanrights.org/en/latest-news/dutch-senate-votes-to-adopt-child-labour-due-diligence-law/> [https://perma.cc/DK5P-SAQ7]; *Mandatory Human Rights Due Diligence Laws: The Netherlands Led the Way in Addressing Child Labour and Contemplates Broader Action*, ALLEN & OVERY (Sept. 2, 2020), <https://www.allenoverly.com/en-gb/global/news-and-insights/publications/mandatory-human-rights-due-diligence-laws-the-netherlands-led-the-way-in-addressing-child-labour-and-contemplates-broader-action>. [https://perma.cc/Z6ES-ACVF].

66. *See* Company Law, no. 42, 2005 P.R.C. LAWS; Castillo & Purdy, *supra* note 52, at 16-17; *Conflict Minerals Regulation*, *supra* note 58; *The German Supply Chain Act*, *supra* note 60; Dohmen, *supra* note 61; *All You Need to Know About France's Corporate Duty of Vigilance Law*, *supra* note 62; *French Vigilance Law—Latest from the Paris Court*, *supra* note 63; Hermes, *supra* note 50; *Dutch Senate Votes to Adopt Child Labor Due Diligence Law*, *supra* note 65.

67. Taiwo Adebayo, *U.S. Measure Would Ban Products Containing Mineral Mined with Child Labor in Congo*, AP NEWS (July 3, 2023, 10:30 AM), <https://apnews.com/article/congo-child-labor-mineral-mining-us-china-99e23da30ae4e6b91804ab1191509125> [https://perma.cc/C3XV-QELA].

68. *Id.*

69. *Id.*

70. Press Release, Michael Finan, Smith Introduces Bill to Bar all Imports that Contain Cobalt Mined by Child Exploitation and Forced Labor Trafficking in the

2. Domestic U.S. Mines

One mine in Idaho, the Jervois Idaho Cobalt Operations Mine, holds about 88% of the United States' cobalt and recently recommenced construction in 2021.⁷¹ Once completed, the mine was expected to produce enough cobalt to make up about 10-15% of the United States' cobalt consumption, but construction on the mine came to a stop just three months after it began.⁷² Cobalt prices dropped too low due to the increased amounts of supply coming out of the DRC, making the Idaho mine unprofitable once it set its own prices to match the DRC's.⁷³ A domestic U.S. mine is believed to be a solution to many of the problems that miners face in the DRC, as the mine would enforce more stringent mining practices that reduce environmental harm and its workers would be protected under U.S. labor laws.⁷⁴ Domestic mines would also be beneficial to American companies and consumers, as tax credits can be earned when certain minerals used in popular items, such as electric vehicles, are mined domestically.⁷⁵ However, until more progress towards completing

Democratic Republic of Congo (June 30, 2023) (on file with author), <https://chrissmith.house.gov/news/documentsingle.aspx?DocumentID=411555> [<https://perma.cc/9GXX-SFR8>].

71. Press Release, Congressman Pete Stauber, Stauber Demands Answers on Biden Administration Mining Agreement with the Congo, Zambia (Feb. 23, 2023) (on file with author), <https://stauber.house.gov/media/press-releases/stauber-demands-answers-biden-administration-mining-agreement-congo-zambia>. [<https://perma.cc/272E-SHBP>] [hereinafter Stauber]; *Constructing America's Only Primary Cobalt Mine*, JERVOIS IDAHO COBALT OPERATIONS, <https://jervoisidahocobalt.com/> [<https://perma.cc/PN67-Z8HR>] (last visited Feb. 2, 2024).
72. Shelley Ridenour, *Jervois Shuts Down Idaho Cobalt Mine*, CHALLIS MESSENGER (Apr. 7, 2023), https://www.postregister.com/messenger/news/jervois-shuts-down-idaho-cobalt-mine/article_efd97f32-d015-11ed-9424-bfb28220210c.html#:~:text=Construction%20at%20the%20Idaho%20Cobalt,remote%20location%20for%20the%20shutdown [[HTTPS://PERMA.CC/4XGL-W9HX](https://perma.cc/4XGL-W9HX)]; Hannah Northey, *Biden is Scrambling for Minerals. This U.S. Cobalt Mine Just Closed*, E&E NEWS (May 12, 2023, 1:42 PM), <https://www.eenews.net/articles/biden-is-scrambling-for-minerals-this-u-s-cobalt-mine-just-closed/> [<https://perma.cc/25UA-HGB2>].
73. Northey, *supra* note 72.
74. See Orion D. Smith, *New Idaho Mine Could Mark Beginning of Cobalt Boom as Demand for Climate-Friendly Minerals Skyrockets*, SPOKESMAN-REVIEW (Jan. 24, 2022), <https://www.spokesman.com/stories/2022/jan/24/new-idaho-mine-could-mark-beginning-of-cobalt-boom/> [<https://perma.cc/8CT8-MUZ6>]; see also Josh Johnson, *Clean Energy Should Not be Built on Dirty Mining*, IDAHO CONSERVATION LEAGUE (Apr. 27, 2022), <https://www.idahoconservation.org/blog/clean-energy-should-not-be-built-on-dirty-mining/> [<https://perma.cc/J5KN-8A39>].
75. Claire Bushey & Aime Williams, *U.S. Opens New Cobalt Mine as EV Battery Needs Grow*, FINANCIAL TIMES (Oct. 6, 2022), <https://www.ft.com/content/561232f9-adf2-4ec3-a28e-e449dfb6dcce> [<https://perma.cc/988P-KAQD>].

domestic mines is made, the United States will not see any of these improvements anytime soon.⁷⁶

Despite the current mining conditions in the DRC, the United States continues to partner with and buy cobalt from the DRC.⁷⁷ In January of 2023, the U.S. Department of State released a Memorandum of Understanding, stating that “the United States will support the commitment between the Democratic Republic of Congo (DRC) and Zambia to develop jointly a supply chain for electric vehicle batteries.”⁷⁸ While some are hopeful the Memorandum of Understanding will encourage the DRC to improve its mining practices by subjecting them to U.S. legal ramifications, the fear remains that increasing mining in the DRC will only further perpetuate the issues of human rights abuses faced within the mines.⁷⁹

3. *Litigation & the Alien Tort Statute*

The small amount of litigation in the United States involving international human exploitation and slavery claims may also fail to bring any repercussions to companies participating in the DRC’s inhumane cobalt mining practices.⁸⁰ In 2021, the Supreme Court threw out a case brought by six former child slaves against Nestlé USA and Cargill.⁸¹ The former child slaves accused Nestlé and Cargill of knowingly aiding and abetting slavery at Ivory Coast cocoa farms under the Alien Tort Statute.⁸² The Alien Tort Statute, enacted as part

76. *See id.*; *see also* Smith, *supra* note 74.

77. Stauber, *supra* note 71.

78. Media Note, U.S. Department of State, The United States Releases Signed Memorandum of Understanding with the Democratic Republic of Congo and Zambia to Strengthen Electric Vehicle Battery Value Chain (Jan. 18, 2023), <https://www.state.gov/the-united-states-releases-signed-memorandum-of-understanding-with-the-democratic-republic-of-congo-and-zambia-to-strengthen-electric-vehicle-battery-value-chain/> [<https://perma.cc/6DU4-2AYG>].

79. Victoria Beaulé, *Artisanal Cobalt Mining Swallowing City in Democratic Republic of Congo, Satellite Imagery Shows*, ABC NEWS (Feb. 8, 2023), <https://abcnews.go.com/International/cobalt-mining-transforms-city-democratic-republic-congo-satellite/story?id=96795773> [<https://perma.cc/A8NU-9T45>].

80. *See* Nestlé USA, Inc. v. Doe, 141 S. Ct. 1931, 1933 (2021); Stephen P. Mulligan, Congressional Research Services R44947, The Alien Tort Statute: A Primer (2022), <https://sgp.fas.org/crs/misc/R44947.pdf> [<https://perma.cc/HT4V-RCW6>].

81. Desiree LeClercq, *Nestlé United States, Inc. v. Doe*, 141 S. Ct. 1931, 115 AMERICAN JOURNAL OF INTERNATIONAL LAW 694, 694 (Oct. 2021), <https://www.cambridge.org/core/journals/american-journal-of-international-law/article/nestle-united-states-inc-v-doe-141-s-ct-1931/A341E68988C80A43A02D2D8755099910> [<https://perma.cc/8G9G-5FDW>]; *Nestlé*, 141 S. Ct. at 1933.

82. Lawrence Hurley, *U.S. Supreme Court Rules for Nestlé, Cargill Over Slavery Lawsuit*, REUTERS (June 17, 2021), <https://www.reuters.com/business/us->

of the Judiciary Act of 1789, allows non-U.S. citizens to bring cases in U.S. federal courts, and it has evolved into a vehicle for foreigners to bring claims for international human rights offenses.⁸³ To bring a successful claim under the Alien Tort Statute, a claimant must satisfy a two-part test requiring that they: (1) overcome the presumption “that a statute applies only domestically [by showing that] the statute gives a clear, affirmative indication that rebuts the presumption;” and (2) “where the statute does not apply extraterritorially, . . . establish that ‘the conduct relevant to the statute’s focus occurred in the United States . . . even if other conduct occurred abroad.’”⁸⁴ The Supreme Court in *Nestlé* found that the former slaves did not meet this criteria.⁸⁵ The former slaves argued that Nestlé and Cargill made domestic corporate decisions that perpetuated the conduct overseas; however, the Court found it to be insufficient to overcome the presumption that the statute applies only domestically, stating “a plaintiff does not plead facts sufficient to support domestic application of the [Alien Tort Statute] simply by alleging ‘mere corporate presence’ of a defendant.”⁸⁶ Because all of the conduct and injury took place outside of the United States, the Court lacked jurisdiction to hear the claim and held that aiding and abetting was not a cause of action under the Alien Tort Statute.⁸⁷

If such a case was brought on behalf of the miners in the DRC, would the same ending result? Would the Alien Tort Statute be an avenue for redress? Are there any legal ramifications for companies that source their cobalt from the mines in the DRC that have similar exploitative practices? These questions remain unanswered.

4. Cobalt Mining Litigation in the United States

In the landmark case *Doe v. Apple Inc.*, a human rights firm, International Rights Advocates, filed a lawsuit in D.C. federal court on behalf of fourteen child miners in the DRC and their parents, naming Apple, Google, Dell, Microsoft, and Tesla as defendants.⁸⁸ This was the first time any big tech companies have

supreme-court-rules-nestle-cargill-over-slavery-lawsuit-2021-06-17/. [https://perma.cc/4RHP-KWSP].

83. Mulligan, *supra* note 80.

84. *Nestlé*, 141 S. Ct. at 1933–34.

85. *Id.*

86. *Id.* at 1937.

87. *Id.* at 1936.

88. Annie Kelly, *Apple and Google Named in U.S. Lawsuit Over Congolese Child Cobalt Mining Deaths*, THE GUARDIAN (Dec. 16, 2019), <https://www.theguardian.com/global-development/2019/dec/16/apple-and-google-named-in-us-lawsuit-over-congolese-child-cobalt-mining-deaths> [https://perma.cc/55AE-76H6].

faced such a legal challenge.⁸⁹ The plaintiffs sued under statutes 18 U.S.C.A. § 1590 (Trafficking with respect to peonage, slavery, involuntary servitude, or forced labor) and 18 U.S.C.A. § 1580 (Forced labor), alleging that the defendant companies profited from the labor of the plaintiff children.⁹⁰

A threshold issue in the case was whether the plaintiffs had standing.⁹¹ The plaintiffs argued that the defendant companies were “in a ‘venture’ with their mining companies, a venture that is jointly responsible for the injuries suffered by Plaintiffs,” and that the defendant companies had knowledge that the cobalt purchased from these companies was mined using child labor.⁹² However, the D.C. court found the plaintiff’s arguments to be insufficient, holding that they lacked standing to sue because the harm alleged was not traceable enough to the defendant companies.⁹³ The court stated that the causal chain between the injuries and the companies’ actions was too far-removed and unclear.⁹⁴ None of the foreign mining companies were listed as defendants in the suit, and thus the court found that the allegations involved too many actions of third parties not listed.⁹⁵ Given the outcome of this case, to be successful under 18 U.S.C.A. §§ 1580, 1590, the plaintiff must prove how the tech companies specifically contributed to the injuries to avoid the same tenuous causal chain issues in *Doe I*.⁹⁶

B. Organizations and Initiatives

A number of international organizations and initiatives have been created with the goal of improving the mining practices and conditions in the DRC.⁹⁷ One such initiative is the Fair Cobalt Alliance.⁹⁸ The Fair Cobalt Alliance

89. *Id.*

90. *Doe I v. Apple Inc.*, No. 1:19-CV-03737, 2021 WL 5774224, at *4 (D.D.C. Nov. 2, 2021).

91. *Id.* at *5–6.

92. *Id.* at *6.

93. *Id.* at *7.

94. *Id.* at *8.

95. *Id.* at *11.

96. *Doe I*, 2021 WL 5774224 at *11.

97. See NABYLAH A. DEHMAN ET AL., *Responsible Cobalt Sourcing: Engagement Results*, PRINCIPLES FOR RESPONSIBLE INVESTMENT 16 (2021), <https://www.unpri.org/download?ac=14320#:~:text=The%20French%20Duty%20of%20Vigilance,from%20direct%20or%20indirect%20operations> [https://perma.cc/M48D-RW9M].

98. *Our Approach: Achieving Change Through Supply-Chain Wide Collaboration*, FAIR COBALT ALLIANCE, <https://www.faircobaltalliance.org/approach/> [https://perma.cc/84K7-E6TC] (last visited Jan. 31, 2024).

works to implement projects in the local communities of the DRC to improve mining sites, bolster children's rights (including promoting their education and school attendance), and support economic diversification.⁹⁹ Many big technology companies, such as Tesla, have supported the Fair Cobalt Alliance by providing funding and resources to assist the Alliance's efforts.¹⁰⁰ Another initiative, Cobalt for Development, works with local governments and other organizations in the DRC.¹⁰¹ Cobalt for Development has the goal of making cobalt mining more sustainable and works to improve conditions within the mines, as well as the local communities.¹⁰² The organization was started by several big-tech companies, including BMW, Volkswagen, and Samsung.¹⁰³ Another advocacy group, the Responsible Minerals Initiative, provides the resources to "create the enabling conditions for companies to exercise due diligence over cobalt supply chains in accordance with the OECD Due Diligence Guidance."¹⁰⁴ The OECD Due Diligence Guidelines give recommendations to companies in order for them to ensure they are using best practices when buying conflict minerals such as cobalt and avoid perpetuating human rights violations as they do so.¹⁰⁵ Similarly, the Responsible Cobalt Initiative aims to help companies comply with the OECD Due Diligence Guidelines, and it gives recommendations for companies when acting within the cobalt supply chain in

99. *Id.*

100. William Johnson, *Tesla Doubles Down on Ethical Sourcing with Cobalt Mining Risk Analysis*, TESLARATI (Apr. 25, 2023), https://www.teslarati.com/tesla-ethical-sourcing-cobalt-mining-impact-report/#google_vignette [<https://perma.cc/9Y2J-BVK5>].

101. *Cross-Industry Partnership to Enhance Sustainable Cobalt Mining*, BASF, <https://www.basf.com/global/en/who-we-are/sustainability/we-source-responsibly/cobalt-initiative.html> [<https://perma.cc/45VM-D225>] (last visited Jan. 31, 2024).

102. *Id.*

103. Lawson, *supra* note 33.

104. *Cobalt*, RESPONSIBLE MINERALS INITIATIVE, <https://www.responsiblemineralsinitiative.org/minerals-due-diligence/cobalt/> [<https://perma.cc/P2AC-QTX5>] (last visited Jan. 31, 2024).

105. *OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas*, ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT, <https://www.oecd.org/corporate/mne/mining.htm#:~:text=for%20multinational%20enterprises-,OECD%20Due%20Diligence%20Guidance%20for%20Responsible%20Supply%20Chains%20of%20Minerals,Affected%20and%20High%2DRisk%20Areas&text=The%20OECD%20Due%20Diligence%20Guidance,mineral%20purchasing%20decisions%20and%20practices> [<https://perma.cc/7YJF-DAYR>] (last visited Jan. 31, 2024).

the DRC specifically.¹⁰⁶ Even though these initiatives and alliances are doing good work, they do not give any repercussions to those engaging in the abusive mining practices in the DRC, so the problems still persist.

IV. CONCLUSION

Taking a deeper dive into the cobalt mining industry, while such an integral component of technological and sustainable advancements, reveals a troubling narrative of human rights abuses and environmental problems in the Democratic Republic of Congo. Despite various legislative attempts and new initiatives, changing the unethical mining practices remains a challenge as corruption and supply chain complexities continue to act as barriers to any meaningful change. As awareness of the harmful practices in the DRC mines continues to spread, the need for improvements in these practices has become evident. Without an equal alternative, cobalt continues to be vital to the world's sustainability efforts. But building a truly sustainable future will demand a more transparent and ethical approach to cobalt mining and will require us to stop ignoring the price the DRC is paying for the world's appetite for continued innovation.

106. *Responsible Cobalt Initiative*, RESPECT INTERNATIONAL, <https://respect.international/responsible-cobalt-initiative-rci/> [<https://perma.cc/8G78-XJ5F>] (last visited Jan. 31, 2024).