



Children, Forced Labor and Mining in Africa

Case studies from Mozambique,
Zambia & Zimbabwe

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Children, Forced Labor and Mining in Africa

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Executive Summary

Children in Sub-Saharan Africa are subject to the highest rates of child labor globally.¹ Financial and social burdens can increase the risk for exploitation in hazardous forms of labor and human trafficking. To better understand the full extent of child labor and exploitation, the project expanded the scope of research to include periphery topics that exacerbate the conditions of child labor, including mineral supply chains, security forces, public health, and environmental impacts. The full purview of the project encompassed reviewing forced and child labor, security forces and supply chains in the mining sector in Mozambique, Zambia, and Zimbabwe. Each country was examined to determine its critical mineral resources and the attending challenges to human security. The focus in each case was as follows: Mozambique - gold and rubies; Zambia - copper and emeralds; and Zimbabwe - gold. The goal of the project was to determine linkages between mineral supply chains focusing on artisanal and informal mines, the recruitment of children for forced labor and security forces, and establishment of additional linkages with environmental impacts and public health concerns, specifically regarding the COVID-19 pandemic.

Similar trends in child labor were discovered across the region studied. Research suggests that children are usually involved in hazardous forms of labor due to familial ties. Limited access to childcare or safer economic opportunities as alternative options cause parents to bring children to work with them in mines. This includes direct engagement in mining as well as work in the surrounding mining communities such as carrying minerals to rivers to be washed. State capacity and resource management lack enforcement mechanisms and often rely on corrupt deals and an illegal “taxing system” to profit from artisanal mining. In the case of public health, heavy metal exposure is common during mineral processing which often leaks dangerous chemicals into local environments and exposes surrounding communities to potential health problems. COVID-19 impacted children heavily due to long-term school closures. These closures may have led more children to participate in hazardous forms of child labor, leading to higher levels of exploitation and risk for trafficking. Select mineral supply chains, especially gold, saw minimal effects from COVID-19 restrictions on travel and logistics. Many private international buyers and traders were able to afford and secure private transit routes, such as private flights, to bypass international travel restriction measures.² Personal and professional security actors were also identified in all cases. These ranged from private informal security groups such as gangs to international terrorist organizations to formal police forces and other forms of government enforcement often fueled by bribes.

Methodology

Research took place over a four-month period. It included a literature review of international reports from the International Labor Organization, UNICEF, U.S. Department of Labor, various NGOs, international business plans and news reports. Research findings were compiled and analyzed by the research team for accuracy and relevance to the scope of work in the countries of interest (Mozambique, Zambia, and Zimbabwe). Interviews were conducted to gain further information and fill gaps in literature findings. The interview process was four-weeks in duration and consisted of 10 questions covering child labor, supply chain

¹ International Labour Office and United Nations Children’s Fund, *Child Labour: Global estimates 2020, trends and the road forward*, ILO and UNICEF, New York, 2021. License: CC BY 4.0.

² “The Impact of COVID-19 Shutdowns on the Gold Supply Chain.” Sprott, June 2020. <https://sprott.com/investment-strategies/physical-bullion-trusts/phys-gold-supply-chain-infographic/#>.

management, security force involvement and environmental and health impacts. Questions were provided to interviewees prior to scheduled meetings to prepare them and to maximize the utility of the time spent expertise in discussion. Interviewees came from a variety of backgrounds including non-government organization leadership, private research firms, government personnel, Peace Corps volunteers and academics. To gain a broader picture of the research terrain, generalists were also interviewed. (Interview questions can be found in the appendix). Consultations with partners in the U.S. Department of Labor were routinely held throughout the course of the four-month project.

International Legal Framework

The International Labor Organization (ILO) codified international standards into conventions signed by most countries across the globe. Labor protection standards are a form of social justice, meant to combat the vulnerability of workers and protect economic growth and human progress.³ The ILO asserts help to combat modern issues including climate change, globalization, technological advancements, rising inequality, and demographic changes by establishing clear goals and standards of labor.⁴ The organization focuses on the global supply chains and the effects of negative working conditions on international trade. This scope originated in Bangladesh following garment factory fires which killed day laborers, some of whom were children.⁵ In response, the ILO adopted a resolution concerning “decent work in global supply chains” hoping to mitigate the negative effects of indecent working conditions.⁶

By ILO definition, labor is not a commodity but rather a role in someone's life.⁷ There are multiple “fundamental conventions” that are considered key principles for labor. These include the Elimination of Forced and Compulsory Labor (No. 29, No. 105), Abolition of Child Labor (No. 138, No. 182), and the Elimination of Discrimination.⁸ The Forced Labor Convention (No. 29) of 1930 defines forced and compulsory labor as “any work or service which is extracted under the threat of menace of any penalty and for which the said person has not offered himself voluntarily.”⁹

Two main conventions have been drafted by the ILO and ratified by member states in relation to child labor and hazardous forms of labor. In 1972, the ILO adopted the Minimum Age Convention (No. 138) which grouped together previous age-related conventions from various sectors. It tasked ratifying members to draft national policies to abolish “child labor and to raise progressively the minimum age for admission to employment, or work, to a level consistent with

³ International Labor Organization, “The Need for Social Justice,” accessed March 15, 2022, <https://www.ilo.org/global/standards/introduction-to-international-labour-standards/need-for-social-justice/lang--en/index.htm>.

⁴ International Labor Organization, “The Need for Social Justice”.

⁵ International Labor Organization, “Introduction to International Labour Standards”.

⁶ International Labor Organization, “The Need for Social Justice”.

⁷ International Labor Organization, “The Benefits of International Labour Standards,” accessed March 15, 2022, <https://www.ilo.org/global/standards/introduction-to-international-labour-standards/the-benefits-of-international-labour-standards/lang--en/index.htm>.

⁸ International Labor Organization, “Conventions and Recommendations”, accessed March 15, 2022, <https://www.ilo.org/global/standards/introduction-to-international-labour-standards/conventions-and-recommendations/lang--en/index.htm>.

⁹ International Labor Organization, “Convention C029 - Forced Labour Convention, 1930 (No. 29),” accessed March 15, 2022, https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C029.

the fullest physical and mental development of young persons.”¹⁰ Each member that ratified the convention can choose a minimum age for “admission to employment... and no one under that age shall be admitted to employment or work in any occupation.”¹¹ Clarified in the convention is the minimum age for employment should not be less than the compulsory education age, and in most cases should not be less than 15 years without an exemption.¹² The article also clarifies that if the government does not have a sufficiently developed economy or educational facilities, the minimum age is 14 years old. As previously mentioned in the 2020 Findings on the Worst Forms of Child Labor report, all three country cases studies have a compulsory education age of 15 or higher.¹³ More importantly, Article 3 of the convention defines hazardous work. It states that work “by its nature ... is likely to jeopardize the health, safety, or morals of young persons” is considered hazardous work and tasks governments to decide on a national level what types of work are protected under Convention 138.

In 1999, the Convention on Worst Forms of Child Labor (No.182), was adopted and specifies that the term “child” is any person under the age of 18.¹⁴ The main facets of Convention 182 include any extent of labor that is considered “worst forms”, involvement of children in these activities, and gives special recognition to the “special situation of girls”; although it does not elaborate on specific measures to protect young girls. Some of the worst forms of child labor included in the convention are the sale and trafficking of children including debt bondage, the use of children for prostitution and any labor that harms the health and safety of a child.¹⁵ Although these inclusions in the convention are necessary to protect children from a wide range of exploitative activities, their definitions are quite broad and lack elaboration on specific details that would benefit from a deeper analysis and provide guidance to national governments. Categorically speaking, mining activities that children take part in, including lifting heavy objects, exposure to chemicals and harsh working conditions are in line with the definitions of hazardous labor in Convention 182. Since national governments lack strong enforcement and regulation mechanisms to protect against hazardous forms of child labor it can be assumed that age-related restrictions for labor in Convention 138s are overlooked as well.

¹⁰ International Labor Organization, “Convention C138 - Minimum Age Convention, 1973 (No. 138),” accessed March 15, 2022,

https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100::NO:12100:P12100_ILO_CODE:C138:NO.

¹¹ International Labor Organization, “Convention C138”.

¹² International Labor Organization, “Convention C138.

¹³ U.S. Department of Labor -Bureau of International Labor Affairs, “2020 Findings on the worst forms of child labor”. 2020. Accessed 2022.

https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2020/2020_TDA_BigBook_Online_optimized.pdf.

¹⁴ International Labor Organization, “Convention C182 - Worst Forms of Child Labour Convention, 1999 (No. 182),” accessed March 15, 2022,

https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100::NO:12100:P12100_ILO_CODE:C182:NO.

¹⁵ International Labor Organization, “Convention C182.

Child Labor

A 2020 Report released by the ILO in partnership with UNICEF states that 1 in 10 children worldwide are engaged in child labor.¹⁶ Beginning in 2016, estimates of child labor participation increased for the first time since 2000; negatively affecting efforts to end child labor by 2025 in line with the United Nations 2030 Sustainable Development Goals. At the beginning of 2020 total approximation of child participation stood at 160 million globally, with 79 million children involved in hazardous work.¹⁷ Prior to COVID-19, child participation in hazardous forms of labor decreased globally but it is estimated that an additional 8.9 million children will be subject to child labor by the end of 2022 because of the pandemic.¹⁸

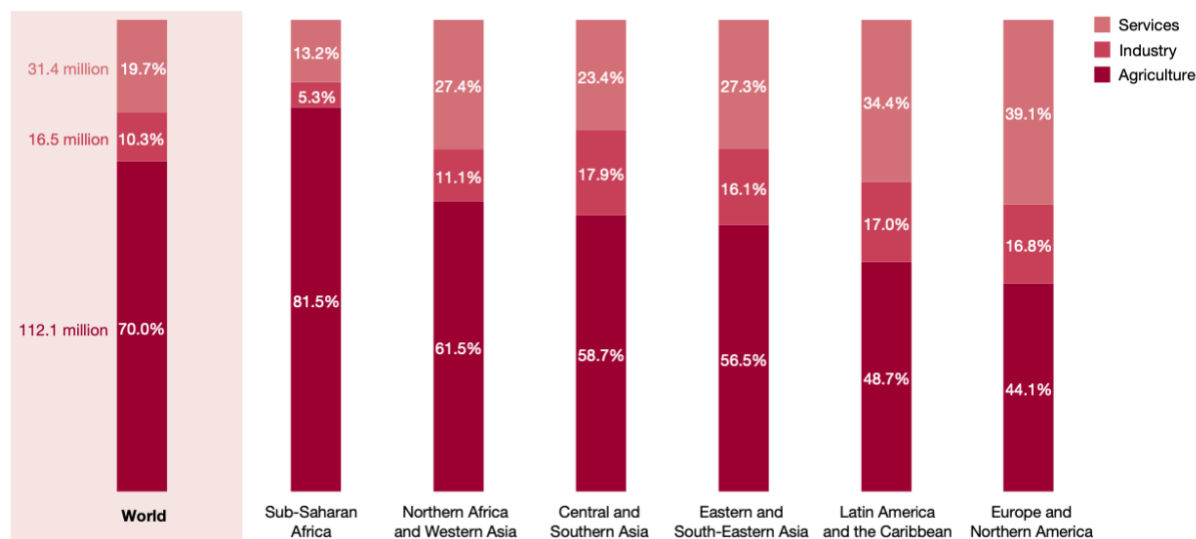


Figure 1. Distribution of Child Labor Across Sectors, International Labor Office and United Nations Children's Fund

Compared to global estimates, Sub-Saharan Africa is on trend with increasing numbers and low mitigation rates to end child labor. Even before COVID-19, there was an increase, up to 23.9%, in child labor and its most hazardous forms.¹⁹ Compared to other regions in Africa, Sub-Saharan African children participate the most in child labor and its most hazardous forms; three times the rate of other regions. It is estimated that child labor participation is around 87 million in Sub-Saharan Africa.²⁰

Rural and urban distinctions also increase the probability for participation in child labor. 82.1% of children in rural Sub-Saharan Africa take part in forms of child labor compared to only 17.9% in urban areas.²¹ A drastic difference mainly related to economic stability, access to education and availability of safe options for economic participation. Surprisingly, Sub-Saharan Africa's urban participation is also 5.4% lower compared to the global average which is 23.3%.²²

¹⁶ International Labour Office and United Nations Children's Fund, *Child Labour: Global estimates 2020, trends and the road forward*, ILO and UNICEF, New York, 2021. License: CC BY 4.0.

¹⁷ International Labor Office and United Nations Children's Fund, 12.

¹⁸ International Labor Office and United Nations Children's Fund, 13.

¹⁹ International Labor Office and United Nations Children's Fund, 12.

²⁰ International Labor Office and United Nations Children's Fund, 21.

²¹ International Labor Office and United Nations Children's Fund, 35.

²² International Labor Office and United Nations Children's Fund, 35.

Sub-Saharan Africa faces unique challenges to other regions where child labor is present. For example, three-quarters of all Sub-Saharan African countries are involved in internal or cross-border conflict,²³ which has contributed to the lack of addressing the status of child laborers. The region also hosts 39% of the world's refugees, stateless persons, and internally displaced peoples.²⁴ 67% of people living with HIV/AIDS infections are located in Sub-Saharan Africa,²⁵ which also limits state capacity to address child labor as resources are spread thin to tackle other hard-hitting issues.

Gender disparities also play a role in participation between young girls and boys. Child labor participation rates are $\frac{1}{3}$ higher for boys than for girls.²⁶ Young boys are generally recruited to work in agricultural and industrial forms of child labor, while young girls often take part in services relating to household activities, including food preparation and childcare. Generally, most child labor exists in domestic and agricultural forms, with a global total of 70% participating in the agricultural sector and 10.3% in industrial work.²⁷ When household chores are accounted for in calculations, the gender gap between girls and boys narrows. This disparity between boys and girls and their participation in forms of child labor will be highlighted in the case studies as well.

School attendance for young children is affected by participation in the labor force as well. There is a general net decline in the number of children that complete primary education across Sub-Saharan Africa if they take part in labor forces. Low retention rates in Sub-Saharan Africa remain at 28.1% eclipsed only by Latin America and the Caribbean with 15.5% non-participation in education.²⁸ Records indicate that children who take part in hazardous forms of labor are less likely to continue their education. Overall, $\frac{1}{3}$ of children who take part in forms of child labor do not attend school.²⁹ Also impacted by COVID-19, children reported more consistent participation in the labor force given school closures for social distancing. In the country cases explored, compulsory education and access to free public education varied. Mozambique and Zambia both have free public education, but Zambia's compulsory education age is undefined under its Education Act. Mozambique's is set at 15 and both have a minimum labor participation age of 15. In contrast, Zimbabwe's compulsory education age is 16, which is also the country's age minimum for labor participation.³⁰ Public education is free; parents and guardians may be faced with additional fees for textbooks and uniforms.³¹ The similarity between compulsory education ages and minimal labor participation ages in all cases put children at risk. A 15- or 16-year-old may decide to enter the workforce early instead of completing their education as soon as they meet the minimum labor participation age.

Children and close ties to their family, especially their mothers or childcare providers, have been identified as a motivator for child labor participation in all three case studies. Specific clarifications on family units were not found in research sources. It is estimated that 82.4% of

²³ International Labor Office and United Nations Children's Fund, 27.

²⁴ International Labor Office and United Nations Children's Fund, 27.

²⁵ "Fact Sheet- UNAIDS Day 2021." Bulletin of the World Health Organization. WHO Press, 2021. https://www.unaids.org/sites/default/files/media_asset/UNAIDS_FactSheet_en.pdf.

²⁶ International Labor Office and United Nations Children's Fund, 9.

²⁷ International Labor Office and United Nations Children's Fund, 13.

²⁸ International Labor Office and United Nations Children's Fund, 49.

²⁹ International Labor Office and United Nations Children's Fund, 48.

³⁰ Rep. 2020 *Findings on the Worst Forms of Child Labor*. Office of Child Labor, Forced Labor, and Human Trafficking Bureau of International Labor Affairs United States Department of Labor, 2020. https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2020/2020_TDA_BigBook_Online_optimized.pdf

³¹ <https://zimfact.org/factsheet-where-does-zimbabwes-education-stand/#:~:text=From%20the%20age%20of%20four,education%20as%20a%20fundamental%20right>

children in Sub-Saharan Africa participate in child labor as a part of their family unit.³² A significant amount of family labor participation is also recorded in the hazardous forms of labor. Child participation in family labor is often a coping mechanism for alleviating the strains of poverty.

Mitigation efforts across the Southern African region include increasing social protections for families including universal child benefits and cash transfers to families with children. These programs have been proven to mitigate the effect of economic shocks caused by the pandemic and the consequences of conflict and increasing climate change events on families that rely heavily on agricultural production and domestic labor.³³ Improving access and quality of education for young children and incentives for children and their families to pursue completing primary education are also identified. Additionally, and as discussed later in the report, globally 237 million children do not have birth certificates, which may increase the probability of their participation in informal markets and make it more difficult for national governments to provide social services to their families.³⁴

³² International Labor Office and United Nations Children's Fund, 43.

³³ International Labor Office and United Nations Children's Fund, 61.

³⁴ International Labor Office and United Nations Children's Fund, 64.

Artisanal Mining

Artisanal and small-scale mining, also known as ASM or ASGM, is identified as “low-tech, labor-intensive mineral processing and extraction.”³⁵ This practice is usually undertaken by groups of six to eight people and is a widespread practice globally. Some countries define ASM not by the amount of people participating, but by the amount of mechanization within the mining process.³⁶ Domestic definitions of artisanal mining and small-scale mining may also be different. In conjunction with the exploitation of child and forced labor in ASM, we also explored the informality of ASM supply chains and policy enforcements. As Figure 2 illustrates, unregulated artisanal mining can be a “negative circle” of self-fulfilling hardships for miners throughout the entire process. The report not only explores the supply chains for the chosen minerals, but the subsequent effects on and from the ASM industry.

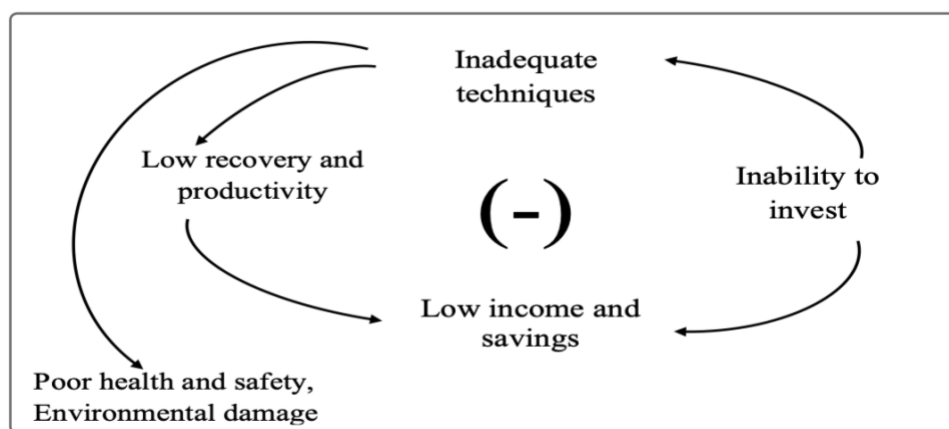


Figure 2. Negative Circle Affecting Artisanal Miners³⁷

³⁵ Hilson, Gavin. “Artisanal and Small-Scale Mining and Agriculture: Exploring Their Links in Rural Sub-Saharan Africa.” *International Institute for Environment and Development*, 2016, <https://www.jstor.org/stable/resrep02665>.

³⁶ Thomas Hentschel, Felix Hruschka, and Michael Priester, *Artisanal and Small-Scale Mining: Challenges and Opportunities* (London: IIED, International Institute for Environment and Development, 2003).

³⁷ Oxfam, & Zimbabwe Economic Policy Analysis and Research Unit (ZEPARU). (2018). (rep.). *Pathways to Formalization of Artisanal Mining In Zimbabwe*. Retrieved April 2022, from <http://www.zeparu.co.zw/sites/default/files/2019-11/pathways%20to%20formalisation%20of%20artisanal%20mining.pdf>.

Mozambique

HISTORICAL BACKGROUND

European trade routes to Asia brought colonial investment and international trade to the southern regions of the African continent. Portuguese conquistadors quickly became interested in setting up maritime ties along sailing routes and turned their interest towards Mozambique. During Portugal's first colonial occupation in the 16th century, gold production decreased drastically as artisanal gold mining was banned.³⁸ Colonial policies banned indigenous people from the formal mining sector and reserved mining rights for a select group of Mozambican nationals. It was not until after World War I that Portugal seized full colonial rule of Mozambique and established a single governing body combining the fragmented trading charters.³⁹ Colonial investments in the country helped the construction of infrastructure including roads, linking the country to South Africa, and other regional coastal ports. Trade routes East and West were the first to be established, leaving North to South routes mostly undeveloped.⁴⁰ The lack of an official election in Mozambique's 1975 journey to independence mounted tensions and fighting leading into the 1977 civil war.⁴¹ After independence, most skilled European and Asian populations emigrated from the country leaving the economy in disarray. Under the new president, Samora Machel, a Marxist government was established and guerrilla warfare from around the region spilled into the country. The Liberation Front of Mozambique (FREMILO), a political party established in 1989, began Mozambique's single party rule switching to a free market with socialist principles. Following the fall of the Soviet Union in 1991, a peace agreement was signed signaling the end of the civil war. The civil war, which lasted from 1977 to 1992, left the country with approximately \$20 billion USD in damages.⁴² Regular elections were established after 1992, following the establishment of a liberal democratic government. Many observers believe the modern state has “entrenched the patrimonial relationships of the elites,” although ethnic conflict is not widespread in the country’s politics.⁴³

Artisanal mining history in Mozambique is just as complex as its colonial past and modern politics. Gold deposits are found throughout the country and ruby mining is prevalent. In recent years, the Mozambican government has attempted to formalize the informal ASM sector with incentives and new mining policies, but as noted in the relevant literature on this phenomenon, it has failed due to a lack of effective enforcement mechanisms.⁴⁴ The industrial mining sector in Mozambique consists of four main elements: coal, gas, gold & uranium. Prior to the 1980s most of Mozambique's economy was public-driven, but quickly moved to a market-driven economy

³⁸ “The Problems of Artisanal Gold Mining in Manica Province.” UniZambeze & Mining Development Fund, 2012. https://www.iucn.org/sites/dev/files/import/downloads/gold_mining_in_mozambique.pdf.

³⁹ Newitt, 147.

⁴⁰ Newitt, 148.

⁴¹ Newitt, 152.

⁴² Hilson, Gavin, Salvador Mondlane, Abigail H Hilson, Alex Arnall, and Tim Laing. “Formalizing Artisanal and Small-Scale Mining in Mozambique.” <https://www.theigc.org/wp-content/uploads/2021/06/Hilson-et-al-June-2021-Final-report.pdf>. International Growth Centre, June 2021. <https://www.theigc.org/wp-content/uploads/2021/06/Hilson-et-al-June-2021-Final-report.pdf>.

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⁴³ Newitt, 177.

⁴⁴ “Gold Fever Infects Young and Old.” The New Humanitarian, January 7, 2016. <https://www.thenewhumanitarian.org/ar/node/236612>.

following international trends.⁴⁵ The mining sector grew as manufacturing companies competed with South African investments and by 2009 there were 11 micro mining companies. Three years prior there was one. Foreign investments from China and the United States helped develop large scale mining projects and further develop and attract interest to the industry.⁴⁶ These investments laid the groundwork for artisanal small-scale miners by identifying mineral deposits through surveying, creating a global demand for minerals from Mozambique and economically incentivizing local communities to take part in mining operations.

There is debate in the academic community about formalizing the artisanal and small-scale mining sector in Mozambique. Due to the requirement of licensing, to ensure mining is done in approved locations, many in rural areas participate without a permit or license and are therefore mining illegally. This coupled with the fact that only state-owned Mozambican Exploration and Mining Company or individually licensed miners are legally allowed to buy gold which fuels the smuggling industry. Most gold smuggled between neighboring countries comes out of the Manica Province and is done by gold panning.⁴⁷

As interest in the ASM sector has grown, the predominantly subsistence agricultural workforce has begun steadily building back the artisanal mining sector from post-colonial periods, recognizing the flexible benefits of small-scale mining. Given the threat of increasing floods and droughts, many farmers have turned to ASM during off seasons or when crop yields are too low to sustain income and support their families. Artisanal gold mining quickly became the second largest sector in terms of employment with about 30% of miners participating in the ASM industry seasonally.⁴⁸ Seasonal miners use money made during the agricultural off-season to purchase seeds, fertilizer, and farming equipment as well as cattle. As the mining sector grew, so did the government's recognition of its worth and contributions to the national economy. Artisanal mining was identified by the national government and local participants as beneficial to local economies and the developing world. It required a low education level and trade skills from individuals in regions with high unemployment.⁴⁹ Low upfront capital investments and high economic returns in the long run made it attractive to individuals diversifying their income in response to climate shocks on agricultural yields and rising economic security concerns. With increased participation in the informal sector, Mozambique's government also came to recognize the lack of human security measures in place to protect participants and their labor outputs.

⁴⁵ Sousa Cruz, Antonio, Dina Gumbo, Constantino Pedro Marrengula, and Amosse Ibises. "Mozambique's Industrialization." Africa Growth Initiative at Brookings, African Development Bank Group, UNU-Wider, 2014. https://www.brookings.edu/wp-content/uploads/2016/07/L2C_WP10_Cruz-et-al-1.pdf.

⁴⁶ "Mozambique's Industrialization." Africa Growth Initiative at Brookings, African Development Bank Group, UNU-Wider, 2014.

⁴⁷ Hilson, Gavin, Salvador Mondlane, Abigail Hilson, Alex Arnall, and Tim Laing. Rep. *Formalizing Artisanal and Small-Scale Mining in Mozambique Concerns, Priorities, and Challenges*. International Growth Center (IGC), June 2021.

<https://www.planetgold.org/sites/default/files/Hilson.%202021.%20Formalising%20ASM%20in%20Mozambique.pdf>.

⁴⁸ Hilson, Gavin. "Artisanal and Small-Scale Mining and Agriculture: Exploring Their Links in Rural Sub-Saharan Africa" (International Institute for Environment and Development, 2016), Page 4, <https://www.jstor.org/stable/resrep02665>.

⁴⁹ Drace, Kevin, Adam M. Kiefer, Marcello M. Veiga, Matt K. Williams, Benjamin Ascari, Cassandra A. Knapper, Kaitlyn M. Logan, et al. "Mercury-Free, Small-Scale Artisanal Gold Mining in Mozambique: Utilization of Magnets to Isolate Gold at Clean Tech Mine." *Journal of Cleaner Production* 32 (2012): 88–95. <https://doi.org/10.1016/j.jclepro.2012.03.022>.

DOMESTIC LEGAL FRAMEWORK

In response to gaps in the infrastructure of the informal sector, the Mozambican government developed policies to enforce licensing and protect child laborers from hazardous work. In Mozambique, the definition of artisanal mining is an operation carried out by 4-8 individuals organized with limited financing and resources who undertake mining full-time using low levels of mechanizations and simple techniques.⁵⁰ The national government has recognized ASM as a net positive opportunity that will help boost their national economy and eradicate poverty through revenues. Policies reflect this ideology by encouraging ASM, providing licenses for recognized mining lands and supplying more advanced technology to make mining easier.

The National Mining Institute (INAMI) and Ministry of Natural Resources and Energy (MIREME) were created by the Mozambican government as oversight committees for the mining industry.⁵¹ In 2019, INAMI published recommendations that included the introduction of a tax system for mining titles and issued individual unique taxpayer identification numbers (NUIT).⁵² These recommendations applied to anyone in possession of exploration licenses, mining certificates, and mining concession titleholders.⁵³ MIREME has created an online database to house an “e-government-based mining cadaster system.”⁵⁴ It houses specific laws for the mining industry that include Law No. 15, specific taxation regime for mining activity or mining tax law, Law No. 20 Mining Law, Decree No. 26 Environmental Regulations for Mining Activity, Decree No. 61 Regulation on Mine Work Safety, Decree No. 31 Mining Law Regulations and various others.⁵⁵ The site clarifies that mining passes, mining certificates and trade licenses for small-scale projects are reserved solely for nationals, honoring the colonial precedent.⁵⁶

In 2002, Mozambique created the Mining Development Fund (MDF) to provide government assistance to those in need of additional funding sources related to ASM. MDF acts to regulate and control ASM through funding and supplies of necessary mining machinery. It promotes formal associations and licensing systems recognized by the government for artisanal miners. By 2008, the MDF funded about 30% of ASM mines in Mozambique.⁵⁷ There are currently 95 designated ASM areas and 53 registered and active associations.⁵⁸ MDF works with the provincial government to register and distribute mining licenses and recruit miners into associations for easier oversight. Mining titles are authorized by the provincial governor and lasts for one year with a renewable option.⁵⁹ As previously mentioned, to gain titles in designated ASM areas, applicants must be Mozambican nationals but are not required to be a part of any mining associations.⁶⁰ The counterintuitive measure to not require miners to be associated with oversight mining associations allows license holders to remain unaccountable for the areas they mine in and their mining practices, including child labor. Informal ASM miners are still the majority in Mozambique, and a

⁵⁰ UniZambeze & Mining Development Fund, Page 6, 2012.

⁵¹ Leopoldo de Amaral and Mussagy, “Mining in Mozambique: Overview,” Practical Law, accessed March 18, 2022, [http://uk.practicallaw.thomsonreuters.com/0-575-3315?contextData=\(sc.Default\)&transitionType=Default&firstPage=true](http://uk.practicallaw.thomsonreuters.com/0-575-3315?contextData=(sc.Default)&transitionType=Default&firstPage=true).

⁵² de Amaral and Mussagy, Authorisation.

⁵³ de Amaral and Mussagy, Authorisation.

⁵⁴ de Amaral and Mussagy, Authorisation.

⁵⁵ de Amaral and Mussagy, Authorisation.

⁵⁶ de Amaral and Mussagy, Authorisation.

⁵⁷ “Mozambique: ASM Profile.” Mozambique | ASM. African Minerals Development Centre. Accessed March 28, 2022. <https://knowledge.uneca.org/ASM/mozambique>.

⁵⁸ African Minerals Development Center, ASM Profile.

⁵⁹ Mining certificates granted for 2-year periods have also been granted exclusively to Mozambicans

⁶⁰ “The Problems of Artisanal Gold Mining in Manica Province.” Page 10. UniZambeze & Mining Development Fund, 2012. https://www.iucn.org/sites/dev/files/import/downloads/gold_mining_in_mozambique.pdf.

majority are unlicensed and not members of mining associations recognized by the national government.⁶¹

CHILD LABOR

Children are actively involved in ASM in Mozambique.⁶² The government has begun drafting a list of jobs they have deemed hazardous for children but have yet to implement any restrictions to end the involvement of children in ASM. It is reported that one-third of the labor force for ASM is made up of women and children. In 2004, an estimated 4.5 million women and 600,000 children were active in the ASM industry in Mozambique.⁶³ Children are recruited at a young age to work in ASM and often disregard the idea of completing school requirements. A specific case study from 2012 explored by Universidade Zambeze (UniZambeze) and the Mining Development Fund (MDF) underscored that children were actively mining gold debris and waste from tiling.⁶⁴ Many were between the ages of 6 -18 and were reported to attend school, in some cases coupled with their employment at mines. Orphans were also very present at mines in certain provinces such as Manica. They often work in the informal mining sector to support their livelihoods and protect themselves and younger siblings.⁶⁵ In another case, reported on by AfricaNews, children were reported to be working in mine shafts as deep as 80 meters with no safety measures in place.⁶⁶ On an average week in mines associated with the Munhena miners' association, about 10 people were able to produce about 20-25 grams of gold. For reference, around 1 to 6 grams of gold can be extracted from one ton of rock.⁶⁷ The Secretary of the Munhena Miners Association, Noe Bernardo, reported production of about 800 grams in a busy week and recognized the presence of foreigners in the region who take part in the trafficking and illegal trading of minerals.⁶⁸

National education trends are like global education trends for children that are actively engaged in child labor. In Mozambique, free primary education lasts for 7 years and includes ages 6 - 13.⁶⁹⁷⁰ Specifics and distinctions on middle and secondary school are hazy. The primary school completion rate in 2018 was 46.4% however there is little data to report on how much these numbers have dropped due to COVID.⁷¹ That same year, the Mozambican Law on the National

⁶¹ UniZambeze & Mining Development Fund, Page 28, 2012.

⁶² "The Problems of Artisanal Gold Mining in Manica Province." UniZambeze & Mining Development Fund, 2012. https://www.iucn.org/sites/dev/files/import/downloads/gold_mining_in_mozambique.pdf.

⁶³ Drace, Kevin, Adam M. Kiefer, Marcello M. Veiga, Matt K. Williams, Benjamin Ascari, Cassandra A. Knapper, Kaitlyn M. Logan, et al. "Mercury-Free, Small-Scale Artisanal Gold Mining in Mozambique: Utilization of Magnets to Isolate Gold at Clean Tech Mine." *Journal of Cleaner Production* 32 (2012): 88–95. <https://doi.org/10.1016/j.jclepro.2012.03.022>.

⁶⁴ "The Problems of Artisanal Gold Mining in Manica Province." UniZambeze & Mining Development Fund, 2012. https://www.iucn.org/sites/dev/files/import/downloads/gold_mining_in_mozambique.pdf.

⁶⁵ https://www.iucn.org/sites/dev/files/import/downloads/gold_mining_in_mozambique.pdf.

⁶⁶ AfricaNews. "Mozambican Children Face Exploitation in Illegal Mining." AfricaNews. March 19, 2021. <https://www.africanews.com/2021/03/19/mozambican-children-face-exploitation-in-illegal-mining/>.

⁶⁷ WWF Switzerland, "A Precious Transition Demanding More Transparency and Responsibility in the Watch and Jewelry Sector Environmental Rating and Industry Report 2018", Page 13, https://www.wwf.ch/sites/default/files/doc-2018-12/2018_12_07_WWF%20Watch%20and%20Jewellery%20Report%202018_final_e_0.pdf

⁶⁸ AfricaNews. "Mozambican Children Face Exploitation in Illegal Mining." AfricaNews. March 19, 2021. <https://www.africanews.com/2021/03/19/mozambican-children-face-exploitation-in-illegal-mining/>.

⁶⁹ "Education- Mozambique." UNICEF. Accessed April, 2022. <https://www.unicef.org/mozambique/en/education>.

⁷⁰ "Education System in Mozambique." Mozambique Education System. Accessed April 2022. <https://www.scholaro.com/pro/Countries/Mozambique/Education-System>.

⁷¹ Mozambique Embassy and Bureau of Labor Affairs, "2018 FINDINGS ON THE WORST FORMS OF CHILD LABOR," n.d., <https://mz.usembassy.gov/wp-content/uploads/sites/182/2018-Child-Labor-Report-Mozambique.pdf>.

System of Education raised the compulsory education age to 15,⁷² signaling that the government was in support of education past primary age. The 2018 law set the minimum age for child labor at 15 and eliminated the previous exception which allowed children as young as 12 to take part in the work force. It also brought the national age standard closer to the internationally recognized minimum age of 18, despite still being lower. That same year primary education completion rates for Mozambique stood at 46.4%, with approximately 22.4% of children between the age of 7 to 14 taking part in both the labor market and educational programs.⁷³ Some small-scale mine owners have promised to fund primary education for their child laborers as an incentive to keep them working in the mines.⁷⁴ Child participation and recruitment in partnership with educational incentives are common. Recruitment trends include enticing children from rural areas with the promise of employment and access to educational opportunities, which often result in hazardous forms of child labor and exploitation through human trafficking networks.⁷⁵ The relationship between child laborers and their families is often used by labor recruiters to convince parents of the social and economic benefits of including their children in ASM work.

Mozambique has ratified both legal frameworks pertaining to child labor presented by the ILO. As in the case with mining policies generally, the country lacks the necessary enforcement mechanisms. Additionally, in 1965, Mozambique ratified the Abolition of Forced Labor Convention (No. 105) of 1957, which defined forced and compulsory labor.⁷⁶ Regardless, the country still faces shortcomings to enforcing child labor laws and restricting child labor participation in hazardous forms.

The risk of children mining is not only due to the hazardous nature of mining, but also activities associated with mining such as “carrying heavy loads, crushing and grinding soil, washing or panning for gold.”⁷⁷ Other tasks children take on in associated mining markets include “removing waste or water from mines,” “cooking and cleaning for adults,” or “selling goods and services to miners.”⁷⁸ This illustrates the additional tasks children are forced to take part in besides direct involvement in mining shafts or mineral production. A returned Peace Corps volunteer from the southern region of Mozambique explained that during the off months many of the townsmen, which included boys as young as 14, looked for more ASM work along the border or were hired by South African mines.⁷⁹ They would often return three months later with cash in hand to be used for their family agricultural practices including buying new machinery.

⁷² “2018 Child Labor Report- Mozambique .” United States Department of State, 2018. <https://mz.usembassy.gov/wp-content/uploads/sites/182/2018-Child-Labor-Report-Mozambique.pdf>.

⁷³ 2018 Child Labor Report - Mozambique, Page 1.

⁷⁴ “The Problems of Artisanal Gold Mining in Manica Province.” UniZambeze & Mining Development Fund, 2012. https://www.iucn.org/sites/dev/files/import/downloads/gold_mining_in_mozambique.pdf.

⁷⁵ 2018 Child Labor Report - Mozambique, Page 2.

⁷⁶ International Labor Organization, “Ratifications of ILO Conventions: Ratifications by Convention,” accessed March 15, 2022, https://www.ilo.org/dyn/normlex/en/f?p=1000:11300:0::NO:11300:P11300_INSTRUMENT_ID:312250.

⁷⁷ International Labor Organization, “Child Labour in Mining and Global Supply Chains”, May 2019, https://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/---ilo-manila/documents/publication/wcms_720743.pdf.

⁷⁸ International Labor Organization, “Child Labour in Mining and Global Supply Chains”.

⁷⁹ Anonymous Returned Peace Corps Volunteer, interviewed by Laura Lopez, Rockville, MD, Zoom, March 21, 2022.

MINERALS GOLD



Figure 3. Provincial Regions of Mozambique.⁸⁰

ASM mining accounts for around 90% of all gold production in Mozambique.⁸¹ Mozambique's natural resource capital accounts for 40% of its total wealth; double the average for Sub-Saharan Africa.⁸² Gold within the global economy is often used in technology including cell phones and jewelry. ASM gold mining takes place in rural areas commonly between the months of December and February when agricultural work is interrupted by winter. Since much of the rural areas rely on subsistence farming, ASM is a way to supplement income from farming. The national government also recognizes the presence of nearly 20,000 prospectors, also known in Portuguese as Garimpeiros, who work in and around the ASM gold industry. Gold mining Garimpeiros are illegal, but the government has taken a hands-off enforcement approach, citing families and their reliance on income generated by gold ASM for survival.⁸³

The most popular and well documented region for gold mining in Mozambique is the Manica Region, bordering Zimbabwe. It includes the Gold-Greenstone Belt of gold deposits

⁸⁰ "Mozambique Maps & Facts," World Atlas, February 25, 2021, Retrieved from <https://www.worldatlas.com/maps/mozambique>. Map of Mozambique provinces and neighboring countries.

⁸¹ "Mozambique: ASM Profile." Mozambique | ASM. African Minerals Development Centre. Accessed March 28, 2022. <https://knowledge.uneca.org/ASM/mozambique>.

⁸² International Labor Organization.

⁸³ "Gold Fever Infects Young and Old." The New Humanitarian, January 7, 2016. <https://www.thenewhumanitarian.org/ar/node/236612>.

extending a full 153 km between Zimbabwe and Mozambique, 35 km of which sits in Manica.⁸⁴ Well-known for its rich water sources and high levels of sediment and gold deposits, it is extremely popular for ASM miners given its remote location making it more difficult for authorities to reach. The Chimanimani Mountains, a recognized national park, are also located in Manica Province. Despite its protected status, the national park is another popular site for ASM with many abandoned mine shafts.⁸⁵ Illegal exploitation of mineral resources is common in the Manica Province and miners will often forgo following mining and land laws to do so. Popular gold deposits can be found in Niassa Province and Tete Province as well.⁸⁶ These regions are North and Western regions of the country, bordering Zimbabwe, Zambia, Malawi, and Tanzania.

Edilson Vagner Siteo, CEO of Mozambique Geological Intelligence, an explorationist company in Mozambique that focuses on finding the location of minerals, described a different scenario for many ASM miners.⁸⁷ He stated that many of the pit owners came from surrounding countries such as Malawi or Zimbabwe and financed the founding of mines, such as providing shovels. The mine owners, once enough gold is found or the mine runs dry, give local miners small amounts of cash and take the gold back to their country to sell.⁸⁸ When asked about gaps in the supply chain, the returned Peace Corps Volunteer mentioned that due to high corruption in the government, there are too many fees to sell the gold or transport gold through Mozambique, which results in smuggling.⁸⁹ Mr. Siteo also stated ASM mining is usually a family affair and people engage in the activity to provide for their families due to poverty in rural regions. When asked if he had seen children in mines, he replied “all kinds of ages of kids.”⁹⁰ When asked about where ASM usually takes place, he specified that miners usually mine in new areas, not in abandoned locations. He later clarified that while the government has social programs to address child labor they are “all talk” and he doubts they will make a difference. These cases in Mozambique were corroborated by another interviewee, from a company focusing on supply chain transparency with experience in Zimbabwe, who stated that many children engage in labor, whether in mining or agriculture, as a way to help their family.⁹¹ He stated it is international influence that keeps children out of mines, because western audiences do not like pictures of children in mines and policemen are aware of this, using it as an excuse to extract bribes from the community in exchange for not mentioning the children in mines. Our source then stated that this does not keep them out of the mining industry completely, moreso out of the mine directly, the children will be sent on other tasks such as washing minerals in the river or back to the farm. When asked about how the community defines a child, our source mentioned that sometimes children as young as 14 have their own children who they must provide for and that mining for gold all day is a better option than taking up a gun to protect their village.⁹²

⁸⁴ UniZambeze & Mining Development Fund, 12, 2012.

⁸⁵ “Gold Fever Infects Young and Old.” The New Humanitarian, January 7, 2016.

⁸⁶ International Labor Organization, “Introduction to International Labor Standards,” accessed March 15, 2022, <https://www.ilo.org/global/standards/introduction-to-international-labour-standards/lang--en/index.htm>.

⁸⁷ Edilson Vagner Siteo, CEO of Mozambican company “Mozambique Geological Intelligence”, an explorationist drilling company, interviewed by Laura Lopez, Rockville, MD, Zoom, March 24, 2022. This source was contacted through LinkedIn and has had multiple interactions with ASM miners through the nature of his work.

⁸⁸ Edilson Vagner Siteo Interview, 2022.

⁸⁹ Anonymous Returned Peace Corps Volunteer, interviewed by Laura Lopez, Rockville, MD, Zoom, March 21, 2022.

⁹⁰ Edilson Vagner Siteo Interview, 2022.

⁹¹ Benjamin Claire, Better Chains, interviewed by Laura Lopez and Megan Prybyl, Rockville, MD, Zoom, February 28, 2022.

⁹² Benjamin Claire Interview, 2022.

RUBIES

Unlike gold ASM, the ruby industry in Mozambique is more formalized with foreign investors in mines, easily traceable supply chain routes and international buyers. The world's largest colored gemstones mineral deposit is in the northeast region of Mozambique, with rubies being the predominant gemstone mined at the Montepuez mine.⁹³ Intra-state mineral flows often go east to the port cities of Pemba and Nacala, while Malawi colored gemstones are transported through Mozambique to the southern port city of Beira. Gemstone flows also spill into Tanzania where they are sold to international market buyers or exported to similar locations as Mozambican rubies in southeast Asia.⁹⁴ The most prominent international investor in Mozambique's ruby deposits and their surrounding markets is British-based Gemfields Group. Gemfields owns 75% of Ruby mines in Montepuez, specifically the Montepuez Ruby Mining Limitada and has strong connections to Kagem Mine in Zambia and the Faberge jewelry industry.⁹⁵ The additional 25% of the Montepuez Ruby Mining Limitada are owned by a domestic company, Mwriti.⁹⁶ 90% of gemstones revenues come from ruby and emerald auctions held approximately 4-6 per year in Singapore and Lusaka, Zambia. These actions are supplied by the rubies mined in Montepuez and most likely transported from Malawi to Beira for export.⁹⁷ Mozambique's recent membership to the Kimberley Process still makes tracing the sustainability and safety of gemstones mined in the country difficult.⁹⁸ They do support Fair Trade certification for gemstones mined in Montepuez and follow the United Nations Interregional Crime and Justice Research Institute (UNICRI) guidelines for traceability.⁹⁹

⁹³ "Mozambique: ASM Profile." Mozambique | ASM. African Minerals Development Centre. Accessed March 28, 2022. <https://knowledge.uneca.org/ASM/mozambique>.

⁹⁴ Hunter, Marcena, Chikomeni Manda, and Gabriel Moberg. Rep. *Scratching the Surface: Tracing Coloured Gemstone Flows from Mozambique and Malawi to Asia*. Global Initiative, November 2021. <https://globalinitiative.net/wp-content/uploads/2021/11/Gemstones-Report-Web.pdf>

⁹⁵ "Gemfields Group Shareholder H1 Results." Edison Group, September 2021. <https://www.edisongroup.com/wp-content/uploads/2021/09/Gemfields-Group-A-new-strategic-shareholder.pdf>.

⁹⁶ International Labor Organization, "The Benefits of International Labour Standards," accessed March 15, 2022, <https://www.ilo.org/global/standards/introduction-to-international-labour-standards/the-benefits-of-international-labour-standards/lang--en/index.htm>.

⁹⁷ Hunter, Marcena, Chikomeni Manda, and Gabriel Moberg. Rep. *Scratching the Surface: Tracing Coloured Gemstone Flows from Mozambique and Malawi to Asia*. Global Initiative, November 2021. <https://globalinitiative.net/wp-content/uploads/2021/11/Gemstones-Report-Web.pdf>.

⁹⁸ "Mozambique- Kimberley Process Status ." KimberleyProcess. Accessed April 2022. <https://www.kimberleyprocess.com/en/mozambique-0>.

⁹⁹ "Mozambique: ASM Profile." Mozambique | ASM. African Minerals Development Centre. Accessed March 28, 2022. <https://knowledge.uneca.org/ASM/mozambique>.

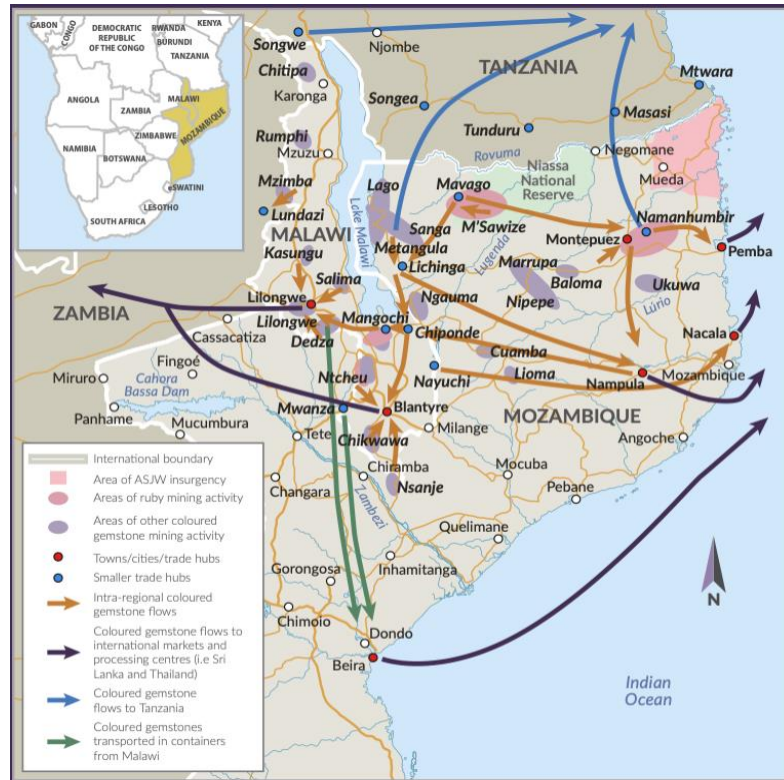


Figure 4. Ruby Supply Chain Route In and Out of Mozambique. Global Initiative.¹⁰⁰

The international investor, Gemfields, was also involved in a lawsuit concerning safety measures at the Montepuez Ruby Mine in 2018.¹⁰¹ Reports from the legal investigation cite that more than 100 Mozambicans working in the mine filed abuse cases against the London-based corporation. Eyewitness accounts from miners stated that they were “shot, beaten, humiliated, subject to sexual abuse, unlawfully detained and forced to carry out menial labor.”¹⁰² The case was settled in 2019 for \$7.8 million USD on behalf of 273 Mozambicans included in the lawsuit.¹⁰³ It was specifically stated that these actions were carried out by Gemfields-employed security forces. To mitigate the reputation of the company and its investments in the region, Gemfields subsequently announced a \$659,000 USD investment project for agricultural development.¹⁰⁴

Entering the international buyer’s market is made easy for miners given the numerous markets across Mozambique. Rubies are sold to international buyers in the villages of M’Sawize, Mavago, Mamanhumir, Nakaka, Nanyupu and Montepuez, which act as trading centers between

¹⁰⁰ Hunter, Marcena, Chikomeni Manda, and Gabriel Moberg. Rep. *Scratching the Surface: Tracing Coloured Gemstone Flows from Mozambique and Malawi to Asia*. Global Initiative, Page 16, November 2021. <https://globalinitiative.net/wp-content/uploads/2021/11/Gemstones-Report-Web.pdf>.

¹⁰¹ Hill, Matthew. “Gemfields Faces Lawsuit Alleging Rights Abuses at Ruby Mine.” Business & Human Rights Resource Centre, 2018. <https://www.business-humanrights.org/en/latest-news/gemfields-faces-lawsuit-alleging-rights-abuses-at-ruby-mine/>.

¹⁰² Hill, Matthew, “Gemfields Faces Lawsuit Alleging Rights Abuses at Ruby Mine”.

¹⁰³ Jamasie, Cecilia, “Gemfields to Pay \$7.8m to Settle Human Rights Abuses Claims in Mozambique.” MINING.COM, January 30, 2019. <https://www.mining.com/gemfields-pay-7-8m-settle-claim-human-rights-abuses-mozambique/>.

¹⁰⁴ Jamasie, Cecilia, “Gemfields to Pay \$7.8m to Settle Human Rights Abuses Claims in Mozambique”.

international buyers and local smuggling networks. Between 2016-2020, the Niassa Provincial Department of Mines reported no ruby exports, leading scholars to make the judgment that almost all were smuggled out illegally.¹⁰⁵ Rubies find their final destinations often in Southeast Asia, where they are sold at ruby markets in Thailand and Sri Lanka. Both countries act as a primary destination for gemstones that have been informally smuggled or formally exported from part of Sub-Saharan Africa. Thailand, particularly given its own former ruby industry now since depleted, has main trading centers at Silom Road in Bangkok and Chanthaburi weekend markets.¹⁰⁶ The country has a dominant ruby market compared to other buyers and sellers in the region due to their knowledge of the market and the historically established networks for buyers and sellers. Thai gemstones authorities, Gem-Jewelry Institute, admit that imports from Africa are under-reported and that corruption and predatory actors are prominent in the southeast Asia market.¹⁰⁷ Once gemstones are bought at Thai markets, they are often directly polished and placed into jewelry that is exported and sold across Hong Kong, mainland China, Switzerland, Italy, India and in some cases the United States.¹⁰⁸ Similar to Thailand, Sri Lanka is a primary destination for African gemstones, including those from Mozambique. In 2019, their gemstones exports peaked at \$150 million USD as demand has grown from foreign buyers, especially those from China.¹⁰⁹ Lab testing from Sri Lanka suggests that nearly half of all gemstones in the Sri Lanka market have originated from Sub-Saharan Africa. Connected with their trading partnerships across southeast Asia, Thailand remains the top destination for processed Sri Lankan rubies. Buy-Sell chains are common in these markets as sales are made to local buyers who may have closer connections to foreign investors and markets. It is also common for gemstone buyers to “shop around” and smuggle stones to whichever country has the lowest export rates and ease of doing business.¹¹⁰

Despite the formality of large ruby mines and market, international buyers in southeast Asia still suspect that hazardous work conditions take place in mines. This is most likely due to the lack of resources to enforce and trace the conditions of gemstones, like the issues identified across the gold industry. One notable event involving child labor involves a Tanzanian syndicate taking advantage of the poverty in the region and financially coerce people, often children, into illegally mining the closed pits in the Montepuez ruby mine.¹¹¹ They offer the “opportunity” to mine as well as funding transport, supplies, and food, but most miners cannot afford this upfront and instead pay it off as a loan over time.¹¹² Since the pits they are mining are formally closed, miners are subject to pit collapses, as well as the general health effects of mining without PPE.

¹⁰⁵ Scratching the Surface: Tracing Coloured Gemstone Flows from Mozambique and Malawi to Asia, 27. 2021.

¹⁰⁶ Scratching the Surface: Tracing Coloured Gemstone Flows from Mozambique and Malawi to Asia, 40. 2021.

¹⁰⁷ Scratching the Surface: Tracing Coloured Gemstone Flows from Mozambique and Malawi to Asia, 11. 2021.

¹⁰⁸ Scratching the Surface: Tracing Coloured Gemstone Flows from Mozambique and Malawi to Asia, 37. 2021.

¹⁰⁹ Scratching the Surface: Tracing Coloured Gemstone Flows from Mozambique and Malawi to Asia, 43. 2021.

¹¹⁰ Scratching the Surface: Tracing Coloured Gemstone Flows from Mozambique and Malawi to Asia, 34. 2021.

¹¹¹ Arnoldi, Marleny, March 2019, “Gemfields Warns about Forced Illegal Mining ‘Slavery’ in Mozambique.” Accessed 2022. <https://www.miningweekly.com/article/gemfields-warns-about-forced-illegal-mining-slavery-in-mozambique-2019-05-13>.

¹¹² Arnoldi, Marleny, March 2019, “Gemfields Warns about Forced Illegal Mining ‘Slavery’ in Mozambique.” Accessed 2022. <https://www.miningweekly.com/article/gemfields-warns-about-forced-illegal-mining-slavery-in-mozambique-2019-05-13>.

FOREIGN INFLUENCE

For the 2020-2021 fiscal year, Vodafone, a British telecom company, released a Modern Slavery Report.¹¹³ The report discusses the impact of COVID-19 on education and subsequently, children's involvement in child labor and hazardous work. Vodafone has committed to a responsible supply chain and has graphed their own due diligence to ensure safe practices are used by their mineral suppliers. As a telecom manufacturer and investor, Vodafone specifies the minerals used in their products. Most common is cobalt followed by tin, tantalum, tungsten, and gold or 3TG.¹¹⁴ Vodafone specifies which of their technologies including routers, modems and anti-theft systems use 3TG or conflict traceable minerals through their Due Diligence for Responsible Mineral Sourcing framework.¹¹⁵ Vodafone specifies they do not purchase raw minerals, but instead rely on direct suppliers to "gather information about Smelters¹¹⁶ in our supply chain."¹¹⁷ From their list of conformant Smelters, only three were located on the African continent, two in South Africa. A majority were in Europe and Asia and included countries such as Switzerland, Germany, China, Japan, and the Republic of Korea. Two were also mentioned from the United Arab Emirates¹¹⁸ as well as the United States and Canada. On the list of non-conformant smelters, 15 were from China, 3 from the United Arab Emirates, and one from Zimbabwe.¹¹⁹ Yet, Vodafone identified Smelters based on reports in the suppliers' Conflict Minerals Reporting Template (CMRT)¹²⁰ responses, in which Mozambique confirmed their gold and tantalum production.¹²¹ Vodafone is also a founding member of *Trust Your Supplier*, an organization created to "use a common industry approach to review risks, including human rights, when on-boarding suppliers." The platform helps organizations gain access to "supplier information that is verified by third parties using block chain technology."¹²²

Additionally, multiple sources have cited heavy investment from China and India in Africa and Mozambique's natural resources. According to KPMG Global, China is mainly focused on Mozambique's coal mining industry and has mentioned the Montepuez ruby mine in Marrupa, Cabo Delgado. KPMG Global also notes the conditions of roads as a reason for investment in certain areas over others.¹²³ China has been investing in Mozambique since before their independence in 1975. Formal diplomatic ties were established in 1992 increasing trade between the two countries. In 2008, China became the second largest investor in Mozambique, surpassed only by South Africa.¹²⁴ As of the release date of the report, China is focused less on the mining

¹¹³ Vodafone, "Modern Slavery Statement," n.d., Page 9, 2021, <https://www.vodafone.com/sites/default/files/2021-05/modern-slavery-statement-2020-21.pdf>.

¹¹⁴ Acronym used for Tin, Tantalum, Tungsten and Gold

¹¹⁵ Vodafone Group Plc, "Conflict Minerals Report", Page 5, 2020, <https://www.vodafone.com/content/dam/vodcom/sustainability/pdfs/conflictminerals2019.pdf> 2020.

¹¹⁶ Smelters refers to the companies that own the mechanisms used for the smelting process.

¹¹⁷ Vodafone Group Plc, "Conflict Minerals Report", Page 7.

¹¹⁸ Vodafone Group Plc, "Conflict Minerals Report", Pages 9–10.

¹¹⁹ Vodafone Group Plc, "Conflict Minerals Report", Page 13.

¹²⁰ Vodafone Group Plc, "Conflict Minerals Report", Pages 7-12.

¹²¹ Vodafone Group Plc, "Conflict Minerals Report", Page 14.

¹²² Vodafone Group Plc, "Modern Slavery Statement," Page 9.

¹²³ KPMG, "2013 - MINING Mozambique - Country Mining Guide.Pdf", Page 10, 2013, <https://assets.kpmg/content/dam/kpmg/pdf/2013/10/Mozambique-mining-country-guide.pdf>.

¹²⁴ Andreas Wilkes, "China-Africa Forest Trade and Investment: An Overview with Analysis for Cameroon, Democratic Republic of Congo, Mozambique and Uganda" (International Institute for Environment and Development, 2016), Page 39, <https://www.jstor.org/stable/resrep02688>.

industry and more on manufacturing and agriculture.¹²⁵ Mining industry focus has mainly been explored through the environmental effects on surrounding areas. This is likely due to China's investment in the logging industry and their need for a sustainable supply chain of lumber to support infrastructure programs domestically.¹²⁶ Although China's influence in the mining sector is less than other sectors within Mozambique, they own 37 mining licenses, 6 of which are gold mining licenses, and a combined 450,000+ hectares of land.¹²⁷

SECURITY

Due to negative sentiments from Mozambique's civil war and the violent conflicts that followed, the presence of guerilla warfare is a cause for concern. The most notable security concern reported in Mozambique is the presence of two primary, but competing, state terrorist groups, Ahlu-Sunna Wa-Jama'a (ASWJ) and Al-Shabaab. Syndicates of ISIS, both groups have been reported to carry out violent acts, mostly in the northern part of the country with specific reports from Cabo Delgado and surrounding areas. In 2020, the U.S. Department of State reported a significant increase in terrorist activity across the region related to ISIS.¹²⁸ The guerilla terrorist tactics of Al-Shabaab are devastating, but not new. ASWJ is reported to be in competition against Al-Shabaab, and responsible for a 2017 attack in Cabo Delgado. Record displacements of nearly 700,000 individuals and 2,500 deaths have been traced back to activities carried out by ASWJ.¹²⁹ Al-Shabaab has been associated with recruiting young male Mozambicans and encouraging them to study abroad in Muslim majority countries in the Middle East with the support of Islamic organizations.¹³⁰ Upon their return from abroad, many of these young men hold anti-government sentiments. Al-Shabaab has been reported to use profits from the ASM sector in Mozambique to benefit their activities. Often these groups are hired as special security for foreign buyers and mineral traders, given their influence and local knowledge of the areas. In the past, Al-Shabaab has bankrolled some of their efforts with revenues made from ASM gold and gemstones mines and supported smuggling efforts in the province.¹³¹

Similar reports note that Al-Shabaab makes money through illicit trading, wildlife and mineral smuggling, drugs, and human trafficking.¹³² It is possible that the minerals smuggled and used for profit by Al-Shabaab come from ASM gold mines in the Manica Province, given its proximity to Cabo Delgado. A rightful fear has emerged among communities that their movement

¹²⁵ Andreas Wilkes, "China-Africa Forest Trade and Investment: An Overview with Analysis for Cameroon, Democratic Republic of Congo, Mozambique and Uganda", Page 39.

¹²⁶ Andreas Wilkes, "China-Africa Forest Trade and Investment: An Overview with Analysis for Cameroon, Democratic Republic of Congo, Mozambique and Uganda", Pages 19-20.

¹²⁷ Andreas Wilkes, "China-Africa Forest Trade and Investment: An Overview with Analysis for Cameroon, Democratic Republic of Congo, Mozambique and Uganda", Page 43.

¹²⁸ United States Department of State, "Country Reports on Terrorism 2020: Mozambique," *United States Department of State* (blog), accessed March 18, 2022, <https://www.state.gov/reports/country-reports-on-terrorism-2020/mozambique/>.

¹²⁹ Hunter, Marcena, Chikomeni Manda, and Gabriel Moberg. Rep. *Scratching the Surface: Tracing Coloured Gemstone Flows from Mozambique and Malawi to Asia*. Global Initiative Against Transnational Organized Crime, November 2021. <https://globalinitiative.net/wp-content/uploads/2021/11/Gemstones-Report-Web.pdf>.

¹³⁰ "Explained: Who Are the Rebels in Northern Mozambique?" *The Economic Times*, April 2, 2021. <https://economictimes.indiatimes.com/news/defence/explained-who-are-the-rebels-in-northern-mozambique/articleshow/81871559.cms>.

¹³¹ International Crisis Group. *Stemming the Insurrection in Mozambique's Cabo Delgado* 303. Vol. 303. Africa Report. 2021. <https://reliefweb.int/sites/reliefweb.int/files/resources/303-mozambique-cabo-delgado%20%281%29.pdf>

¹³² "Drivers of Extremism in Mozambique – Africa Center for Strategic Studies," accessed March 18, 2022, <https://africacenter.org/spotlight/the-many-drivers-enabling-violent-extremism-in-northern-mozambique/>.

across the province and into the mineral supply chain could result in the increase of contraband supply chains. Attacks carried out in the Cabo Delgado Province usually involve the destruction of road infrastructure, occupation of district capitals, kidnappings, resupply raids and civilian attacks. Use of security forces to protect mining sites, transportation of minerals, and personal security has increased over recent years. The presence of state terrorist organizations in the province has been well publicized and tracked as a security concern to public safety.

In a state response to Al-Shabaab, Mozambique's president contracted the Russian mercenary Wagner Group in the fall of 2019.¹³³ Unfortunately, given operations' limited understanding of Cabo Delgado, local communities and indigenous military forces, the Wagner Group operation was unsuccessful.

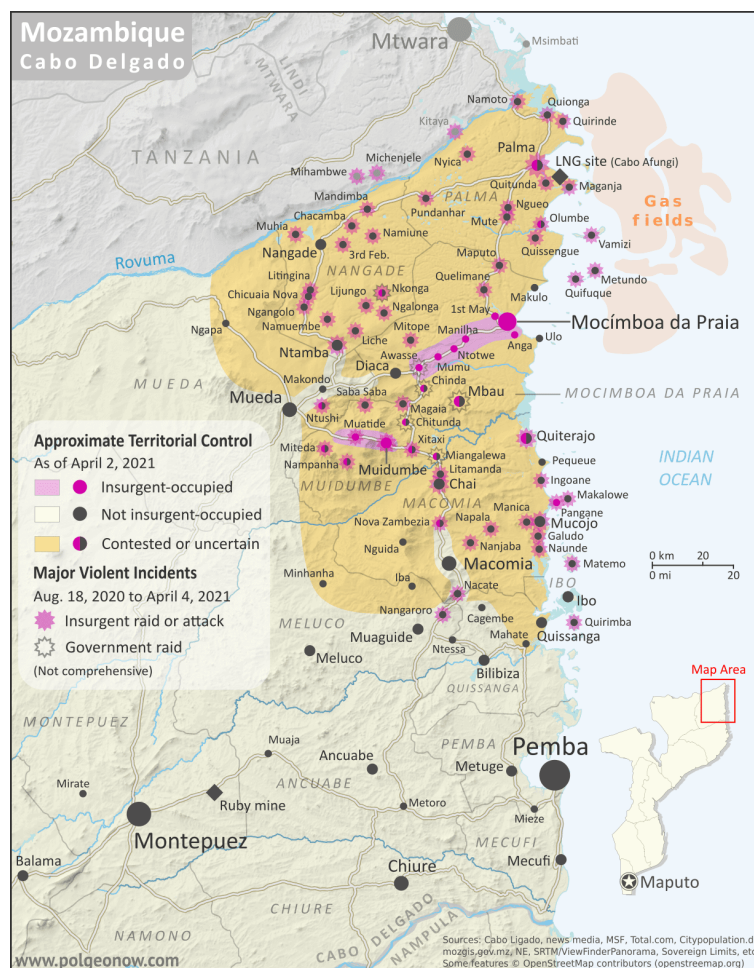


Figure 5. Mapping Attacks by Jihadist Groups in Cabo Delgado, Mozambique 2020-2021¹³⁴

¹³³ Fasanotti, Federica Saini. "Russia's Wagner Group in Africa: Influence, Commercial Concessions, Rights Violations, and Counterinsurgency Failure." Brookings. Brookings, March 9, 2022. <https://www.brookings.edu/blog/order-from-chaos/2022/02/08/russias-wagner-group-in-africa-influence-commercial-concessions-rights-violations-and-counterinsurgency-failure/>.

¹³⁴ Political Geography Now, "Mozambique Insurgency: Close-up Map of Control in April 2021", 2021, <https://www.polgeonow.com/2021/04/cabo-delgado-conflict-map-2021.html>.

PUBLIC HEALTH & ENVIRONMENTAL SAFETY

Despite Mozambique's efforts to regulate the gold ASM sector, the health and safety of miners and surrounding communities often falls short. Open and abandoned mine shafts left unattended pose a major safety risk to local inhabitants and wildlife in mining regions. Falling into abandoned mines poses a major threat to individuals, especially smaller unattended children.¹³⁵ Mine shafts as deep as 80-meters have been recorded across the Manica region. Due to the lack of structural support and mine safety protocols, cave-ins are a frequent occurrence.¹³⁶ Public health is also threatened by ASM activities. Mining production byproducts that pollute local waterways and air quality are common. The use of mercury for gold amalgamation, a process of separating unrefined minerals from gold deposits, poses major health risks to those that come in direct contact with the element.¹³⁷ Mercury-Gold amalgamation is the process of mixing unrefined gold with liquid mercury that is then heated to high temperatures, evaporating the mercury, and separating unrefined mineral products from refined gold. Evaporated mercury can linger in the lungs of those breathing it in without proper repository protection or pollute local streams and soil. Long-term exposure to mercury can cause poisoning which includes memory loss, impaired motor functions and can lead to death.¹³⁸ In children the effects are greater, causing both physical and mental disabilities.¹³⁹ Mercury poisoning from gold production does not only impact public health and safety, but also the surrounding communities. The largest source of mercury pollution stems from the ASM sector with vaporized levels as high as 1000 metric tons per year.¹⁴⁰ In addition to the potential for neurological damage, further contamination of local water sources and, subsequently, soil in surrounding areas is possible.¹⁴¹ Most people in Mozambique live on subsistence farming and take part in ASM activities in the agricultural off season. High mercury levels in local environments affect the conditions for farming and other agricultural practices.

Attempts to raise awareness of the dangers of mercury resulted in the creation of The Minamata Convention on Mercury in 2013. Sponsored by the UN Environment Programme, it is a “global treaty to protect human health and the environment from the adverse effects of mercury.”¹⁴² The internationally recognized treaty was ratified by Zambia in 2016 and in Zimbabwe in 2021. Mozambique has yet to ratify the treaty. The convention was drafted in response to those suffering

¹³⁵ “Gold Fever Infects Young and Old.” The New Humanitarian, January 7, 2016.

<https://www.thenewhumanitarian.org/ar/node/236612>.

¹³⁶ AfricaNews. “Mozambican Children Face Exploitation in Illegal Mining.” AfricaNews. March 19, 2021.

<https://www.africanews.com/2021/03/19/mozambican-children-face-exploitation-in-illegal-mining/>.

¹³⁷ Drace, Kevin, Adam M. Kiefer, Marcello M. Veiga, Matt K. Williams, Benjamin Ascari, Kassandra A. Knapper, Kaitlyn M. Logan, et al. “Mercury-Free, Small-Scale Artisanal Gold Mining in Mozambique: Utilization of Magnets to Isolate Gold at CleanTech Mine.” *Journal of Cleaner Production* 32 (2012): 88–95.
<https://doi.org/10.1016/j.jclepro.2012.03.022>.

¹³⁸ Drace, et al, “Mercury-Free, Small-Scale Artisanal Gold Mining in Mozambique: Utilization of Magnets to Isolate Gold at CleanTech Mine”.

¹³⁹ Louisa J. Esdaile and Justin M. Chalker, “The Mercury Problem in Artisanal and Small-Scale Gold Mining,” *Chemistry (Weinheim an Der Bergstrasse, Germany)* 24, no. 27 (May 11, 2018): 6905–16,
<https://doi.org/10.1002/chem.201704840>.

¹⁴⁰ Esdaile and Chalker.

¹⁴¹ Gibb, H., & O’Leary, K. G. Mercury exposure and health impacts among individuals in the artisanal and small-scale gold mining community: a comprehensive review. *Environmental health perspectives*, 122(7), 667–672. 2014.
<https://doi.org/10.1289/ehp.1307864>

¹⁴² UN Environment Programme, “Minamata Convention on Mercury”, “About Us”, 2021. Retrieved from
<https://www.mercuryconvention.org/en/about>.

from the effects of mercury poisoning due to chemical leaks in Minamata, Japan. It specifies that the “largest source of mercury emissions are artisanal and small-scale gold mining.”¹⁴³

COVID

Like many underdeveloped countries during the spread of the coronavirus pandemic, Mozambique faced an overwhelming number of cases and lack of medical resources to combat the virus. Despite the lack of centralized resources and the lack of ability to reach rural areas, Mozambique began a mitigation strategy early in the pandemic to spread awareness of the seriousness of the virus. Mozambique officially declared a State of Emergency as a response to the spread of the novel coronavirus on April 1st, 2020.¹⁴⁴ The State of Emergency was renewed four times until September 7th, 2020, when a State of Calamity was declared.¹⁴⁵ According to the World Health Organization’s COVID-19 dashboard, total cases on the African continent are at 8.2 million with a low death rate at 4,686.¹⁴⁶ During the period of research during mid-February 2022, Mozambique recorded a total of 224,841 cases with 2,189 confirmed deaths.¹⁴⁷ Total number of confirmed cases counted as 2.71% of cases in the region.

In late 2020, research and interviews were conducted in ASM communities in Mozambique to assess the impacts of COVID-19 on the industry and surrounding communities. Four main impacts were identified:¹⁴⁸

1. Covid restrictions resulted in reduced ASM activity.
2. Critical impacts on local economies were experienced.
3. Mineral trade did not seem to be affected by restrictions.
4. Awareness based health measures were reported to be effective.

Restrictions implemented by the Mozambican government reduced the ability to participate in mineral production at ASM mines due to their closure. Besides closures, mines that remained opened increased their health restrictions to include proper personal protective equipment, like masks, and increased access to disinfectant and requirements for washing stations.¹⁴⁹ Mining sites that could not follow government restriction due to costs were either forced to cease operations or cut employment in half.¹⁵⁰ With the closure of mines and layoffs, employment levels plummeted compared to pre-COVID levels. An 85% decrease in household income was recorded at the beginning of the study, increasing to 100% by the conclusion of the final report.¹⁵¹ Supply chain restrictions on international borders caused domestic price inflation and the cost of living increased drastically. Many mine workers and their families reported back to agricultural work despite the high input costs for agricultural yields. Despite the decrease in the workforce and heavy impacts on economic stability in Mozambique, mineral trade and supply chains for minerals did not seem hard hit by local covid restrictions. The buyers who had purchased ASM minerals prior to COVID-19,

¹⁴³ UN Environment Programme, “Minamata Convention on Mercury”, Page 5, September 2019, https://www.mercuryconvention.org/sites/default/files/documents/information_document/Minamata-Convention-booklet-Sep2019-EN.pdf

¹⁴⁴ Lsyter, Olivia, Salvador Mondlane Jr., and Elton Maiela. “Four Impacts of Covid-19 on ASM in Mozambique.” Delve, November 9, 2020. <https://delvedatabase.org/news/four-impacts-of-covid-19-on-asm-in-mozambique>.

¹⁴⁵ Four Impacts of Covid-19 on ASM in Mozambique. November 9, 2020.

¹⁴⁶ World Health Organization. “COVID-19 (WHO African Region).” ArcGIS dashboards. Accessed February 20, 2022. <https://www.arcgis.com/apps/dashboards/0c9b3a8b68d0437a8cf28581e9c063a9>.

¹⁴⁷ COVID-19 (WHO African Region).

¹⁴⁸ Four Impacts of Covid-19 on ASM in Mozambique. November 9, 2020.

¹⁴⁹ Four Impacts of Covid-19 on ASM in Mozambique. November 9, 2020.

¹⁵⁰ Four Impacts of Covid-19 on ASM in Mozambique. November 9, 2020.

¹⁵¹ Four Impacts of Covid-19 on ASM in Mozambique. November 9, 2020.

continued to hold open purchase routes in Mozambique. This is most likely since most buyers have their own forms of transportation and can avoid restrictions locally. Even with global prices increasing at the beginning of the pandemic, because of “panic buying,” local miners reported lower than usual pricing. Global ASM gold supply chains did, however, see massive disruption.¹⁵² Triumphantly, the Mozambican government has efficiently brought awareness to the pandemic and prevention practices were reported to be very high.¹⁵³ Many respondents knew how to protect themselves from getting sick and restrictions implemented by the government were substantial in the ASM sector and could have resulted in a lower transmission rate.

TREND SUMMARY

Out of all three countries in the case studies Mozambique lacks enforcement and protection measures the most. Although mining association exist to regulate ASM, miners are not required to join or follow protocols related to child labor. Arguments for formalization are met with bureaucratic red tape as many in rural areas do not have the access or resources needed to obtain a ASM gold license, leaving them reliant on the informal and illegal sectors. As discussed, reliance on subsistence agriculture, mixed with the precarious citations of flooding or droughts exacerbated by climate change and a lack of childcare, motivates many families to bring their children along to the mining sites. As discussed, access to childcare is limited and the reliance on subsistence agriculture has exacerbated this trend. In the case explored by UniZambeze, children were actively involved in gold mining operations, but in other cases children have been seen participating in less hazardous work around mining sites such as cleaning clothes or providing water to workers.

As previously discussed, foreign influence in the artisanal and small-scale mining sector in Mozambique does not see as much international influence from outside of Africa as from within. Many small-scale mines are financed by neighboring foreigners who often return to their countries of origin in the region with Mozambican minerals, leaving insignificant amounts of money behind in local mining communities. Countries, such as the United Kingdom, try to remain transparent and legal in their activities, by paying taxes on mineral products but others, like China, focus more heavily on the environmental effects of mining.

Low education rates across the country for children is also a trend. The primary completion rate for students in Mozambique is low compared to the other countries in this report and may have been adversely affected by the COVID-19 pandemic as well. Mozambique made a targeted effort to increase the quality and quantity of children engaged in the education system, but besides abolishing school fees, a lack of resources to help build and fund, schools and teachers lends to the low completion rate of schooling. The next case study will cover Zambia and the emerald and copper ASM industry across the country.

¹⁵² Four Impacts of Covid-19 on ASM in Mozambique. November 9, 2020.

¹⁵³ Four Impacts of Covid-19 on ASM in Mozambique. November 9, 2020.

Zambia

HISTORICAL BACKGROUND

At the end of the 19th century the British Empire colonized Zambia. During the colonial administration between 1911 and 1963, Zambia attracted immigrants from Europe and the Asian subcontinent, some of whom were indentured workers. While most Europeans left after the collapse of white-minority rule, many Asians remained. In 1964, after dissolving the states of Northern Rhodesia, Zambia gained its independence from the British and became known as the Republic of Zambia.¹⁵⁴ After independence in 1964, Zambia governed under a single party until 1973 when an official one-party state was established.¹⁵⁵ In 1991, Zambia adopted a multi-party democracy and liberalized their economy. Currently, the Zambian government is pursuing a national development plan to reduce the economy's reliance on the copper industry and diversify into the gemstone industry. Primary challenges include improving governance issues such as restoring debt sustainability, promoting broad-based, inclusive economic growth, maintaining adherence to democratic and constitutional principles, creating employment, and developing its human capital.¹⁵⁶ Despite Zambia's economic growth, many Zambians continue to live in poverty across the primary economic hubs of Lusaka and the Copperbelt Province.

The Zambian population of 19 million consists primarily of lower-middle income individuals, with half of the population living below the poverty line.¹⁵⁷ Poverty levels remain high across the country, despite positive economic growth and relative political stability over the past decades. The stable political climate remained free of large-scale violence but faced high levels of corruption and lack of development. Alleged corruption and a volatile economy remain at the core of the country's issues. Food insecurity affects a large portion of the population with around 2.3 million people requiring emergency food assistance.¹⁵⁸

DOMESTIC LEGAL FRAMEWORK

ASM is prevalent in Zambia and is considered the main source of income for households in the Copperbelt, Central, Lusaka, Eastern, Southern, North-Western, and Eastern provinces, where the presence of child labor is extensive.¹⁵⁹ While legal channels for ASM exist in Zambia, most of the labor undertaken by children is classified as illegal activity. It is estimated that the ASM industry employs nearly 13 million people and is a secondary source of income next to rural agricultural practices.¹⁶⁰ The International Growth Center reports that ASM mining can include

¹⁵⁴ "Background Note: Zambia." *U.S. Department of State- Bureau of African Affairs*, January 2009. <https://2001-2009.state.gov/r/pa/ei/bgn/2359.htm>.

¹⁵⁵ "Background Note: Zambia." *U.S. Department of State*. January 2009.

¹⁵⁶ "Background Note: Zambia." *U.S. Department of State- Bureau of African Affairs*, January 2009. <https://2001-2009.state.gov/r/pa/ei/bgn/2359.htm>.

¹⁵⁷ *Countrymeters.info*. "Zambia Population (2022)." *Countrymeters*. Accessed March 2022. <https://countrymeters.info/en/Zambia#:~:text=As%20of%201%20January%202022,of%2018%2C675%2C979%20the%20year%20before>.

¹⁵⁸ *Situation Report: Zambia*. World Food Programme. July 5, 2002. Accessed March 2022. Retrieved from <https://reliefweb.int/report/zambia/food-shortages-zambia-facts>

¹⁵⁹ Hapunda, Given. "Baseline Study Report on the Push and Pull factors of Child labour in mining in Central and Copperbelt of Zambia." *Pact Zambia*, Page1, 2022.

¹⁶⁰ International Growth Center. "The current state of artisanal and small-scale mining in Zambia." 2019. Retrieved from <https://www.theigc.org/blog/the-current-state-of-artisanal-and-small-scale-mining-in-zambia/>

various social challenges but is beneficial to Zambian communities. ASM also provides off-season support for communities that rely heavily on agriculture.¹⁶¹

Given its criminal activity connections, ASM has lost the interest of the Zambian government. The decision to steer clear of ASM questions whether they choose to view the sector as a poverty driven necessity or a potential for economic progress in the country.¹⁶² Formalization of the sector could improve the conditions of miners in ASM, especially copper mining sectors that many Zambians rely on for income. Zambia's current reliance on the formal mining sector is being challenged by the illegality of ASM practices across the country, which are negatively impacting their economy. The United Nations Conference on Trade and Development reports that “trade mis-invoicing, the under-declaration of exports, and other fraudulent trade practices,” cost the country around \$12.5 billion USD between 2013 and 2015.¹⁶³ Copper mining supports a large portion of Zambia's economy and is often brought into question when shipment and transaction practices by international traders are suspected to include inaccurate reporting or illegal activity. The UN's Economic Commission for Africa estimates that Zambia accounted for 65% of all African trade mis-invoicing in copper.¹⁶⁴ Zambia's participation in programs that recover unpaid export dues, such as the Mineral Output Statistical Evaluation System, can help improve the economy and initiate development programs that could lessen poverty and child labor in the country.

As of 2013, the government of Zambia has also attempted to enforce policies targeted at the ASM sector. The 2013 Mineral Resources Development Policy aims to encourage the use of appropriate, affordable, and safe technology for ASM. It proposed several initiatives which included increasing the government's support, capacity building in Regional Mining Offices, collaboration with ASM associations and disseminating information to raise awareness on occupational health and safety, and environmental risks. Additionally, with special focus on ASM participants and surrounding communities the focus is to improve the system of information flow in rural populations and inform them of the regulations governing the ASM sector and access to financing.¹⁶⁵ The policy attempted not only to improve the current conditions of ASM practices, but also formalize the existing informal institutions that have been created by ASM miners and their communities. The Mines and Minerals Development Act No. 11 of 2015 and the General Mining Regulations of 2016 are the legal frameworks regulating mining and mineral development in Zambia. The legislation established basic principles for miners to follow that include education on the sustainability of mineral resources, the socio-economics effects, danger of exploitation, public health concerns and citizen rights.¹⁶⁶

Parts of the ASM sector in Zambia are formalized for individuals, groups or companies that operate under legal mining titles such as the Artisans' Mining Right, Small-Scale Exploration License, or a Small-Scale Mining License.¹⁶⁷ Each license varies in its specific land coverage and ownership. The Artisans' Mining Right is granted to Zambian citizens and covers a minimum of 3 hectares and a maximum of 6 hectares of mining coverage. The Small-Scale Exploration and Small-Scale mining follow similar trends although the exploration license covers up to 1000 hectares

¹⁶¹ International Growth Center. 2019.

¹⁶² International Growth Center. 2019.

¹⁶³ United Nations Conference on Trade and Development. “Mineral tracking tool helps Zambia combat illicit financial flows.” *UNCTAD*, October 1, 2020. Retrieved from <https://unctad.org/news/mineral-tracking-tool-helps-zambia-combat-illicit-financial-flows>

¹⁶⁴ United Nations Conference on Trade and Development. October 1, 2020.

¹⁶⁵ The Republic of Zambia Ministry of Lands and Natural Resources. “Artisanal and Small-Scale Mining Handbook for Zambia.” 2018, 52. Accessed Feb. 19, 2022.

¹⁶⁶ The Republic of Zambia Ministry of Lands and Natural Resources, 55.

¹⁶⁷ The Republic of Zambia Ministry of Lands and Natural Resources, 55.

while the mining license only covers 400 hectares. Both have a minimum of 10 hectares.¹⁶⁸ The Mines and Minerals Development Act of 2015 defined the bounds of ASM licensing, but also included an eligibility statement for license holders to only include Zambian citizens. In Article 1 of the 2015 Act, mining rights cannot be granted to anyone under the age of 18 or unregistered companies.¹⁶⁹ More specific details on eligibility and licensing procedures are available in the official 2015 Act but exemplify the complicated and extensive process that is not widely accessible to those in the ASM industry. Many ASM miners are already in poverty and cannot afford the licenses and cannot afford to spend time on ensuring they meet all the stipulations.

CHILD LABOR

In the ASM sector, children are employed as casual laborers with little to no job security and are subjected to minimal remuneration.¹⁷⁰ They are exposed to physical and mental abuse which oftentimes takes place in the presence of their parents and face risk of sexual abuse and human trafficking.^{171 172} Nonetheless, child involvement in mining remains largely unregulated throughout Zambia which allows children to participate in dangerous conditions. In an attempt to combat child labor, Zambia has signed ILO Conventions 138 and 182.¹⁷³ The government of Zambia became a member of International Programme on the Elimination of Child Labor (ILO-IPEC) in 2000 and joined the ILO-IPEC regional project funded by the U.S. Department of Labor in order to combat child labor in commercial agriculture by withdrawing children from exploitative work and promoting education and health care.¹⁷⁴ Additionally, Zambia passed the Education Act which required the government to provide free education until the seventh grade and specified that education is compulsory for children of “school-going age.” The Education Act, however, does not specify the age or define “school-going age,” which results in children leaving school before they are legally allowed to work under international law.¹⁷⁵

Lack of standards in relation to school attendance may increase the risk of children’s involvement in the worst forms of child labor. Agencies in Zambia work to combat child labor but are lacking in personnel and financial resources. In 2020, the Ministry of Labor and Social Security (MLSS) employed 160 labor inspectors.¹⁷⁶ These inspectors not only review the severity of child labor in Zambia, but also look at labor violations generally. The number of labor inspectors employed is inadequate for the workforce of nearly 7 million in Zambia. An insufficient budget, inadequate training and a lack of transportation prevented the MLSS from effectively carrying out inspections throughout the country.¹⁷⁷ Inspections are also only carried out in registered private mining sites, this means that it does not conduct investigations in unregistered mining locations.¹⁷⁸ Unregistered institutions are more likely to conduct child labor activities. The MLSS Child Labor Unit uses mediation with parents as a common method for dealing with child labor cases, but do not

¹⁶⁸ The Republic of Zambia Ministry of Lands and Natural Resources, 56.

¹⁶⁹ The Republic of Zambia Ministry of Lands and Natural Resources, 56.

¹⁷⁰ Zambia Congress of Trade Unions. “National Policy on Child Labor.” 2008, 11. Accessed Feb 17, 2022

¹⁷¹ Zambia Congress of Trade Unions.

¹⁷² Zambia Congress of Trade Unions.

¹⁷³ U.S. Department of Labor. “Findings on the Worst Forms of Child Labor” 2020. Retrieved from <https://www.dol.gov/agencies/ilab/resources/reports/child-labor/zambia>.

¹⁷⁴ U.S. Department of Labor. “2001 Findings on the Worst Forms of Child Labor.” 2002. Retrieved from <https://www.refworld.org/docid/48c8c9fe32.html>.

¹⁷⁵ U.S. Department of Labor, “2020 Findings on the Worst Forms of Child Labor,” 2020.

¹⁷⁶ U.S. Department of Labor, “2020 Findings on the Worst Forms of Child Labor,” 2020.

¹⁷⁷ U.S. Department of Labor, “2020 Findings on the Worst Forms of Child Labor,” 2020.

¹⁷⁸ U.S. Department of Labor, 2002.

prosecute companies suspected of labor trafficking in the mining sector.¹⁷⁹ The MLSS's role in deterring child labor practices includes enforcing and regulating child labor laws and advising other government agencies on issues concerning child labor. Additionally, the Zambia Police Service Child Protection Unit collaborates with other agencies to identify and remove vulnerable children from the streets. They place rescued children with families, foster care programs, or in safe homes.¹⁸⁰

In 2020, the government funded and participated in programs with the goal of eliminating or preventing child labor.¹⁸¹ However, gaps exist in social programs including the adequacy of programs to address child labor in all relevant sectors. The government established mechanisms to coordinate its efforts to address child labor, but lack effective application in addressing child labor, including cooperation among agencies.¹⁸² As previously mentioned, the Education Act did not specify a compulsory education age, and human trafficking laws are discordant with international standards since Zambia requires threats, the use of force, or coercion to be prosecuted for the crime of child trafficking. According to the U.S. Department of State Trafficking in Persons Report, women and children may face higher trafficking risk in mining export supply chains.¹⁸³ Zambian children are vulnerable to labor trafficking in illegal mining for purposes involving a variety of activities, such as loading stolen copper onto trucks. Sex trafficking chains associated with the mining sector also puts Zambian children at risk.¹⁸⁴

The government of Zambia has implemented different methods for combating trafficking of women and children in the country. The Anti-Trafficking Act of 2008 criminalized some forms of sex and labor trafficking in Zambia. However, "human trafficking provisions remain inconsistent with international standards because they require demonstration of threats, force, intimidation, or other forms of coercion to constitute a child trafficking offense."¹⁸⁵ In 2019, the Zambian government investigated 17 potential cases of trafficking in the country. Of these 17 cases, 8 were acts of forced labor. The government did not convict any traffickers in 2020, compared to the four convictions made in 2019. Courts also acquitted two alleged traffickers in 2020.¹⁸⁶ In 2019, the government investigated one government official of complicity in forced child labor, but there were no updates given in 2021.¹⁸⁷ The U.S. Department of State has also reported that the government of Zambia has established a plan to direct trafficking cases to two human trafficking courts located in Lusaka, but this has not been successfully implemented.¹⁸⁸

Current legislation fails to consider the extent to which child labor is conducted within family units. A referral mechanism does exist in the country, conducted through the District Child Labor Committees, and allows labor officers to refer cases of child labor to social welfare services, but negative elements effect success and coordination of these programs.¹⁸⁹ NGOs have also had a

¹⁷⁹ U.S. Department of Labor, 2002.

¹⁸⁰ U.S. Department of Labor, 2002.

¹⁸¹ Bureau of International Labor Affairs. "2020 Findings on the Worst Forms of Child Labor: Zambia." 2020. Accessed Feb 6, 2022. Retrieved from <https://www.dol.gov/agencies/ilab/resources/reports/child-labor/zambia>

¹⁸² Bureau of International Labor Affairs. "2020 Findings on the Worst Forms of Child Labor: Zambia." 2020. Accessed Feb 6, 2022. Retrieved from <https://www.dol.gov/agencies/ilab/resources/reports/child-labor/zambia>

¹⁸³ U.S. Department of State. "2020 Trafficking in Persons Report: Zambia." 2020. Retrieved from <https://www.state.gov/reports/2020-trafficking-in-persons-report/zambia/>

¹⁸⁴ U.S. Department of State. "Trafficking in Persons Report." 2020. Retrieved from <https://www.state.gov/reports/2020-trafficking-in-persons-report/zambia/>

¹⁸⁵ U.S. Department of State, 2020.

¹⁸⁶ U.S. Department of State, 2020.

¹⁸⁷ U.S. Department of State, 2020.

¹⁸⁸ U.S. Department of State, 2020.

¹⁸⁹ U.S. Department of Labor. "2020 Findings on the Worst Forms of Child Labor."

role in combating human trafficking and child labor in Zambia. The government worked with international organizations and local NGOs in implementing anti-human trafficking training modules for law enforcement officers, criminal justice practitioners and magistrates, traditional chiefs, and labor officers.¹⁹⁰ Zambia attempted to provide shelter for victims of trafficking, but these programs, especially in rural areas, lack funding and resources.¹⁹¹ Pact, an international nonprofit working in human development in Zambia, conducted research on Zambia's mining communities. During Pact's research, children, caregivers, and stakeholders recommended various ways to reduce child mining. Methods included economic empowerment for caregivers, promoting access to education, and vocational skill development for youth.¹⁹² They also suggested improved security measures near mining sites and the implementation of artisanal mining machinery to decrease the presence of child labor in mining.¹⁹³

MINERALS

Copper and emeralds are lucrative industries in Zambia. Figure 6 shows where both emeralds and copper are mined in the Copperbelt Province. The Copperbelt Province is an area of extreme poverty. About 16% of the children in the Copperbelt reported being influenced to start artisanal mining by their parents compared to 8% of the children in the Central province.¹⁹⁴ The Copperbelt is also the province with the highest number of children who were led into mining because of poverty. Data shows more children (83%) in the Copperbelt than in the central province (54%) reported being led into mining because of poverty.¹⁹⁵ Caregivers in the Copperbelt also mentioned orphaned children without support were involved in mining as a way to earn a living.¹⁹⁶ In 2021, it was reported that 2.4% of the workforce (over 73,000 people), are employed in Zambia's extractive industry.¹⁹⁷ According to the Extractive Industries Transparency Initiative (EITI), mining accounted for 77% of Zambia's total exports and nearly 28% of government revenues came from the sector in 2019.¹⁹⁸

¹⁹⁰ U.S. Department of State. "Trafficking in Persons Report." 2021. Retrieved from <https://www.state.gov/reports/2020-trafficking-in-persons-report/zambia/>.

¹⁹¹ U.S. Department of State.

¹⁹² Hapunda, Given. "Baseline Study Report on the Push and Pull factors of Child labour in mining in Central and Copperbelt of Zambia." Pact Zambia. 2022. Unpublished.

¹⁹³ Hapunda, 2022.

¹⁹⁴ Hapunda, 2022.

¹⁹⁵ Hapunda, 2022.

¹⁹⁶ Hapunda, Given. "Baseline Study Report on the Push and Pull factors of Child labour in mining in Central and Copperbelt of Zambia." Pact Zambia. 2022. Unpublished.

¹⁹⁷ Mushinge, Glory, "Nationalizing Zambia's Copper Mines," *Deutsche Welle*, Dec. 3, 2021. Retrieved from <https://www.dw.com/en/nationalizing-zambias-copper-mines/a-56843152>

¹⁹⁸ Extractive Industries Transparency Initiative. "Zambia Overview and Role of the EITI." Latest validation 2021. Accessed March 10, 2022.

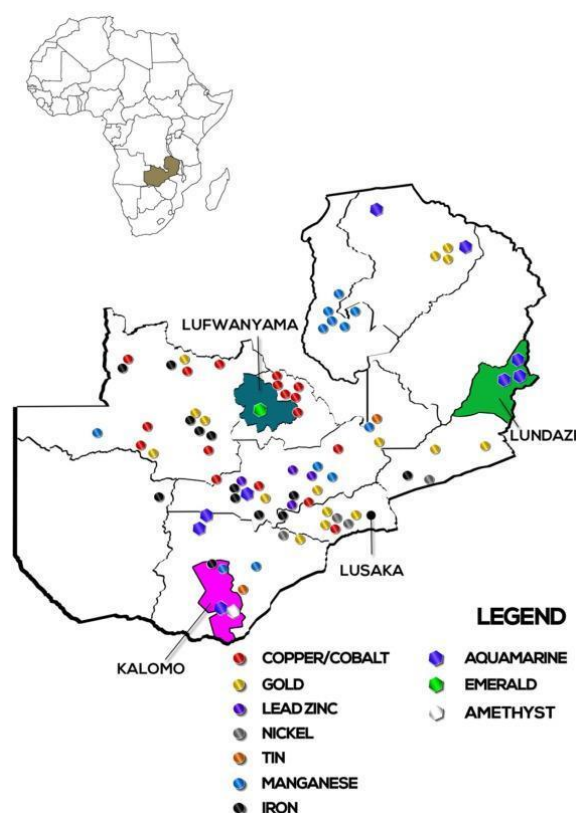


Figure 6. Distribution of Gemstones and Selected Minerals in Zambia, International Growth Center¹⁹⁹

COPPER

Zambia is Africa's second largest copper producer²⁰⁰, and high levels of copper production led to increased illegal activity and child labor. Copper mining also played a role in Zambia's early development stages. After independence in 1964, the copper industry urbanized across the Copperbelt region. After the oil crisis of 1974, international copper prices fell which led to a decline in Zambia's economic development. As a result, the copper industry privatized in 1992 and began contracting the Copperbelt region for a workforce.²⁰¹ This resulted in women and children entering the informal sector in large numbers.²⁰² Pact reporting conducted in 2021 found that throughout the Copperbelt and Central Provinces, the children working in copper ASM spent an average of 7 hours a day working in ASM mining, and some children even report sleeping in trenches while working over 12 hours a day.²⁰³ Children in the Copperbelt region contribute towards digging, sorting, loading and selling of minerals. Pact Zambia reports that in the Central Province, children are more likely to act as minerals transporters and watch after other children than engage directly in mining. Children describe transportation as being particularly demanding given the heavy weight of the

¹⁹⁹ "The Current State of Artisanal and Small-Scale Mining in Zambia." IGC, November 6, 2019.

<https://www.theigc.org/blog/the-current-state-of-artisanal-and-small-scale-mining-in-zambia/>.

²⁰⁰ Chris Mfula, "Zambia to Cap Number of Mining Licenses Issued to Single Firms," Reuters, March 29, 2022.

<https://www.reuters.com/world/africa/zambia-cap-number-mining-licences-issued-single-firms-2022-03-29/>.

²⁰¹ Gadzala, Aleksandra. "From formal- to informal-sector employment" Taylor & Francis, Ltd.y, 2010, 43.

²⁰² Mususa, Patience. "Zambia, Mining, and Neoliberalism" *Palgrave Macmillan*, 2009, pg 185–208.

²⁰³ Mususa, 2009.

slags that are carried to buyer's trucks.²⁰⁴ Child mining is also largely influenced by gender, as more boys participate in mining activities while girls carry out domestic chores at the mining sites. Pact reveals that buyers are often the ones that set prices for products mined and sold by children which results in children being paid less. Those that buy copper from children, including Chinese buyers, are reported as insincere about the worth of their minerals.²⁰⁵ Many of the tasks that children participate in can negatively impact their health or lead to accidents. They also face long term impacts from exposure to mercury, dust, and carrying heavy loads.²⁰⁶

When considering child labor in relation to the copper supply chain, children in Zambia work for themselves or in some cases for a company. Companies will bribe police and mine security so they will permit the children to work.²⁰⁷ Children earn less money working with companies because they must share their proceeds amongst groups of other child laborers. During their research, Pact Zambia found that most (44.8%) products of the child labor were sold to middlemen traders before reaching their final destinations.²⁰⁸ Buyers wait by the roadside to buy minerals from children and an estimated 30% of children did not know who the buyers are, while an additional 53% reported selling to, what they consider, businessmen.²⁰⁹

In 2020, the main destinations for copper exports from Zambia were Switzerland, China, Namibia, Singapore, and India.²¹⁰ The Zambia and China trade relationship became substantially stronger in recent years making China the country's leading foreign investor.²¹¹ In 2015, several Chinese owned mines decreased their production, which resulted in job loss and desperation among miners in the Copperbelt region.²¹² Poor labor conditions and discriminatory hiring practices within Chinese firms has impacted Zambia's labor market and community economic mobility. Chinese entrepreneurs hold competitive advantages over the informal sector which has resulted in the displacement of Zambia's small-scale miners.²¹³ Overall, this leads to higher unemployment and poverty which harms Zambia's long-term development.

Zambia's copper supply chain accounts for its small-scale mining operations but has made it more difficult to successfully identify the supply chains. Copper is mined through open-pit or underground mining. Once extracted, it is sold to a series of buyers before reaching copper smelters. The copper, smelted in Zambia, is then used in consumer and industrial goods. Global demand for copper is expected to increase in coming years, as its use increases in consumer tech products, including electric cars.²¹⁴ Copper alloys are also used in Information and Computer Technology (ICT) products including smartphones, laptops, and power cords.²¹⁵

²⁰⁴ Hapunda, Given. "Baseline Study Report on the Push and Pull factors of Child labour in mining in Central and Copperbelt of Zambia." Pact Zambia. 2022. Unpublished

²⁰⁵ Mususa, Patience. "Zambia, Mining, and Neoliberalism" *Palgrave Macmillan*, 2009, pg 185–208.

²⁰⁶ Hapunda, Given. "Baseline Study Report on the Push and Pull factors of Child labour in mining in Central and Copperbelt of Zambia." Pact Zambia. 2022. Unpublished

²⁰⁷ Hapunda, 2022.

²⁰⁸ Hapunda, 2022.

²⁰⁹ Hapunda, 2022.

²¹⁰ The Observatory of Economic Complexity. "Raw Copper in Zambia," 2020. Retrieved from <https://oec.world/en/profile/bilateral-product/raw-copper/reporter/zmb>.

²¹¹ Verite. "Trafficking Risk in Sub-Saharan African Supply Chains." 2022. Retrieved from <https://www.verite.org/africa/explore-by-country/zambia/>.

²¹² Verite, 2022.

²¹³ Gadzala, 2010.

²¹⁴ Gadzala, Aleksandra. "From formal- to informal-sector employment : examining the Chinese presence in Zambia" *Taylor & Francis, Ltd*, 2010, pg. 43.

²¹⁵ Jakobsson, Linda Scott. "Copper with a cost." Swedwatch. 2019, pg 17. Retrieved from https://swedwatch.org/wp-content/uploads/2019/05/94_Zambia_uppslag.pdf.

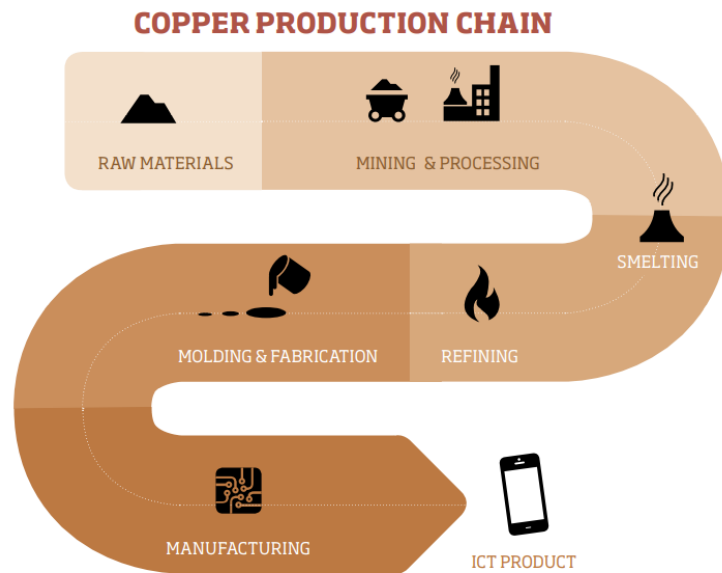


Figure 7. The Copper Supply Chain, Zambia. Swedwatch.²¹⁶

EMERALDS

While copper is widely known as the biggest industry, Zambia is now the second largest emerald producer in the world.²¹⁷ Zambia’s emerald mines can be found in the Ndola Rural District of the Copperbelt Province and is home to the largest emerald mine in the world, Kagem Mine which is owned by London-based Gemfields. According to the 2020 List of Goods Produced by Child Labor or Forced Labor, gemstones are produced by using child labor in Zambia.²¹⁸ The 2018 Findings on the Worst Forms of Child Labor found child labor specifically in the emerald mining industry.²¹⁹ Most of the emerald deposits are located near the Kafubu River in the Ndola Rural Restricted Area. Emeralds originated from this region in 1928, but significant commercial production did not begin until the 1970s. In the 1970s, local miners discovered several more emerald deposits in the Kafubu area (also known as the Ndola Rural Restricted Area), establishing the area as a major producer of good-quality emeralds. Due to the significant economic potential and extensive illegal mining, the government established a restricted zone and forcibly removed the population of this sparsely inhabited area.²²⁰ Despite several efforts by the Zambian government to

²¹⁶ “Copper with a Cost - Swedwatch.” 2019. Accessed April 10, 2022. https://swedwatch.org/wp-content/uploads/2019/05/94_Zambia_190429_enkelsidor.pdf.

²¹⁷ (Hanco) Zwaan, J., Seifert, A., Vrána, S., Laurs, B., Anckar, B., & (Skip) Simmons, W. et al. (2005). Emeralds from the Kafubu Area, Zambia. *Gems & Gemology*, 41(2), 116-148.

²¹⁸ Office of Child Labor, Forced Labor, and Human Trafficking. (2018). List of Goods Produced by Child Labor or Forced Labor. Retrieved from <https://www.dol.gov/sites/default/files/documents/ilab/ListofGoods.pdf>

²¹⁹ Bureau of International Labor Affairs. “2018 Findings on the Worst Forms of Child Labor: Zambia.” 2018. Accessed Feb 7, 2022.

²²⁰ Bureau of International Labor Affairs. “2018 Findings on the Worst Forms of Child Labor: Zambia.” 2018. Accessed Feb 7, 2022.

extend control over the emerald industry, effective development of the emerald sector is perpetually inhibited by reported ineffective governance and a deficient regulatory framework. There are minimal formal institutions to monitor the industry and few funded formal institutions rendering them easily bought through various forms of corruption. In 2004, as industry actors entered and the government issued hundreds of gemstone-mining licenses, only 40% of the licenses were estimated to be active.²²¹ As of 2013, Zambian government officials estimated that 40% of Zambia's gemstones, worth an estimated \$60 million USD annually, were mined without a license.²²² The government attempted to expand small-scale mining of emeralds by suspending a 15% export tax on precious and semi-precious colored gemstones to attract more investors to help small-scale miners contribute to the economy.²²³

Currently, there are three large corporations that have a monopoly on emerald mining in the region. They include Kagem Mining Ltd., Grizzly and Chantete.²²⁴ All three of these mines are foreign owned with part ownership by the Zambian government. The London-based company Gemfields owns 75% of Kagem mine and the Zambian government owns 25%.²²⁵ For ASM miners, limited access to financing, technology and institutional support has made it difficult to compete with the presence of foreign investments in the formal mining industry. The emerald industry is dominated by Gemfields making it difficult for small-scale gemstone miners to get a fair price for their emeralds, forcing them to sell their emeralds to illegal buyers at depleted prices.²²⁶ Dormant small-scale emerald mines that are still mineral rich across the province are inaccessible to under-financed small-scale, local mining brigades. Paul Kabuswe, Minister of Mines and Minerals Development said that more than 500 locally owned, small-scale emerald mines are dormant in the Copperbelt region.²²⁷ Outside the Kagem properties, which lie on the north side of the Kafubu River, emerald deposits have been subdivided into nearly 500 prospecting plots.²²⁸ However, many of these claims were established without the benefit of a thorough geologic evaluation and are not recognized by licensing policies. In 2021 it was reported by Kula Resources that there are over 900 small-scale and artisanal licenses in Zambia with 90% of the licenses inactive.²²⁹ Small-scale mining currently takes place on dozens of claims, whereas mechanized activity is mostly concentrated on the Kagem, Grizzly, Chantete and Kamakanga properties.²³⁰ According to a new Pact Zambia Report, in rural mining sites evidence shows informal mine owners and traditional

²²¹ Shortell, P., & Irwin, E. (2017). Governing the Gemstone Sector: Lessons from Global Experience. National Resource Governance Institute. Retrieved from https://resourcegovernance.org/sites/default/files/documents/governing-the-gemstone_sector-lessons-from-global-experience.pdf

²²² Shortell, P., & Irwin, E. (2017).

²²³ Silimina, Derrick. "Deep Green and Lucrative." *Development and Cooperation*. Feb. 7, 2022. Retrieved from <https://www.dandc.eu/en/article/help-tax-break-zambias-emerald-producers-hope-shine-again>

²²⁴ Shortell, P., & Irwin, E. (2017). Governing the Gemstone Sector: Lessons from Global Experience. National Resource Governance Institute. Retrieved from https://resourcegovernance.org/sites/default/files/documents/governing-the-gemstone_sector-lessons-from-global-experience.pdf

²²⁵ Vives, L. (2019). Emeralds, Rubies Could Make Zambia Rich - IDN-InDepthNews, Analysis That Matters. Retrieved from <https://www.indepthnews.net/index.php/the-world/africa/2476-emeralds-rubies-could-make-zambia-rich>

²²⁶ Neate, R. (2013). Emerald miner loses fifth of market value on Zambian anti-corruption plans. Retrieved from <https://www.theguardian.com/business/2013/apr/08/emerald-miner-gemfields-zambia-anti-corruption>

²²⁷ Silimina, Derrick. "Deep Green and Lucrative." *Development and Cooperation*. Feb. 7, 2022. Retrieved from <https://www.dandc.eu/en/article/help-tax-break-zambias-emerald-producers-hope-shine-again>

²²⁸ (Hanco) Zwaan, J., Seifert, A., Vrána, S., Laurs, B., Anekar, B., & (Skip) Simmons, W. et al. (2005). Emeralds from the Kafubu Area, Zambia. *Gems & Gemology*, 41(2), 116-148.

²²⁹ Kula Resources. "Opportunity." Retrieved from <https://kularesources.com/>

²³⁰ Kula Resources.

leaders secretly engage children in mining.²³¹ There is child labor in emerald mining in Zambia, but the extent remains unclear due to restriction of entry imposed on mining sites, either by mining companies or the informal sector, that run some parts of the artisanal mining sector. According to a 2008 ILO report, most children working in mining were in the 15-17 age range.²³²

Children are active in two different groups of miners that are in the same area as Kagem Mine. The first group are artisanal miners who use basic tools like picks and shovels.²³³ This is commonly done on an individual family basis. The ILO reports that this group is “largely constituted by illegal miners who invade the large number of mining plots whose owners are away. They are settled within the protected mining area.”²³⁴ The second group are scavengers that sift through the emerald dump sites of Kagem Mine. These scavengers are from within the settlements in the protected mining areas and neighboring communities around the area.²³⁵ Both groups of illegal miners depend on sponsors from urban areas who supply them with basic living necessities. These sponsors are also frequently the buyers of the emeralds that the miners produce.²³⁶

Emerald mining is mostly open pit. Emeralds can be found between three to six meters deep in the ground. Children are involved in the digging of the pits in addition to gathering soil created by pits. The soil, or rough, is placed in empty grain bags and ferried to washing sites. The soil is separated from the rocks which are later sorted between ordinary rocks and valuable emeralds.²³⁷

According to the ILO, “the youngest of the children (some as young as 7 years) do other tasks such as cooking and fetching water for elders and older groups of children”.²³⁸ The study highlighted older children in these groups work as apprentices. They were also involved in performing hazardous activities including working long hours, working from high heights and using crude equipment such as hammers, picks, and shovels.²³⁹ They were involved in all the mining activities, including digging the earth, ferrying it to a sieving site, washing the sieved rocks, separating ordinary rocks from the emeralds, and later grading the gemstones.²⁴⁰

The hazardous nature of mining is compounded by the fact that the more informal artisanal small-scale mining is carried out with no inspection or supervision from the responsible state authorities. An ILO report explains “this omission was underscored during one field visit when undertaking this research in Lufwanyama on the Copperbelt Province, when an officer from the Mine Safety Department accompanying the research team was taken to task by small-scale artisanal

²³¹ PACT Zambia. “Baseline Study Report on the Push and Pull Factors of Child Labour in Mining in Central and Copperbelt of Zambia.” (Jan 2022). Unpublished.

²³² International Labor Organization. (2008). Rapid assessment of child labour in non-traditional mining sector in Zambia, 36. Retrieved from <http://www.ilo.org/ippecinfo/product/download.do?type=document&id=13633>

²³³ International Labor Organization. (2008). Rapid assessment of child labour in non-traditional mining sector in Zambia, 9.

²³⁴ International Labor Organization. (2008). Rapid assessment of child labour in non-traditional mining sector in Zambia, 43.

²³⁵ International Labor Organization. (2008). Rapid assessment of child labour in non-traditional mining sector in Zambia, 43.

²³⁶ International Labor Organization. (2008). Rapid assessment of child labour in non-traditional mining sector in Zambia, 44.

²³⁷ International Labor Organization. (2008). Rapid assessment of child labour in non-traditional mining sector in Zambia, 44.

²³⁸ International Labor Organization. (2008). Rapid assessment of child labour in non-traditional mining sector in Zambia, 44.

²³⁹ International Labor Organization. (2008). Rapid assessment of child labour in non-traditional mining sector in Zambia, 44.

²⁴⁰ International Labor Organization. (2008). Rapid assessment of child labour in non-traditional mining sector in Zambia, 44.

miners for allegedly ignoring their needs and concentrating on more established mines like Kagem.”²⁴¹

Gemfields estimates it lost as much as \$17 million in potential revenue from emerald theft in the 12 months leading up to June 30th, 2012.²⁴² The steady supply of illegal emeralds in Zambia negatively impacts Gemfields’ prices. Illegal miners will pilfer the mineral from rejected piles of ore from the larger open pit mines, such as Kagem mine. The illegal miners collect broken lumps of emerald-bearing rock, loading them into sacks which they carry to makeshift camps at the Kafubu River, less than a mile south-west of Kagem’s main pit.²⁴³ The miners use picks and shovels to break the rocks into smaller pieces. They then wash them in the river, plucking out the emeralds. Sean Gilbertson, CEO of Gemfields, reports that illegal miners will operate on the periphery of the large scale mines, like Kagem, or come onto the official mine site to look for emeralds in the mine dump that Kagem miners may have missed.²⁴⁴ Security personnel are sometimes bribed and let the illegal miners into the official mining sites.²⁴⁵ According to Gilbertson, workers at the mines also collaborate with security officers to steal and smuggle the stones.²⁴⁶

Being in the Copperbelt Province, the Kagem Mine operates amongst competing jerabo gangs in the region. Jerabos have been reported to use child labor and recruit children into their organizations.²⁴⁷ Jerabo gangs function as mining syndicates within the Copperbelt Province. Children that are in proximity to the Kagem Mine for various reasons may be at higher risk for recruitment, child labor or trafficking by jerabo gangs. Gemfields estimates it lost as much as \$17 million in potential revenue from emerald theft in the 12 months leading up to 30 June 2012.²⁴⁸ The steady supply of illegal emeralds in Zambia negatively impacts Gemfields’ prices. It is for this reason that Gemfields is employing Nepalese gorkhas as guards, partly to make communication more difficult to stop collaboration between miners and security.²⁴⁹

The supply chain for emeralds varies between ASM and large-scale mining operations. Large scale mines have assets and networks to get the emeralds to locations they can be treated and finished the fastest. For artisanal miners, the emerald rough may pass through multiple middle persons and hands before it reaches its ultimate destination. While substantive evidence of child involvement in the transporting of emeralds is currently lacking, it can be inferred that children are sometimes tasked with transporting emeralds to informal market locations or to other middlemen. In general, the artisanal supply chain of colored gemstones is particularly susceptible to volatility.²⁵⁰

²⁴¹ International Labor Organization. (2008). Rapid assessment of child labour in non-traditional mining sector in Zambia, 52.

²⁴² Mint. “Zambia emerald thieves brave police dogs to sap the nation's revenue.” July 3, 2013. Accessed from <https://www.livemint.com/Politics/hngAgGRbit7FvEdxUV0BxO/Zambia-emerald-thieves-brave-police-dogs-to-sap-nations-rev.html>

²⁴³ Mint, 2013.

²⁴⁴ Mint, 2013.

²⁴⁵ Mint, 2013.

²⁴⁶ Mint, 2013.

²⁴⁷ Bureau of International Labor Affairs. “2020 Findings on the Worst Forms of Child Labor: Zambia.” 2020. Accessed Feb 6, 2022.

²⁴⁸ Mint. “Zambia emerald thieves brave police dogs to sap the nation's revenue.” July 3, 2013. Accessed from <https://www.livemint.com/Politics/hngAgGRbit7FvEdxUV0BxO/Zambia-emerald-thieves-brave-police-dogs-to-sap-nations-rev.html>

²⁴⁹ Mint, 2013.

²⁵⁰ Edison Group. “Coloured Gemstones.” May 19, 2021. Retrieved from <https://www.edisongroup.com/edison-explains/coloured-gemstones/>

Most of Zambia's emeralds are exported to India, mainly for use in their country's domestic market, and to Israel for international distribution. Israeli buyers usually purchase the higher-quality material. India receives approximately 80% of Zambia's emerald production by weight, and 70–75% by value, with gem refinement taking place in Jaipur.²⁵¹ The larger mining operators have well-established trading arrangements. For example, Kagem offers their production four times a year at a closed tender auction in Lusaka. The dates are flexible, depending on when sufficient material is available. Small operators and illegal miners rely on local traders, who are mainly of West African origin (e.g., Senegal and Mali) and often supply them with food and other necessities in exchange for emeralds.²⁵²

In the informal market, rough emeralds are frequently traded on the streets of Lusaka and Kitwe, usually as run-of-mine materials sold by illegal miners.²⁵³ Occasionally, large top-quality emeralds also turn up on the informal street market.²⁵⁴ There are reports of workers extracting emeralds in the open pit who swallow the stones when they see that a security camera is pointing in another direction.²⁵⁵ The gems are later passed to couriers known as “go-comes”, who take them to dealers.²⁵⁶ Traders either smuggle the emeralds out of the country or export them legally to buyers in the US, Bangkok, India and Hong Kong.²⁵⁷

In 2019, a positive step to develop the emerald industry in Zambia was reported.²⁵⁸ The Zambian government allocated 400 small-scale miners a USD \$3.8 million grant. The 400 small-scale miners awarded had dormant mineral exploration licenses and the funds from the grant are intended to help overcome the barriers to entry that small scale miners often face when beginning their operation and production.

²⁵¹ (Hanco) Zwaan, J., Seifert, A., Vrána, S., Laurs, B., Anckar, B., & (Skip) Simmons, W. et al. (2005). Emeralds from the Kafubu Area, Zambia. *Gems & Gemology*, 41(2), 116-148.

²⁵² Hanco. 116-148.

²⁵³ Hanco. 116-148.

²⁵⁴ Hanco. 116-148.

²⁵⁵ Mint. “Zambia emerald thieves brave police dogs to sap nation’s revenue.” July 3, 2013. Accessed from <https://www.livemint.com/Politics/hngAgGRbit7FvEdxUV0BxO/Zambia-emerald-thieves-brave-police-dogs-to-sap-nations-rev.html>.

²⁵⁶ Mint. “Zambia emerald thieves brave police dogs to sap nation’s revenue.” July 3, 2013. Retrieved from <https://www.livemint.com/Politics/hngAgGRbit7FvEdxUV0BxO/Zambia-emerald-thieves-brave-police-dogs-to-sap-nations-rev.html>.

²⁵⁷ Mint, 2013.

²⁵⁸ Mining for Zambia. “Five reasons Zambia’s emeralds are in the spotlight.” October 2, 2019. Retrieved from <https://miningforzambia.com/five-reasons-zambias-emeralds-are-in-the-global-spotlight/>.



Figure 7. A map of some of the principal global colored gemstone trading routes worldwide.²⁵⁹

SECURITY

Like Mozambique, Zambia also faces difficulties when it comes to security spaces surrounding mineral supply chains and child labor. Zambia's primary security presence are illegal mining syndicates, referred to as “jerabos.” Children are easily attracted to jerabos because of their “gangster” aesthetic. This aesthetic is a pivotal part for the recruitment of children and teenagers who are naturally drawn to the idea of “coolness” or interested in holding power in their community or region.²⁶⁰ Child mining in the Copperbelt region has gone unregulated in part due to jerabos and their political relationship with Zambia’s previous president, Edgar Lungu. In 2015, the Copperbelt was seen as an important region in the presidential election of Lungu. Jerabos were involved in helping the Patriotic Front gain support in the region,²⁶¹ in exchange for electoral support and reduced violence. President Edgar Lungu recognized groups of jerabos as legal miners and allowed them access to Black Mountain, a lucrative mining region in Kitwe. Black Mountain has been a source of illegal mining for decades, and it is now owned by foreign companies including the Nkana Alloy and Smelting Company and Tianjin Maolin Technology Company.²⁶² In 2017, the Kitwe High Court granted the jerabos interlocutory injunction preventing Nkana Alloy and Smelting Company and Tianjin Maolin Technology Company from restricting the jerabos’ ability

²⁵⁹ The Gemstones and Jewellery Community Platform. “Glimmers in the Shadows: Perception and Reality in Global Coloured Gemstone Trading.” Retrieved from https://gemstones-and-jewellery.com/white_papers/glimmers-in-the-shadows-perception-and-reality-in-global-coloured-gemstone-trading/

²⁶⁰ Cristina Villages from Pact World Organization, interviewed by Reilly Simmons, Abisola James, Bertha Nibigira, Bethesda, MD, Zoom, March 04, 2022.

²⁶¹ Marima, Tendai . “Zambia’s ‘calculator boy’ president” *Quartz Africa*. 2021. Retrieved from <https://qz.com/africa/2054347/fixing-zambias-economy-requires-hichilema-to-make-tough-choices/>.

²⁶² Taylor, Tristen. “The gangsters who made a president.” *Sunday Times*. 2020. Retrieved from <https://www.pressreader.com/south-africa/sunday-times-1107/20200816/282385516876672>.

to use the Black Mountain region.²⁶³ Jerabos feel they have a right to the copper because of their direct connection to the community.

Jerabo gangs may force Zambian children to engage in illegal mining operations including loading stolen copper or crushing rocks.²⁶⁴ In 2021, reports of local gangs stealing copper increased due to record high copper prices. Truckloads of copper owned by miners and traders were stolen while en route to ports in southern Africa.²⁶⁵ These thefts can often amount to millions of dollars' worth of stolen copper. Organized crime gangs remove serial numbers and marks of ownership from the stolen copper and then resell it locally or transport it to be sold in other countries. Copper prices hit an all-time high above \$10,700 a tonne in May 2021 due to an increase in demand in manufacturing and the reopening of economies from post COVID-19 lockdowns.²⁶⁶ The international economy's growing demand for copper could lead to further illegal mining and an increase in children participating in dangerous mining activities and gang involvement.

Under the previous administration, jerabos were often permitted to use abandoned mines to promote Lungu's influence in the East.²⁶⁷ Given the complicated political relationship, the role of child recruitment by jerabos was overlooked. In 2021, jerabos invaded open pits in the China Nonferrous Metal Mining (Group)Co., Ltd. (CNMC) Luanshya Copper Mines located in the Copperbelt region. Hundreds of illegal miners, some around 10 years old, claimed that the government gave them access to the pits as a part of their youth empowerment initiative.²⁶⁸ The Chamber of Mines President claimed that these pits are structurally sensitive and could cave in during illegal mining practices. The jerabos' occupation of this region also negatively impacted economic investment and government relationships with mining companies.²⁶⁹ Similar actions have the potential to destroy investment in the region given that investor properties in Zambia can often be appropriated by politicians.²⁷⁰ The invasion by the jerabos also poses a reputational risk to the country as a source of ethically sourced minerals free from child labor.²⁷¹ A riot was reported in 2021 over the removal of jerabos who had invaded a Chinese copper mining unit. The riot resulted in blocked roads, tire burnings, and general threats to the public.²⁷²

PUBLIC HEALTH & ENVIRONMENTAL SAFETY

Environmental pollution in Zambia is also closely associated with health problems and environmental degradation. Accidents and injuries, respiratory diseases, pollution, and exposure to harsh chemicals affect communities around mining operations. For ASM miners who must go

²⁶³ Lusaka Times. "Jerabos win first round in court" 2017. Retrieved from <https://www.lusakatimes.com/2017/06/24/jerabos-win-first-round-court-black-mountain-fight/>.

²⁶⁴ Lusaka Times, 2017. .

²⁶⁵ Shabalala, Zandi, and Reid, Helen. "Exclusive-Bandits Steal Truckloads of Copper Worth Millions in Southern Africa" *Reuters*. 2021. Retrieved from <https://www.reuters.com/article/us-copper-theft-exclusive/exclusive-bandits-steal-truckloads-of-copper-worth-millions-in-southern-africa-sources-idUSKBN2EX1Q7>.

²⁶⁶ Shabalala, Zandi, and Reid, Helen. "Exclusive-Bandits Steal Truckloads of Copper Worth Millions in Southern Africa" *Reuters*. 2021. Retrieved from <https://www.reuters.com/article/us-copper-theft-exclusive/exclusive-bandits-steal-truckloads-of-copper-worth-millions-in-southern-africa-sources-idUSKBN2EX1Q7>.

²⁶⁷ Marima, Tendai. "Zambia's 'calculator boy' president" *Quartz Africa*. 2021. Retrieved from <https://qz.com/africa/2054347/fixing-zambias-economy-requires-hichilema-to-make-tough-choices/>.

²⁶⁸ Lusaka Times. "Illegal miners in their hundreds invade Luanshya Copper Mines open pits." 2021.Retrieved from <https://www.lusakatimes.com/2021/08/21/illegal-miners-in-their-hundreds-invade/>.

²⁶⁹ Lusaka Times, 2021.

²⁷⁰ Lusaka Times, 2021.

²⁷¹ Lusaka Times, 2021.

²⁷² Kunda, James. "Riot erupts in Zambian town." 2021. Retrieved From <https://www.aa.com.tr/en/africa/riot-erupts-in-zambian-town-after-police-disperse-1-000-illegal-miners/2350135>.

underground, ventilation, lighting and ground support is virtually non-existent.²⁷³ As global demand grows for copper, expected to rise by 43 percent by 2035, these issues are becoming more frequent and apparent to those involved in the ASM sector.²⁷⁴ Each ton of copper can result in 99 tons of waste and waste rock exposed to air or rain can result in sulfuric acid and acid mine drainage.²⁷⁵ The acid can dissolve copper and cause pollution of ground and surface water. This can pollute drinking water and lead to the destruction of infrastructure, fishery operations, and local communities. Drinking water with high metal content also results in health problems for communities including cancer, heart disease, and other health issues.²⁷⁶

Children working in Zambian copper mines also face a range of health issues from their labor participation including bodily injuries, fever, coughing, and diarrhea. Long-term mining can also result in body pains, change in skin tone, sight issues, weight problems, hearing loss, and persistent headaches. It is reported that children will sometimes also drink alcohol to cope with the stress of working in the mines.²⁷⁷

Pollution in rural communities has affected agricultural practices reducing food security and placed financial burdens on families to pay for education. The loss of farmland and low-income levels has affected many societal factors. Families with low income might arrange for their daughters to be married at a young age, negatively impacting their education.²⁷⁸ From 2003 to 2011, the World Bank funded the Copperbelt Environment Project to remove lead in copper mining communities and resolve health impacts in the region. The government failed to implement a model that successfully accomplished the project's goals. It is estimated that around half of the children in communities surrounding Kabwe mines have elevated blood lead levels.²⁷⁹ Children in Kabwe are especially at risk because they are more likely to ingest lead dust from the soil. This has direct effects on child growth and continued exposure to high levels of lead at a young age has consequences on their overall health.²⁸⁰

Emerald mining has many negative impacts on the environment as well, especially when it is unregulated or when existing regulations are not enforced. Emeralds have a high stripping ratio resulting in high levels of bulk waste with small quantities of emeralds extracts. The ratio is very high when compared to other mineral commodities such as iron ore, copper, industrial or building materials.²⁸¹ Large volumes of waste piles are left behind by mining operations leaving natural habitats neglected.²⁸² Emerald mining occurs at growing depths as well, which exacerbates the

²⁷³ Silengo, M., & Sinkamba, P. (n.d.). Environmental Issues in Mining and Quarrying industry on the Copperbelt of Zambia. Netherlands Institute for Southern Africa

²⁷⁴ Jakobsson, Linda Scott. "Copper with a cost." Swedwatch. 2019, pg 17. Retrieved from https://swedwatch.org/wp-content/uploads/2019/05/94_Zambia_uppslag.pdf.

²⁷⁵ Jakobsson, 2019.

²⁷⁶ Jakobsson, 2019.

²⁷⁷ Hapunda, Given. "Baseline Study Report on the Push and Pull factors of Child labour in mining in Central and Copperbelt of Zambia." Pact Zambia. 2022.

²⁷⁸ Hapunda, 2022.

²⁷⁹ Human Rights Watch. "Zambia: Tackle Lead Poisoning at Former Mine." 2021. Retrieved from <https://www.hrw.org/news/2021/07/27/zambia-tackle-lead-poisoning-former-mine#:~:text=Kabwe%20residents%20still%20have%20lead,health%20risks%20from%20lead%20poisoning..>

²⁸⁰ Naples-Mitchell, Joanna. "We have to be worried." *Human Rights Watch*. 2019. Retrieved from <https://www.hrw.org/report/2019/08/23/we-have-be-worried/impact-lead-contamination-childrens-rights-kabwe-zambia#>.

²⁸¹ Naples-Mitchell, 2019.

²⁸² Naples-Mitchell, 2019.

issue. In a bid to minimize stripping ratios, pits are left with steep walls resulting in slope failures and landslides, which pose a risk for personal injuries.²⁸³

Mining-induced environmental changes range from air and water (surface and groundwater) contamination from emissions of sulfur-dioxide, waste landfills and tailings, lead and cadmium poisoning.²⁸⁴ Other environmental concerns include noise, vibrations, habitat loss, soil erosion, destruction of vegetation and scenery, stockpiles of overburden rock, topsoil displacement and dust clouds.²⁸⁵ These environmental impacts are evident in communities near Zambian mines. Artisanal mining has disturbed natural streams in the Ndola Rural emerald mining area around Kagem Mines Ltd. and Kuber Minerals. The natural streams have been diverted and blocked-in order to increase surveyable land for the companies.²⁸⁶ Contamination of the Kafue River and its tributaries in the Copperbelt region has been studied and has determined the environmental impact of mining and related activities. The concentrations of persistent pollutants, (i.e., DDT, dieldrin, and PCB)²⁸⁷, in the Kafue River must be considered as high and these pollutants affect both wild and domestic animals in various ways. Pollutant levels were also higher in water samples from the areas downstream of the mining sites.²⁸⁸ Lufwanyama, a recognized watershed area, is home to various water courses and vegetation types including the Miombo woodlands. Use of open cast and illegal mining in the extraction of emeralds is a threat to this fragile environment while waste dumps permanently degrade the environment and large open pits are a permanent scar on the earth surface and if not properly rehabilitated can have adverse impacts.²⁸⁹

COVID

As of August 2021, schools in Zambia had been physically closed for 80 days and only partially open to certain ages for 72 days due to the COVID-19 pandemic.²⁹⁰ It is estimated that the educational progress of nearly 3.4 million students was disrupted by school closures.²⁹¹ These effects made children more vulnerable to trafficking and recruitment by jerabos into child labor in the mining sector. School closings have made children idle, under-employed and vulnerable to exploitative practices such as labor and human trafficking. Since the start of COVID-19, children were more heavily recruited by jerabos with the incentive to work and make living wages to support their families.²⁹²

²⁸³ Naples-Mitchell, 2019.

²⁸⁴ Kambani, Stephen M. "Small-scale mining and cleaner production issues in Zambia." *Journal of Cleaner Production* 11, no. 2 (2003): 141-146.

²⁸⁵ Boocock, C. N. (2002). Environmental impacts of foreign direct investment in the mining sector in Sub-Saharan Africa. *Foreign Direct Investment and the Environment*, 19.)

²⁸⁶ Kambani, Stephen M. "Small-scale mining and cleaner production issues in Zambia." *Journal of Cleaner Production* 11, no. 2 (2003): 141-146.

²⁸⁷ DDT and dieldrin are pesticides and PCBs are industrial chemicals. They are all Persistent Organic Pollutants or POPs recognized under the Stockholm Convention as causing adverse effects on humans and the ecosystem. See <http://chm.pops.int/TheConvention/ThePOPs/The12InitialPOPs/tabid/296/Default.aspx>

²⁸⁸ Norrgren, L., Pettersson, U. R. N. S., Örn, S., & Bergqvist, P. A. (2000). Environmental monitoring of the Kafue River, located in the Copperbelt, Zambia. *Archives of environmental contamination and toxicology*, 38(3), 334-341

²⁸⁹ Shoko, M., and Jacob Mwitwa. "Socio-economic impact of small-scale emerald mining on local community livelihoods: the case of Lufwanyama district." *Int J Educ Res* 3 (2015): 14.)

²⁹⁰ Human Rights Watch. "Submission on Zambia to the Committee on the Rights of the Child." Sept. 1, 2021. Retrieved from <https://www.hrw.org/news/2021/09/01/submission-zambia-committee-rights-child#>

²⁹¹ Human Rights Watch, 2021.

²⁹² Global Initiative. "Civil Society Observatory of Illicit Economies in Eastern and Southern Africa." Aug.-Sept. 2020. Retrieved from <https://globalinitiative.net/wp-content/uploads/2020/09/ESA-RB11.pdf>

A Pact Zambia forthcoming report detailing data in the Copperbelt region, illustrated the number of children engaged in mining activities increasing during the COVID-19 pandemic and subsequent lockdown in 2020, which lasted for almost 7 months.²⁹³ Many people lost jobs and schools closed fostering a breeding ground for child labor in mining activities.²⁹⁴

TREND SUMMARY

Key trends in Zambia's mining sector include the increasing demand for both copper and emeralds. The greater need for copper is due to the more electric vehicles being made.²⁹⁵ Increased interest in Zambian emeralds come from European buyers who desire the unique, rare color and transparency.²⁹⁶ The full impact of this increased demand will have on children is not yet known, but it could be inferred that child labor may increase to meet demands. While the need for copper increases, the emerald sector is also relied upon by the Zambian government to diversify their economy. The recent election of Hakainde Hichilema is progressing the fight against corruption, particularly in the Copperbelt region. Hichilema ran on an anti-corruption platform and pledged to take on jerabo activities. This would benefit children indirectly because current jerabo rule contributes to increased levels of child labor and child trafficking.²⁹⁷ The final case study is of Zimbabwe's gold artisanal mining industry which will be discussed next.

²⁹³ Pact Zambia. "Baseline Study Report on the Push and Pull Factors of Child Labour in Mining in Central and Copperbelt of Zambia." (Jan 2022). Unpublished.

²⁹⁴ Cristina Villages from Pact World Organization, interviewed by Reilly Simmons, Abisola James, Bertha Nibigira, Bethesda, MD, Zoom, March 04, 2022.

²⁹⁵ Sinyangwe, Chiwoyu. "Zambia's copper output to rise to 1 million tonnes in 2021, government says," *Reuters*. December 14, 2020. Retrieved from <https://www.reuters.com/article/zambia-mining-idAFL8N2IU4QM>

²⁹⁶ Adebayo, Bukola. "1.1 kg and 5,655 carats: An emerald like no other has been unearthed in Zambia," *CNN*. October 30, 2018. Retrieved from <https://www.cnn.com/style/article/massive-emerald-found-in-zambia/index.html>

²⁹⁷ Cristina Villages from Pact World Organization, interviewed by Reilly Simmons, Abisola James, Bertha Nibigira, Bethesda, MD, Zoom, March 04, 2022.

Zimbabwe

HISTORICAL BACKGROUND

British imperial rule in the 1900s had deep-rooted effects on the economic and socio-political aspects of Zimbabwean society that are still being felt today. During the colonial period, nearly all of the country's wealth was controlled by the white minority.²⁹⁸ The colonial era was characterized by three major trends: (1) relocation of the black natives to remote communal lands without compensation which further prohibited them from accessing arable land; (2) exclusion of the black majority from political activities; (3) segregation of black Zimbabweans from attending good schools.²⁹⁹ In 1914, the white population in Zimbabwe was 28,000 while black Zimbabweans totaled 836,000; 3% of the overall population owned 75% of the fertile land; while the 97% of the population had access to only 23% of the land in remote areas of the country.³⁰⁰ These racial inequalities gave birth to the African nationalist movement and fight for the independence of black Zimbabweans.

The ZANU majority Shona people party, led by Robert Mugabe, and ZAPU minority Ndebele people party, led by Joshua Nkomo, were at the forefront of the liberation struggles against European rulers. The war for liberation started in 1964 and ended in 1980 with Zimbabwe's independence.³⁰¹ ³⁰² China and North Korea supported the ZANU fighters while the Soviet Union and East Germany supported ZAPU forces. Proceeding independence, the ZANU party, with Mugabe as the first president of new Zimbabwe, replaced British administrators and maintained partially shared power with the European minority for 15 years before taking full control of the country.³⁰³ Mugabe remained in office and was the leader of the ZANU-PF party until 2017 when Emmerson Mnangagwa replaced him. For the first decade of Mugabe Presidency, Zimbabwe had the best economy, education programs and health infrastructure on the continent, characterized by economic growth of 21% and an 80% literacy rate.³⁰⁴ ³⁰⁵ ³⁰⁶ His country's successes were propelled by a lucrative mining and agricultural industry. However, droughts in 1983 and 1987, coupled with a global recession, caused Zimbabwe to experience a great economic decline in 1997. Failures from policy shifts caused the country's stock market to crash and led to hyperinflation of local currency. As the economy collapsed, the government increased money printing, driving hyperinflation which resulted in the adoption of the U.S. dollar and South African Rand to replace local currency. Non-

²⁹⁸ Munangagwa, Chidochashe. "The Economic Decline of Zimbabwe ." Gettysburg College. The Gettysburg Review: Vol 3. Article 9, 2009. <https://cupola.gettysburg.edu/cgi/viewcontent.cgi?article=1021&context=ger>.

²⁹⁹ Munangagwa, Chidochashe. "The Economic Decline of Zimbabwe ." Gettysburg College. The Gettysburg Review: Vol 3. Article 9, 2009. <https://cupola.gettysburg.edu/cgi/viewcontent.cgi?article=1021&context=ger>.

³⁰⁰ Alois S. Mlambo, *A History of Zimbabwe* (New York: Cambridge University Press, 2014).

³⁰¹ Alois S. Mlambo, *A History of Zimbabwe* (New York: Cambridge University Press, 2014).

³⁰² Munangagwa, Chidochashe. "The Economic Decline of Zimbabwe ." Gettysburg College. The Gettysburg Review: Vol 3. Article 9, 2009. <https://cupola.gettysburg.edu/cgi/viewcontent.cgi?article=1021&context=ger>.

³⁰³ "Zimbabwe." South African History Online. Accessed January 12, 2022. <https://www.sahistory.org.za/place/zimbabwe>.

³⁰⁴ Riddell, Roger C. "Zimbabwe: The Economy Four Years after Independence," *African Affairs* 83, no. 333 (1984): 463–76, page 468, accessed April 25, 2022, https://www-jstor-org.proxyau.wrlc.org/stable/pdf/722919.pdf?refreqid=excelsior%3A1a4abbcf5d6b40f283da2c6c570a5122&ab_segmen ts=&origin=

³⁰⁵ Munangagwa, Chidochashe. "The Economic Decline of Zimbabwe ." Gettysburg College. The Gettysburg Review: Vol 3. Article 9, 2009. Page 112. <https://cupola.gettysburg.edu/cgi/viewcontent.cgi?article=1021&context=ger>.

³⁰⁶ "Zimbabwe Literacy Rate 1982-2022," MacroTrends, accessed April 24, 2022, <https://www.macrotrends.net/countries/ZWE/zimbabwe/literacy-rate>.

government gold buyers started paying only in USD as it was the preferred currency given its stability and international reputability; consequently, luring more people into ASM. Factors including Mugabe's involvement in the second Congolese war, unbudgeted expenditure that drained out bank reserves, and allegations that his interest in mineral resources in the DRC added to economic instability leading to the country's economic decline and U.S./EU sanctions.³⁰⁷

The current economy of Zimbabwe consists mainly of subsistence agriculture, mining, and tourism.³⁰⁸ While commercial farming was the largest contributor to the country's GDP in previous decades, the issue of land ownership has historically remained a point of contention as Mugabe strived to create equitable land ownership. Once the Lancaster Agreement became invalid in 1990, which protected white farmers' land rights, land redistribution gradually started taking place. A large percentage of fertile land was still owned by the white minority in 1997. As a result, in 2000, President Mugabe implemented the "Fast Track Land Reform Program" with a goal of creating 51,000 new farms; he confiscated land from the minority and redistributed it to the black majority.³⁰⁹ However, the program did not alleviate all aspects of land ownership issue; disparities between commercial and communal farms were common due to property right disagreements. Black farmers did not possess land deeds and lacked access to loans for farming equipment, unlike the white commercial farmers. As a side effect, agricultural production, once the population's main source of income, dwindled. The Indigenization and Empowerment Act of 2007, attempted to alleviate some disparities resulting from the Fast Track Land Reform program and mandated that foreign-owned companies grant at least 51% of their share to natives of Zimbabwe, particularly in effort to nationalize the mining industry.³¹⁰

Today, agriculture and mineral exports have progressively developed into strong industries, with both accounting for the majority of Zimbabwe's total output.³¹¹ ³¹² The mining sector contributes 16% to national GDP and 60% of export earnings; gold is the fourth most produced mineral, ASM mined gold has primarily become the top exported mineral in Zimbabwe.³¹³ ³¹⁴

³⁰⁷ Munangagwa, Chidochashe. "The Economic Decline of Zimbabwe ." Gettysburg College. The Gettysburg Review: Vol 3. Article 9, 2009. Page 114. <https://cupola.gettysburg.edu/cgi/viewcontent.cgi?article=1021&context=ger>.

³⁰⁸ Josephine Chiname, Joyce Nyamukunda, Fedzai Midzi, Shamiso Mtisi, Nobuhle Thelma Chikuni, from Zimbabwe Environmental Law Association, interviewed by Bertha Nibigira, Reilly Simmons, Abisola James, Laura Lopez, Bethesda, MD, Zoom, March 8, 2022

³⁰⁹ Munangagwa, Chidochashe. "The Economic Decline of Zimbabwe ." Gettysburg College. The Gettysburg Review: Vol 3. Article 9, 2009. <https://cupola.gettysburg.edu/cgi/viewcontent.cgi?article=1021&context=ger>.

³¹⁰ Lindelwa Makoni, Patricia. "THE IMPACT OF THE NATIONALIZATION THREAT ON ZIMBABWE'S ECONOMY." Corporate Ownership & Control / Volume 12, Issue 1, 2014. http://www.virtusinterpress.org/IMG/pdf/10-22495_cocv12i1c1p1.pdf.

³¹¹ Lars Kamer, "Zimbabwe: Contribution of Travel and Tourism to GDP 2020," Statista. March 23, 2022. <https://www.statista.com/statistics/1277033/contribution-of-travel-and-tourism-to-gdp-in-zimbabwe/>.

³¹² "Trade Policy Review: Zimbabwe." World Trade Organization. Accessed February 10, 2022. https://www.wto.org/english/tratop_e/tpr_e/s398_e.pdf.

³¹³ "Sustainability Impact Assessment in Support of ... - Europa." London School of Economics and Political Science, European Commission, Accessed March 2, 2022, Page 6. https://trade.ec.europa.eu/doclib/docs/2021/june/tradoc_159611.pdf.

³¹⁴ "Sustainability Impact Assessment in Support of ... - Europa." London School of Economics and Political Science, European Commission, Accessed March 2, 2022, Page 6. https://trade.ec.europa.eu/doclib/docs/2021/june/tradoc_159611.pdf.

Despite these potentials for great economic development, the country is plagued by an unemployment rate of 57%, a poverty rate of 82.80%, and a hyperinflation rate of 30%.^{315 316 317} This coupled with effects from COVID-19 and climate change impacts, such as droughts, has pushed more people into the informal mining sector than formal. In addition, at the time of independence, Zimbabwe's education system was regulated by the Education Act of 1987 which made primary and secondary school free, compulsory and a fundamental right. Although education is supposed to be free until the age of 16 under the Education Act, parents often pay fees because government budgets do not properly support schools.³¹⁸ Despite the 1987 Education Act and the Basic Education Assistance Module of 2001, which were supposed to mitigate the prevalent education challenges by providing additional support to the country's orphans and other vulnerable children, many families and guardians of young children cannot afford education which has pushed them to alternative income earning sources including mining and subsistence farming.

DOMESTIC LEGAL FRAMEWORK

The 1961 Mines and Mineral Act is the main government statute of mining policies in Zimbabwe.³¹⁹ It states that any individual who is a permanent resident of Zimbabwe can apply for a mining license and title.³²⁰ The law allows foreign companies to own 100% of a mining license for most mining products, excluding diamond and platinum.³²¹ In 1991, the government passed a law recognizing artisanal and small-scale mining sectors and incorporated it into the national development plan.³²² The law allowed local authorities, mainly rural district councils, to allocate mining blocks to be organized for ASM practices in consultation with the mining commissioner. However, in 2014, ASM laws were repealed as the government responded to staggering cases of illegal gold trading and consequently banned alluvial gold mining.³²³ The state-asserted decision came from "artisanal mining causing chaos, environmental degradation, smuggling of minerals, and illicit financial flows."³²⁴

³¹⁵ Aaron O'Neill, "Zimbabwe - Inflation Rate 1986-2026," Statista, November 24, 2021, <https://www.statista.com/statistics/455290/inflation-rate-in-zimbabwe/>.

³¹⁶ "Half of Zimbabweans Faced Extreme Poverty in 2020 Due to Covid-19: Rapid Poverty Income Consumption and Expenditure Survey (Pices)," Related UNICEF sites, accessed March 28, 2022, <https://www.unicef.org/zimbabwe/press-releases/half-zimbabweans-faced-extreme-poverty-2020-due-covid-19-rapid-poverty-income>.

³¹⁷ "Zimbabwe Poverty Rate 2011-2022," MacroTrends, accessed March 2, 2022, <https://www.macrotrends.net/countries/ZWE/zimbabwe/poverty-rate>.

³¹⁸ Tsiko, Sifelani. "Where Does Zimbabwe's Education Stand?" ZimFact, July 19, 2018. <https://zimfact.org/factsheet-where-does-zimbabwes-education-stand/#:~:text=From%20the%20age%20of%20four,education%20as%20a%20fundamental%20right>.

³¹⁹ Kudzai Chimhangwa, "Zimbabwe's New Gold Rush," openDemocracy, August 7, 2020, <https://www.opendemocracy.net/en/oureconomy/zimbabwes-new-gold-rush/>.

³²⁰ Kudzai Chimhangwa, "Zimbabwe's New Gold Rush." OpenDemocracy, August 7, 2020. <https://www.opendemocracy.net/en/oureconomy/zimbabwes-new-gold-rush/>.

³²¹ Kudzai Chimhangwa, "Zimbabwe's New Gold Rush." OpenDemocracy, August 7, 2020. <https://www.opendemocracy.net/en/oureconomy/zimbabwes-new-gold-rush/>.

³²² "Shifting Formalization Policies and Recentralizing Power: The Case of Zimbabwe's Artisanal Gold Mining Sector." Taylor & Francis. Accessed February 25, 2022. <https://www.tandfonline.com/doi/full/10.1080/08941920.2015.1014606>.

³²³ "Reviving the Legacy of Formalized Artisanal Mining." Mining Zimbabwe. September 5, 2020. <https://miningzimbabwe.com/reviving-the-legacy-of-formalized-artisanal-mining/>.

³²⁴ Reviving the Legacy of Formalized Artisanal Mining, September 5, 2020.

The country ratified ILO Convention 176 on Safety and Health in Mines and all other major international conventions related to child labor.³²⁵ Afterwards establishing the National Labor Act banning employers from hiring people under the age of 18 to carry out hazardous work.³²⁶ Moreover, Zimbabwe's Children's Act and the regional African Charter on the Rights and Welfare of Child (ACRCW) outlawed the exploitation of children through labor.^{327 328} Despite the ratification of ILO regulations and Zimbabwe's national laws concerning child labor and mining, the government frequently fails to enforce the regulations in parallel with Conventions 138 and 182.³²⁹ In Zimbabwe, government employees and public security forces enforcing the laws and regulations are inadequately trained and do not have access to sufficient resources to manage problems.³³⁰ Penalties for breaking laws and regulation on mining are not rigid enough and have loopholes.³³¹ Overall, Zimbabwe has limited social programs targeting sectors in which child labor is most prevalent.

Although the country has made strides in economic development, approximately 1 out of every 2 citizens live under the national poverty line.³³² Children lack access to healthcare, nutritional food, and education; ultimately pushing them towards manual labor. A 2010 U.N. Children's Fund (UNICEF) report illustrated that at least 13% of Zimbabwean children were involved in child labor; *whereas a 2020 U.S. Department of Labor report indicates 40% of children are involved in both regular work and worst form of child labor.*^{333 334} The figure is roughly 20% in the national capital of Harare.³³⁵ Over 71% of child labor in Zimbabwe takes place in the agricultural sector mainly in the tobacco, cotton, and sugarcane crop industry, while the remainder is increasingly taking place in the gold and diamond mining and domestic sectors.³³⁶ Rampant poverty, the absence of robust social services, and weak enforcement of legislation inhibit efforts to eliminate child labor in Zimbabwe.^{337 338} At the end of 2020, 76.3% of

³²⁵ "2015 Findings on the Worst Forms of Child Labor." United States Department of Labor. Accessed February 20, 2022. https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2015/tda2015.pdf, 1121.

³²⁶ United States Department of Labor, February 20, 2022.

³²⁷ United States Department of Labor, February 20, 2022.

³²⁸ "Double Dilemma: How Covid-19 Is Entrenching Child Labour in Artisanal Small Scale Gold Mining." Kubatana.net. July 6, 2021, <https://kubatana.net/2021/07/06/double-dilemma-how-covid-19-is-entrenching-child-labour-in-artisanal-small-scale-gold-mining/>.

³²⁹ "Internationally Recognized Core Labour Standards in Zimbabwe." ITUC CSI IGB. Accessed February 18, 2022. https://www.ituc-csi.org/IMG/pdf/Zimbabwe_TPR_report-16_oct_.pdf.

³³⁰ "Child Labour on the Rise - Zimbabwe." ReliefWeb. Accessed March 20, 2022. <https://reliefweb.int/report/zimbabwe/child-labour-rise#:~:text=According%20to%20a%202010%20UN,that%20interferes%20with%20their%20schooling.>

³³¹ "Internationally Recognized Core Labour Standards in Zimbabwe." ITUC CSI IGB. Accessed February 18, 2022. https://www.ituc-csi.org/IMG/pdf/Zimbabwe_TPR_report-16_oct_.pdf, 1.

³³² "Children of Zimbabwe." Humanium. April 4, 2019. <https://www.humanium.org/en/zimbabwe/>.

³³³ "Child Labour on the Rise - Zimbabwe." ReliefWeb. Accessed March 20, 2022. <https://reliefweb.int/report/zimbabwe/child-labour-rise#:~:text=According%20to%20a%202010%20UN,that%20interferes%20with%20their%20schooling.>

³³⁴ U.S. Department of Labor -Bureau of International Labor Affairs, "2020 Findings on the worst forms of child labor". 2020. Accessed 2022. https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2020/2020_TDA_BigBook_Online_optimized.pdf.

³³⁵ Child Labour on the Rise, March 20, 2022.

³³⁶ "2021 Trafficking in Persons Report: Zimbabwe," U.S. Department of State, September 14, 2021, <https://www.state.gov/reports/2021-trafficking-in-persons-report/zimbabwe/>.

³³⁷ Child Labour on the Rise, March 20, 2022.

³³⁸ Port Louis, Matthew. "Poverty in Zimbabwe." The Borgen Project. Borgen Project https://borgenproject.org/wp-content/uploads/The_Borgen_Project_Logo_small.jpg, July 29, 2021. <https://borgenproject.org/poverty-in-zimbabwe/>.

the Zimbabwe population was under 18 and was living in rural areas, 3.5 million children suffered from malnutrition and 13.5 million people endured food insecurity.³³⁹ These factors have made children more vulnerable to recruitment in ASM child labor. Currently, Zimbabwe has approximately 1.3 million orphans and about 100,000 of them support themselves.³⁴⁰ Children frequently drop out of school and seek work in order to support themselves and siblings.³⁴¹ The 2004 National Action Plan for Orphans and Vulnerable Children together with the Zimbabwe National Orphan Care Policy of 1999, were developed to ensure that orphans and vulnerable children have access to life essentials such as food, education, health services, birth registration as well as protect from exploitation and abuse, but they have yet to be effectively implemented or fully materialized.^{342 343} To this end, “the prevalence of the worst forms of child labor is on the rise and cause for concern” in Zimbabwe.³⁴⁴

CHILD LABOR

Child labor in Zimbabwe’s ASM sector rose drastically in recent years; it is caused by the lingering effects of the early 2000 economic crisis as well as the fact that mining employers prefer children as they provide an inexpensive labor.^{345 346} It is estimated that more than 13% of children in Zimbabwe participate in labor intensive activities, primarily in the agricultural sector. Employment conditions are reported to be “extremely harsh” in cases of child labor in mining.³⁴⁷ The number of children taking part in ASM labor forces has increased exponentially since COVID-19.³⁴⁸ Families bring their children to work at ASM mines to counter the economic effects of the COVID-19 pandemic. This fact was underscored by representatives of the Zimbabwe Environmental Law Association (ZELA) who noted that, “the informal markets have been closed due to Covid-19. And with no other source of income, thousands of Zimbabweans continue to seek work in the mining sector, especially gold, to make ends meet.”³⁴⁹

Indentured servitude is also common for children experiencing high levels of poverty.³⁵⁰ Zimbabwean girls, as young as 11 years old and particularly the ones residing on the border of South African, Mozambique, and Zambia, are frequently involved in the worst form of child labor

³³⁹ Port Louis, Matthew. “Poverty in Zimbabwe.” The Borgen Project. Borgen Project https://borgenproject.org/wp-content/uploads/The_Borgen_Project_Logo_small.jpg, July 29, 2021. <https://borgenproject.org/poverty-in-zimbabwe/>.

³⁴⁰ Child Labour on the Rise, March 20, 2022.

³⁴¹ Child Labour on the Rise, March 20, 2022.

³⁴² Dadirai Gwenzi, Getrude. “More Children in Zimbabwe Are Working to Survive: What is Needed.” The Conversation. October 20, 2021. <https://theconversation.com/more-children-in-zimbabwe-are-working-to-survive-whats-needed-149033>.

³⁴³ “National Action Plan For Orphans and Vulnerable Children 2004-2010,” African Child Policy Forum, April 2008, http://www.africanchildforum.org/clr/policy%20per%20country/zimbabwe/zimbabwe_ovc_2004-2010_en.pdf.

³⁴⁴ “Child Labour on the Rise - Zimbabwe.” ReliefWeb. Accessed March 20, 2022.

<https://reliefweb.int/report/zimbabwe/child-labour-rise#:~:text=According%20to%20a%202010%20UN,that%20interferes%20with%20their%20schooling>.

³⁴⁵ Moyo, Jeffery. “Zimbabwe: Fragile Economy Forces Children to Labor in Mines.” November 6, 2020.

<https://www.aa.com.tr/en/africa/zimbabwe-fragile-economy-forces-children-to-labor-in-mines-1873032#:~:text=It%20is%20a%20gold%20rush,working%20in%20mines%20and%20fields>.

³⁴⁶ “Zimbabwe: Mining Industry Attracts Child Labour as Economy Picks up - Zimbabwe.” ReliefWeb. Accessed March 15, 2022. <https://reliefweb.int/report/zimbabwe/zimbabwe-mining-industry-attracts-child-labour-economy-picks>.

³⁴⁷ Children of Zimbabwe.

³⁴⁸ Children of Zimbabwe.

³⁴⁹ Josephine Chiname, Joyce Nyamukunda, Fedzai Midzi, Shamiso Mtisi, Nobuhle Thelma Chikuni, from Zimbabwe Environmental Law Association, interviewed by Bertha Nibigira, Reilly Simmons, Abiola James, Laura Lopez, Bethesda, MD, Zoom, March 8, 2022

³⁵⁰ Zimbabwe Environmental Law Association Interview, 2022.

in domestic work, sex trafficking and agricultural.³⁵¹ In the domestic sector, the girls between the ages of 9 and 14 are employed as “nannies, maids, and gardeners” in urban and mining communities.³⁵² In the agricultural sector, they spray harsh chemicals on crops and at times, employers withhold wages, make school inaccessible, and cause them to endure gender-based violence.³⁵³ Internationally, Zimbabwe is recognized as a primary source and destination for human trafficking, and sexual exploitation is prevalent in the communities surrounding ASM mines.³⁵⁴ Additionally, sexual and gender-based violence against girls has increasingly become more common in districts with a high concentration of ASM sites.³⁵⁵ Traffickers target children working as gold panners or ore transporters; they fail to compensate the children, subject them to hunger, and coerce them to both sell and use drugs to increase productivity in the arduous tasks.³⁵⁶ Their recruitment often starts in human trafficking networks where they are sexually exploited or used for domestic or agricultural labor. Traffickers have even been caught enticing children with fraudulent job opportunities, particularly through social media and other messaging platforms such as WhatsApp.³⁵⁷

The education system has been encountering setbacks as demand for education continues to become greater than supply, caused by population growth. Quality of education has declined due to lack of adequate teacher training, shortages, and adequate school facilities. Gender disparities continue to exist and only worsened by the economic crisis. There has been an increase in young girls dropping out of school compared with their male counterparts due to early marriage, adolescent pregnancy, and gender-based violence, particularly in secondary schools. Girls access to menstrual supplies has decreased resulting in the girls of menstrual age missing approximately 20% of school³⁵⁸.

Programs have been adapted to address the needs of children that are subject to sexual exploitation in the ASM sector. One program, Mining Girl Child Indaba (MGCI), seeks to assist young girls in the mining community that are subject to sexual and gender-based violence experienced in and around artisanal and small-scale mining communities, unfortunately, it was postponed due to COVID-19. The program hoped to combat the mining industry’s “verbal and sexual harassment, sexual violence, physical violence, and socio-economic violence affecting the girl child the most.”³⁵⁹ It also aimed to end the current situation of violence and abuse by going to its origins which, it purports, are due to the irresponsibility of the mining companies and their

³⁵¹ “2021 Trafficking in Persons Report: Zimbabwe,” U.S. Department of State, September 14, 2021, <https://www.state.gov/reports/2021-trafficking-in-persons-report/zimbabwe/>.

³⁵² “2021 Trafficking in Persons Report: Zimbabwe,” U.S. Department of State, September 14, 2021, <https://www.state.gov/reports/2021-trafficking-in-persons-report/zimbabwe/>.

³⁵³ “2021 Trafficking in Persons Report: Zimbabwe,” U.S. Department of State, September 14, 2021, <https://www.state.gov/reports/2021-trafficking-in-persons-report/zimbabwe/>.

³⁵⁴ Zimbabwe Environmental Law Association Interview, 2022.

³⁵⁵ “Mining Girl Child Indaba Rescheduled - Mining Zimbabwe,” <https://miningzimbabwe.com/>, September 27, 2021, <https://miningzimbabwe.com/mining-girl-child-indaba-rescheduled/>.

³⁵⁶ “2021 Trafficking in Persons Report: Zimbabwe,” U.S. Department of State, September 14, 2021, <https://www.state.gov/reports/2021-trafficking-in-persons-report/zimbabwe/>.

³⁵⁷ “2021 Trafficking in Persons Report: Zimbabwe,” U.S. Department of State, September 14, 2021, <https://www.state.gov/reports/2021-trafficking-in-persons-report/zimbabwe/>.

³⁵⁸ Port Louis, Matthew. “Poverty in Zimbabwe.” The Borgen Project. Borgen Project https://borgenproject.org/wp-content/uploads/The_Borgen_Project_Logo_small.jpg, July 29, 2021. <https://borgenproject.org/poverty-in-zimbabwe/>.

³⁵⁹ “Reviving the Legacy of Formalized Artisanal Mining.” Mining Zimbabwe. September 5, 2020. <https://miningzimbabwe.com/reviving-the-legacy-of-formalized-artisanal-mining/>.

collaboration with the government.³⁶⁰ Initiatives proposed by the Indaba for mining companies to partake in are: providing scholarships, promoting the building of schools and colleges, stretching their mining business to tourism, among other propositions.³⁶¹

Children, particularly orphans, are recruited with the promise of educational opportunities or adoptions but are later coerced into mining and other illegal activities.³⁶² A major risk, often found as an issue across Sub-Saharan Africa, is the lack of official birth documentation.³⁶³ It is estimated that in Zimbabwe 25% of all births are not officially reported through legal channels.³⁶⁴ This makes enforcing policies and identifying children in need of protection from hazardous labor more difficult. Another major challenge facing Zimbabwe's efforts to end child labor is the decline in primary school enrollment as well as the effect of COVID-19 on children returning to schools. This in turn has affected the literacy rate and has resulted in an all-time low primary school attendance rate.³⁶⁵ Josephine Chinama of Zimbabwe Environmental Association (ZELA) stated that, "more children are now involved in mining, and are no longer willing to go back to school once it opens."³⁶⁶ Thus the initial closure of schools and informal markets pushed an increased number of children into mining, and as schools slowly reopen, children are choosing mining over school. Additional gender disparities are recognized between young boys and girls as well. Boys who make more money from mining than farming have attracted girls into relationships at a higher rate. This is causing a growing number of teenage pregnancies and ultimately resulting in premature marriage.³⁶⁷ Alcohol and drug consumption is also high among boys who use these alternative methods to cope with strenuous mining work. All these factors are contributing to the expanding number of children choosing not to return to school.

MINERALS

GOLD

Zimbabwe is a major producer of gold and has many large illicit gold markets interlinked with supply chains and market structures. It is estimated that there are nearly 4,000 gold deposits across the country.³⁶⁸ Gold mining in Zimbabwe dates to the 17th century when trade routes and large portions of its gold infrastructure were established during colonial times.³⁶⁹ Great Britain built

³⁶⁰ "Reviving the Legacy of Formalized Artisanal Mining." Mining Zimbabwe. September 5, 2020. <https://miningzimbabwe.com/reviving-the-legacy-of-formalized-artisanal-mining/>.

³⁶¹ "MGCI Seeks to End Girl Child Exploitation in Mining." Mining Zimbabwe. August 2, 2021. <https://miningzimbabwe.com/mgci-seeks-to-end-girl-child-exploitation-in-mining/>.

³⁶² "2015 Findings on the Worst Forms of Child Labor." United States Department of Labor. Accessed February 20, 2022. https://www.dol.gov/sites/dolgov/files/ILAB/child_labor_reports/tda2015/tda2015.pdf, 1121.

³⁶³ "Understanding children's right to identity." Humanium. (2019, March 28). Retrieved April 2022. <https://www.humanium.org/en/identity/>

³⁶⁴ "Children of Zimbabwe." Humanium. (2019, April 4). Accessed, April 2022. <https://www.humanium.org/en/zimbabwe/>

³⁶⁵ Anadolu Ajansı, "Continuous Lockdowns to Hit Literacy Rate in Zimbabwe." Anadolu Agency. Accessed February 2022. <https://www.aa.com.tr/en/africa/-continuous-lockdowns-to-hit-literacy-rate-in-zimbabwe-/2357594>.

³⁶⁶ Josephine Chiname, Joyce Nyamukunda, Fedzai Midzi, Shamiso Mtisi, Nobuhle Thelma Chikuni, from Zimbabwe Environmental Law Association, interviewed by Bertha Nibigira, Reilly Simmons, Abiola James, Laura Lopez, Bethesda, MD, Zoom, March 8, 2022

³⁶⁷ Josephine Chiname, Joyce Nyamukunda, Fedzai Midzi, Shamiso Mtisi, Nobuhle Thelma Chikuni, from Zimbabwe Environmental Law Association, interviewed by Bertha Nibigira, Reilly Simmons, Abisola James, Laura Lopez, Bethesda, MD, Zoom, March 8, 2022

³⁶⁸ "In Zimbabwe, High Unemployment Is Fuelling Illegal Mining." Rosa Luxemburg Stiftung. Accessed March 20, 2022. <https://www.rosalux.de/en/publication/id/45975/in-zimbabwe-high-unemployment-is-fuelling-illegal-mining>.

³⁶⁹ Kudzai Chimhangwa, "Zimbabwe's New Gold Rush." Open Democracy, August 7, 2020, <https://www.opendemocracy.net/en/oureconomy/zimbabwes-new-gold-rush/>.

upon previous Portuguese railways to maximize the accumulation of economic profits and to connect eastern African trade routes with southern Africa to provide easier access through the continent.^{370 371} Consequently, railways opened up more trading routes and ventures, which has greatly benefited the Zimbabwean economy and gold mining sector today.³⁷² These routes are still used today, particularly for mineral trading as access to roads allow for easier transportation of minerals, whether legal or illegal.

Zimbabwe identifies artisanal, small-scale, and large-scale mining in its industry sector, and cites ASM as the third largest contributor to its GDP.³⁷³ The Zimbabwean government has categorized small-scale mining and artisanal mining under the same definitions. The government continually refers to both as “ASM” but small-scale mining across the country is much more regulated than artisanal scale mining. This classification benefits buyers, such as the Reserve Bank of Zimbabwe, who can bypass safety and regulation checks for unregulated artisanal scale gold they purchase.³⁷⁴ ASM activities fill the income gap left in the agricultural off season like Mozambique and Zambia.³⁷⁵ Although gold mining is equally distributed throughout the country, most activities are concentrated in the Midland Districts of Kwekwe and Shurugwi and the Mashonaland West District of Kadoma.^{376 377} Gold miners and buyers frequently use the popular messaging app WhatsApp as a communication hub. The app has been used by miners to obtain mercury for the gold amalgamation process and is also a way for local traders to privately discuss transactions without government oversight.^{378 379} Traditionally, ASM activities centered around gold mining along river banks, but rock and soil mining became more common.³⁸⁰ From 2012 to 2017 an

³⁷⁰ Don Strack, “Railroads of Central and Southern Africa,” <https://utahrails.net/>, accessed February 21, 2022, <https://utahrails.net/articles/central-africa-railroads.php>.

³⁷¹ Don Strack, “Railroads of Central and Southern Africa,” <https://utahrails.net/>, accessed February 21, 2022, <https://utahrails.net/articles/central-africa-railroads.php>.

³⁷² Don Strack, “Railroads of Central and Southern Africa,” <https://utahrails.net/>, accessed February 21, 2022, <https://utahrails.net/articles/central-africa-railroads.php>.

³⁷³ JP Casey and JP Casey, “Mining in Zimbabwe: Time to Use It or Lose It.” Mining Technology. March 2, 2020. <https://www.mining-technology.com/features/mining-in-zimbabwe-time-to-use-it-or-lose-it/>.

³⁷⁴ Maguwu, F., Mlevu, S., Obren Nhachi, T., & Nyapokoto, H. (2020). “From Blood Diamonds to Blood Gold- A Report on machete violence in Zimbabwe’s ASM Gold Sector (Vol. Issue 1).” Center for Natural Resources Governance. https://media.africaportal.org/documents/From_blood_diamonds_to_blood_gold.pdf.

³⁷⁵ “Half of Zimbabweans Faced Extreme Poverty in 2020 Due to Covid-19: Rapid Poverty Income Consumption and Expenditure Survey (Pices).” UNICEF. Accessed March 28, 2022, <https://www.unicef.org/zimbabwe/press-releases/half-zimbabweans-faced-extreme-poverty-2020-due-covid-19-rapid-poverty-income>.

³⁷⁶ “Zimbabwe.” Encyclopædia Britannica (Encyclopædia Britannica, inc.). Accessed March 28, 2022. <https://www.britannica.com/place/Zimbabwe>.

³⁷⁷ Josephine Chiname, Joyce Nyamukunda, Fedzai Midzi, Shamiso Mtisi, Nobuhle Thelma Chikuni, from Zimbabwe Environmental Law Association, interviewed by Bertha Nibigira, Reilly Simmons, Abiola James, Laura Lopez, Bethesda, MD, Zoom, March 8, 2022

³⁷⁸ “Illicit gold markets in East and Southern Africa.” Global Initiative. (2021, June 8). Accessed April 2022. <https://globalinitiative.net/analysis/illicit-gold-east-southern-africa/>

³⁷⁹ “Understanding violence in artisanal small-scale mining in Zimbabwe: Drivers, implications and key options.” Zimbabwe Environmental Law Association. (1969, December 25). Accessed April 2022. <http://www.zela.org/understanding-violence-in-artisanal-small-scale-mining-in-zimbabwe-drivers-implications-and-key-options/>

³⁸⁰ “Follow the Money: Zimbabwe.” United Nations Industrial Development Organization. <https://www.unido.org/>, Accessed February 15, 2022. https://www.unido.org/sites/default/files/files/2019-02/Zimbabwe%20ASGM_28.04.18_0.pdf, 5.

estimated 500,000 Zimbabweans engaged in ASM.³⁸¹ ASM miners are also paid in U.S. dollars which has encouraged many children and women from rural areas to become involved in mining.³⁸² Efforts to eradicate or formalize the artisanal mining sector are more likely to result in a significant push towards illicit markets because many miners cannot meet the permit requirements and regulations.³⁸³

South Africa and Zimbabwe also have a strong connection through ASM. Large populations of Zimbabweans, known as Zama Zamas, will travel to South Africa to take part in the mining sector. About 70% of the Zama Zamas in South Africa are foreign nationals from across Sub-Saharan Africa.³⁸⁴ It is also common for ASM miners in South Africa to break into abandoned commercial mines and mine them illegally for profit.³⁸⁵ The gold mining industry in Zimbabwe also faces a major challenge in its supply chain. Smuggling is extremely common given the local economies' high inflation rates. Approximately 50% of ASM gold is lost to smuggling, which is roughly \$100 million per month.³⁸⁶ Primary destinations for gold smuggled out of Zimbabwe include the UAE, China, India and in rare cases, Russia.³⁸⁷ Specifically in 2019, it was reported that \$60 million of ASM gold was smuggled into Dubai alone.³⁸⁸

³⁸¹ "Zimbabwe's Artisanal Miners, Popularly Known as Makorokoza, Risk Their Lives to Make a Decent Living." Zimbabwe Field Guide. Accessed March 20, 2022, <https://zimfieldguide.com/midlands/zimbabwe%E2%80%99s-artisanal-miners-popularly-known-makorokoza-risk-their-lives-make-decent-living>.

³⁸² Zimbabwe's Artisanal Miners, Popularly Known as Makorokoza, Risk Their Lives to Make a Decent Living, March 20, 2022.

³⁸³ "Follow the Money: Zimbabwe." United Nations Industrial Development Organization accessed February 15, 2022. https://www.unido.org/sites/default/files/files/2019-02/App.2_Qualification%20Requirements%20and%20Evaluation%20Criteria_0.pdf, 3 -4.

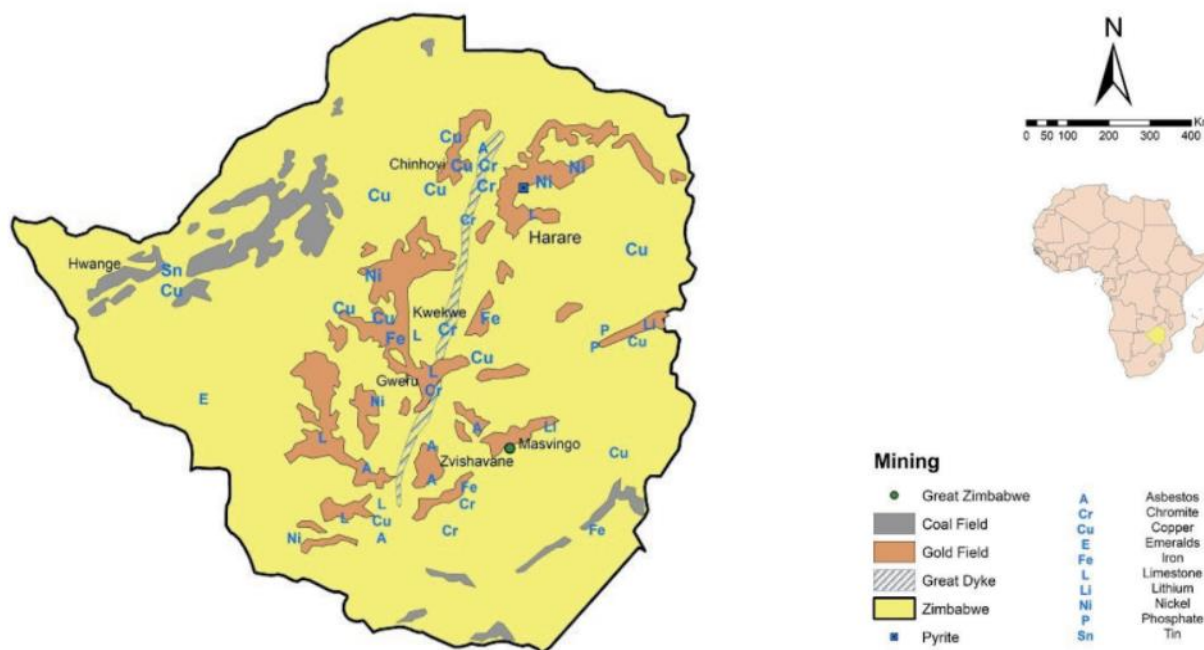
³⁸⁴ "Illicit gold markets in East and Southern Africa." Global Initiative. (2021, June 8). Accessed April 2022. <https://globalinitiative.net/analysis/illicit-gold-east-southern-africa/>

³⁸⁵ *Illicit gold markets in East and Southern Africa*. Global Initiative. June 8, 2021. Retrieved April 2022, from <https://globalinitiative.net/analysis/illicit-gold-east-southern-africa/>

³⁸⁶ *Illicit gold markets in East and Southern Africa*. Global Initiative, 11

³⁸⁷ *Illicit gold markets in East and Southern Africa*. Global Initiative, 37.

³⁸⁸ *Illicit gold markets in East and Southern Africa*. Global Initiative, 11



*Figure 8. Mineral Deposits in Zimbabwe.*³⁸⁹

In 2020, Zimbabwe was the world's 35th largest gold exporter with revenues of \$2.14 billion.³⁹⁰ Many of the final destinations for Zimbabwean gold included other African countries such as Uganda(\$331M) and South Africa (83.4M), as well as the United Arab Emirates (\$1.68B) and Hong Kong (\$28.2M).³⁹¹ High rates of smuggling challenge the government's official certified gold buyer, Fidelity Printer and Refiners (FPR). Sellers gravitate towards informal markets for higher return prices, access to larger markets and greater liquidity.³⁹² According to ZELA, approximately \$1.5 billion of gold is lost in the formal market every year due to smuggling.³⁹³

Zimbabwe's economy is dependent on the informal sector and about 80% of it utilizes foreign currencies such as the South African rand, the Botswana Pula, and the United States dollar.³⁹⁴ Miners wages are being eroded by hyperinflation which has caused many individuals to secure money from the parallel market made up of both skilled and unskilled workers. The laborers

³⁸⁹ Mtetwa, Ezekiel. (2018). "Technology, ideology, and environment. The social dynamics of iron metallurgy in Great Zimbabwe, AD 900 to the present. Azania: Archaeological Research in Africa. 53. 1-1. [10.1080/0067270X.2018.1440959](https://doi.org/10.1080/0067270X.2018.1440959).

³⁹⁰ "Gold in Zimbabwe." Observatory of Economic Complexity (OEC). Accessed March 25, 2022. <https://oec.world/en/profile/bilateral-product/gold/reporter/zwe>.

³⁹¹ Observatory of Economic Complexity (OEC), 2022.

³⁹² "Follow the Money: Zimbabwe," United Nations Industrial Organization, accessed February 15, 2022. https://www.unido.org/sites/default/files/files/2019-02/Zimbabwe%20ASGM_28.04.18_0.pdf, 1.

³⁹³ "Follow the Money: Zimbabwe," United Nations Industrial Organization, accessed February 15, 2022, https://www.unido.org/sites/default/files/files/2019-02/Zimbabwe%20ASGM_28.04.18_0.pdf.

³⁹⁴ Munangagwa, Chidochashe. "The Economic Decline of Zimbabwe ." Gettysburg College. The Gettysburg Review: Vol 3. Article 9, 2009. Page 124. <https://cupola.gettysburg.edu/cgi/viewcontent.cgi?article=1021&context=ger>.

prefer saving their money in the foreign currencies or non-financial assets.³⁹⁵ The early 2000 economic crisis led to a drastic change in mining policies and in 2006 a "No More Illegal Mining" policy was put in place criminalizing ASM activities.³⁹⁶ The new policy mandated that all gold produced in Zimbabwe be sold to FPR to increase national revenue despite the country's rising inflation rate.³⁹⁷ As a lucrative black market emerged, more local gold miners began selling informally and cases of smuggling soared.³⁹⁸ Gold that is purchased by FPR, in partnership with the Reserve Bank of Zimbabwe (RBZ), is refined and exported on behalf of the government of Zimbabwe.³⁹⁹ Their gold reserves come from official channels of ASM miners with licenses, who purchase it directly from miners or secondary sources. Regardless, ASM sellers with licenses self-report only selling 10-30% of their gold to FPR before taking their products to black markets for higher revenues.⁴⁰⁰

Zimbabwe's ASM sector changed dramatically over the years, with the entry of new investors including China, Russia, and the UAE.⁴⁰¹ Gold smugglers who previously worked with buyers in South Africa to reach international markets are now directly working with counterparts across the globe. Research shows that international buyers influence the illicit market of ASM, making it flourish.⁴⁰² Local and national airports have also become trading hubs for foreign investors and bribing airport employees to gain access to back channels is very common.⁴⁰³ Smugglers also found ways to hide gold from border controls and local security by wearing it as jewelry.⁴⁰⁴ Zimbabwe's policies on foreign actors in the sector foster corruption and exploitation of the market.⁴⁰⁵ The country prohibited ASM on riverbanks and conserved territories, however foreign actors including China hold permits for the areas.⁴⁰⁶ The supply chain routes used by China are not well documented and are speculated to include illegal activities in collaboration with the government and diplomatic officials.⁴⁰⁷

Prior to international smuggling routes in Zimbabwe, gold was smuggled through trading hubs in the capital city of Harare and Bulawayo.⁴⁰⁸ Additionally ASM miners and buyers, particularly from the southern provinces such as Matabeleland, transported their gold straight to South Africa. The Beitbridge Border Post, which sits between Zimbabwe and South Africa, is cited as a main port for ASM gold smugglers.⁴⁰⁹ Individuals will hide the gold in their hair, clothing or in

³⁹⁵ Munangagwa, Chidochashe. "The Economic Decline of Zimbabwe." Gettysburg College. The Gettysburg Review: Vol 3. Article 9, 2009. Page 124. <https://cupola.gettysburg.edu/cgi/viewcontent.cgi?article=1021&context=ger>.

³⁹⁶ Follow the Money, (UNIDO), 9.

³⁹⁷ "Follow the Money: Zimbabwe." United Nations Industrial Organization. Accessed February 15, 2022. https://www.unido.org/sites/default/files/files/2019-02/Zimbabwe%20ASGM_28.04.18_0.pdf, 9.

³⁹⁸ Follow the Money, (UNIDO), 2.

³⁹⁹ Follow the Money, (UNIDO), 2.

⁴⁰⁰ Hunter, Marcena et al. "Illicit Gold Markets in East and Southern Africa" May 2021. Accessed February 23, 2022, <https://globalinitiative.net/wp-content/uploads/2021/05/Illicit-gold-markets-in-East-and-Southern-Africa-GITOC-.pdf>.

⁴⁰¹ Illicit Gold Markets in East and Southern Africa, 1.

⁴⁰² Illicit Gold Markets in East and Southern Africa, 44.

⁴⁰³ Illicit Gold Markets in East and Southern Africa, 37.

⁴⁰⁴ Illicit Gold Markets in East and Southern Africa, 37.

⁴⁰⁵ Illicit Gold Markets in East and Southern Africa, 35.

⁴⁰⁶ Illicit Gold Markets in East and Southern Africa, 43

⁴⁰⁷ "Zimbabwe's Illicit Gold Market Hinders the Country's Development." Zim Field Guide. Accessed February 10, 2022. <https://zimfieldguide.com/midlands/zimbabwe%E2%80%99s-illicit-gold-market-hinders-country%E2%80%99s-development>.

⁴⁰⁸ "Zimbabwe's Illicit Gold Market Hinders the Country's Development." Zim Field Guide. accessed February 10, 2022. <https://zimfieldguide.com/midlands/zimbabwe%E2%80%99s-illicit-gold-market-hinders-country%E2%80%99s-development>.

⁴⁰⁹ Zimbabwe's Illicit Gold Market Hinders the Country's Development, 2022.

various parts of their cars when crossing the border. Truck and bus drivers have been known to smuggle chunks of ASM gold across the bridge daily.⁴¹⁰ Consequently, cases of child labor have soared in mining sites with high participation in smuggling activities. ASM gold smuggling is in return incentivizing child labor given the inconspicuousness of the activities.

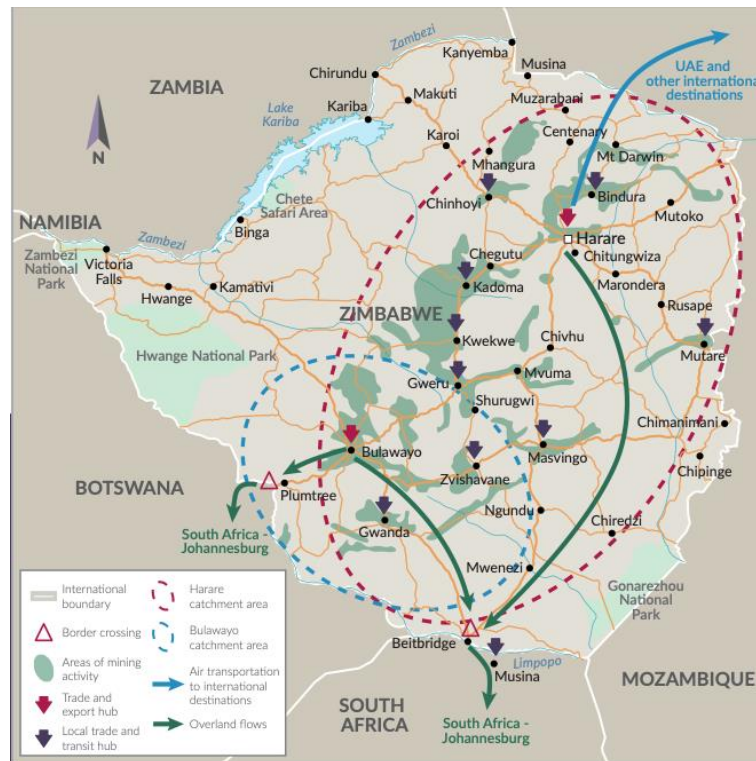


Figure 9. Mapping Gold Supply Chain Routes in Zimbabwe. Global Initiative.⁴¹¹

SECURITY

Like Zambia, Zimbabwe faces security challenges in the ASM with the presence of machete gangs. Numerous people were killed due to machete gang violence in gold ASM between 2019 and 2020.⁴¹² The “MaShurugwis,” the most prominent machete gang, originally from the Midlands Province of Zimbabwe, are associated with terrorizing local ASM communities and threatening them with machetes.⁴¹³ Members of the MaShurugwi include young and middle-aged men as young as 14, some reports include the presence of women as well.⁴¹⁴ Members of the MaShurugwi

⁴¹⁰ Zimbabwe’s Illicit Gold Market Hinders the Country’s Development, 2022.

⁴¹¹ Hunter, Marcena et al. “Illicit Gold Markets in East and Southern Africa” Global Initiative. May 2021. Accessed February 23, 2022, <https://globalinitiative.net/wp-content/uploads/2021/05/Illicit-gold-markets-in-East-and-Southern-Africa-GITOC-.pd>

⁴¹² Columbus Mavhunga, “Zimbabwean Artisanal Miners Fear Resurgence of Violence,” VOA (Zimbabwean Artisanal Miners Fear Resurgence of Violence, November 26, 2020), https://www.voanews.com/a/africa_zimbabwean-artisanal-miners-fear-resurgence-violence/6198860.html.

⁴¹³ Maguwu, F., Mlevu, S., Obren Nhachi, T., & Nyapokoto, H. (2020). (rep.). *From Blood Diamonds to Blood Gold- A Report on machete violence in Zimbabwe's ASM Gold Sector* (Vol. Issue 1). Center for Natural Resources Governance. Retrieved from https://media.africaportal.org/documents/From_blood_diamonds_to_blood_gold.pdf.

⁴¹⁴ Maguwu, F. 1.

and other machete gangs steal from local gold miners and employ the assistance of local youth to support their supply chains.⁴¹⁵ Resistance often results in forced and coerced labor or death. Evidence does support the fact that members of these gangs are not artisanal miners themselves but rely on their abilities to control mines and local gold supply chains.⁴¹⁶ MaShurugwis presence in the gold ASM industry has dubbed gold from Zimbabwe as “blood gold,” with similar connotations as its predecessor “blood diamonds.”⁴¹⁷ In one month in 2019, machete gangs took the lives of 105 people in the Kadoma region; among those killed were on-duty national security forces children.⁴¹⁸ After several security officers fell victim to the MaShurugwis’ violence while on duty and pressure from civil society groups, a campaign called #StopTheMachete, started by the Center of Natural Resource Governance. They released a statement acknowledging the dangers of the gang and urging the national government to “roll out a ban on possession of machetes.”⁴¹⁹

In response to the campaign and to end violence across the country, the government of Zimbabwe has banned possession of machetes. To address illegal activities across the ASM sector, the Zimbabwean government made informal mining illegal which led to a further push into the informal sectors by many locals seeking financial gain.⁴²⁰ The industry's association with the US Dollar, has incentivized local criminals to engage more in the sector.⁴²¹ *As a result of Zimbabwe’s dollarization during the economic collapse of the early 2000s*, all black markets in Zimbabwe sell gold using USD as its primary standard.⁴²² This attracts informal gold producers and criminal activity due to the high inflation rates of Zimbabwe's RTGS.⁴²³ Police forces are also present in the ASM sector, they are often reported to take bribes and make agreements with mining guards who themselves take part in gold mining.⁴²⁴ The presence of gangs, *which thrive in illegal ASM sites*, has also impeded the national government's plans to formalize the mining industry with a \$12 billion USD investment by 2023.⁴²⁵ *Although the government security forces have been attempting to end violence by arresting gang members, they fail to distinguish the gang members inciting violence from the peaceful ASM miners. Non-violent ASM miners are being arrested and hindered from making ends meet; the police crackdown has resulted in conflicts among mining communities.*⁴²⁶

⁴¹⁵ Maguwu, F. 1.

⁴¹⁶ Maguwu, F. 6.

⁴¹⁷ Maguwu, F. 6.

⁴¹⁸ Ibid

⁴¹⁹ Maguwu, F. 1.

⁴²⁰ “Pathways to Formalization of Artisanal Mining In Zimbabwe.” Oxfam, & Zimbabwe Economic Policy Analysis and Research Unit (ZEPARU). (2018). (rep.). Accessed April 2022. <http://www.zeparu.co.zw/sites/default/files/2019-11/pathways%20to%20formalisation%20of%20artisanal%20mining.pdf>.

⁴²¹ Pathways to Formalization of Artisanal Mining In Zimbabwe, Page 8. 2018

⁴²² Munangagwa, Chidochashe. “The Economic Decline of Zimbabwe .” Gettysburg College. The Gettysburg Review: Vol 3. Article 9, 2009. <https://cupola.gettysburg.edu/cgi/viewcontent.cgi?article=1021&context=ger>.

⁴²³ Pathways to Formalization of Artisanal Mining In Zimbabwe, Page 8. 2018

⁴²⁴ “Understanding violence in artisanal small scale mining in Zimbabwe: Drivers, implications and key options.”

Zimbabwe Environmental Law Association. (1969, December 25). Accessed April 2022.

<http://www.zela.org/understanding-violence-in-artisanal-small-scale-mining-in-zimbabwe-drivers-implications-and-key-options/>

⁴²⁵ *Machete gangs an impediment to US\$12bn mining industry target* . Zimbabwe Situation. (2021, March 23).

Accessed April 2022. <https://www.zimbabwesituation.com/news/machete-gangs-an-impediment-to-us12bn-mining-industry-target/>

⁴²⁶ “All That Glitters Is Not Gold: Turmoil in Zimbabwe’s Mining Sector ,” International Crisis Group , November 24, 2020, <https://www.justice.gov/eoir/page/file/1339421/download>.

In addition, the Zimbabwean Government “Flora and Fauna” department is charged with enforcing regulations and eliminating gold smuggling.⁴²⁷ However, ASM dealers report that district police officers are often instructed to maintain security for illegal mining activities, including smuggling. The senior officers giving commands are bribed to permit illicit ASM activities and security is often provided for mine sites that have given bribes. The machete gangs have also been known to victimize the miners who are not involved in corruption.

PUBLIC SAFETY & ENVIRONMENTAL

Lack of mine and personal safety are common causes for accidents in ASM communities. Whether they are direct injury or death from falling rock or lack of proper equipment for miners. Mining shaft collapses and falling rock from within mining tunnels are due to poor judgment on safety protocols.⁴²⁸ Since ASM is mostly unregulated in Zimbabwe the average miners understanding of safety protocol and mining practices are low and lead to their failure to protect themselves and others.

Besides diamonds, Zimbabwe's gold ASM sector has been steadily growing over the past years. Increased interest and financial incentives have led more individuals into gold mining. Just like Mozambique, Zimbabwean miners use gold-mercury amalgamation to separate refined gold from mineral rough.⁴²⁹ This not only pollutes the air and water in surrounding communities but also directly affects those working with mercury, especially women and children. The alternative to the use of mercury in gold production is carbon-in-leach plants which require heavy investment and proper equipment.⁴³⁰ The government of Zimbabwe did ban the use of mercury in small-scale mining in 2020, but it is hard to say if the ban has been enforced.⁴³¹ Public health concerns around HIV/AIDs are also high in the region and are cited to be the highest among ASM workers.⁴³²

The Zimbabwean government does claim to enforce the Environmental Management Act (EMA) when it comes to mining licensing.⁴³³ The EMA states that when renewing licensing for mining operations the applicant must return land to its original status before mining had begun to protect the environment. EMA licensing is usually granted on an annual basis and encompasses environmental effects such as air, water and land pollution, waste from mining sites and hazardous material storage.⁴³⁴

⁴²⁷ Marcena Hunter, “ILLICIT GOLD MARKETS IN EAST AND SOUTHERN AFRICA,” <https://globalinitiative.net/>, accessed February 23, 2022, <https://globalinitiative.net/wp-content/uploads/2021/05/Illicit-gold-markets-in-East-and-Southern-Africa-GITOC-pdf>MARCENA HUNTER, 51.

⁴²⁸ Machinga, J., & Matshona, P. (n.d.). *Safety and Health in the artisanal and small-scale mining (ASM) sector is key for Sustainable Mining Development*. Zimbabwe Environmental Law Association. Accessed April 2022. <http://www.zela.org/safety-and-health-in-the-artisanal-and-small-scale-mining-asm-sector-is-key-for-sustainable-mining-development/>

⁴²⁹ Machinga & Matshona. Machinga, J., & Matshona, P. (n.d.). *Safety and Health in the artisanal and small-scale mining (ASM) sector is key for Sustainable Mining Development*. Zimbabwe Environmental Law Association. Accessed April 2022, from <http://www.zela.org/safety-and-health-in-the-artisanal-and-small-scale-mining-asm-sector-is-key-for-sustainable-mining-development/>

⁴³⁰ Machinga & Matsona, April 2022.

⁴³¹ Thomson Reuters. (2020, December 29). Zimbabwe bans use of Mercury in mining. Reuters. Accessed April 2022, from <https://www.reuters.com/article/zimbabwe-mining-mercury/zimbabwe-bans-use-of-mercury-in-mining-idUKL8N2J50CP>

⁴³² Machinga & Matshona, April 2022.

⁴³³ “Pathways to Formalization of Artisanal Mining In Zimbabwe.” Oxfam, & Zimbabwe Economic Policy Analysis and Research Unit (ZEPARU). (2018). Retrieved April 2022, from <http://www.zeparu.co.zw/sites/default/files/2019-11/pathways%20to%20formalisation%20of%20artisanal%20mining.pdf>.

⁴³⁴ Pathways to Formalization of Artisanal Mining In Zimbabwe, 9.

In another case, Chinese owned mining sites have been reportedly causing massive environmental damage to surrounding communities. A Zimbabwean company, Zimasco, has in return invested in rehabilitation programs to save the surrounding environments according to environmental laws and regulations.⁴³⁵ Like much of Sub-Saharan Africa, Zimbabwe has also faced the challenges of climate change. Since 2018, the country has been facing a lasting drought which has affected its majority subsistence agriculture population. Livestock farming has taken a major hit and in 2020 reportedly 16,000 cattle died due to drought conditions in the southern provinces of Zimbabwe.⁴³⁶ Child abuse has also been reported in ASM. Shamiso Mtisi of ZELA stated that, “child abuse is also a problem in child labor... most of the time children are working without the adequate protective equipment which can prevent them from getting injured.”⁴³⁷

Psychological health among children affected by their labor participation was also mentioned in interviews. Long hours, hard work and minimal support can lead to mental degradation. Members of ZELA reiterated this issue, drawing a line between child labor, education, and mercury poisoning. Stating “even the psychological damage that happens that comes with dropping out of school and handling mercury... those are the kinds of impacts that we're talking about.”⁴³⁸

COVID

Zimbabwe is also still addressing the challenges of COVID-19. As of March 2022, Zimbabwe accounted for 3% of all coronavirus cases in the African region at a rate of 1412 out of every 100,000.⁴³⁹ The country has seen 246,414 total cases with 5,444 deaths.⁴⁴⁰ Since their first cases in March 2020 and an initial closure of 6 months, schools have been intermittently closed. Teachers across the country are concerned about the pandemic's effects on their own low wages but also the capacity of families to send their children to school.⁴⁴¹ School closures forced parents to bring their children to ASM mines to supervise them. As a result, this put large populations of school-age children at risk for child labor.⁴⁴²

Across the region COVID-19 has exacerbated already serious conditions of poverty including food insecurity. Zimbabwe's high inflation rate and increased drought have created some of the worst food insecurity in the country's history, only increased by COVID-19. In July 2020, 77% of respondents to a Levin Sources survey said they skipped meals because they did not have

⁴³⁵ “Machete gangs an impediment to US\$12bn mining industry target.” Zimbabwe Situation. (2021, March 23). Retrieved April 2022, from <https://www.zimbabwesituation.com/news/machete-gangs-an-impediment-to-us12bn-mining-industry-target/>

⁴³⁶ Maguwu, F., Mlevu, S., Obren Nhachi, T., & Nyapokoto, H. (2020). (rep.). *From Blood Diamonds to Blood Gold- A Report on machete violence in Zimbabwe's ASM Gold Sector* (Vol. Issue 1). Center for Natural Resources Governance- https://media.africportal.org/documents/From_blood_diamonds_to_blood_gold.pdf.

⁴³⁷ Josephine Chiname, Joyce Nyamukunda, Fedzai Midzi, Shamiso Mtisi, Nobuhle Thelma Chikuni, from Zimbabwe Environmental Law Association, interviewed by Bertha Nibigira, Reilly Simmons, Abisola James, Laura Lopez, Bethesda, MD, Zoom, March 8, 2022

⁴³⁸ Zimbabwe Environmental Law Association Interview, 2022.

⁴³⁹ World Health Organization. “COVID-19 (WHO African Region).” ArcGIS dashboards. Accessed February 20, 2022. <https://www.arcgis.com/apps/dashboards/0c9b3a8b68d0437a8cf28581e9c063a9>.

⁴⁴⁰ COVID-19 (WHO African Region).

⁴⁴¹ “Zimbabwe's Teachers Strike Amid Pandemic and High Inflation.” Associated Press. (2022, February). US News. Retrieved April 2022, from <https://www.usnews.com/news/world/articles/2022-02-10/zimbabwes-teachers-strike-amid-pandemic-and-high-inflation>

⁴⁴² Tufo, R., Jacot, C., & Singo, J. (2020, October). “7 COVID-19 impacts on artisanal gold mining communities in Zimbabwe.” Levin Sources. Accessed April 2022, from <https://www.levinources.com/knowledge-centre/insights/covid-19-impacts-artisanal-gold-mining-zimbabwe>

enough to eat.⁴⁴³ Sales and production of ASM have also declined due to global demand and restrictions on supply chains. The country's main buyer of ASM gold, Fidelity Printers and Refiners, lowered their purchasing rates for Zimbabwean gold during the pandemic due to travel restrictions.⁴⁴⁴

TREND SUMMARY

President Robert Mugabe redistribution of land back to black Zimbabweans through the Land Reform Act arguably further disenfranchised those already economically marginalized and pushed them to pursue ASM activities as an alternative livelihood.⁴⁴⁵ Myriad factors, such as upheaval during the land redistribution act, nationalization efforts, involvement in the Congo war, COVID-19, and environmental impacts have exacerbated the economy of Zimbabwe, leading to an economic crisis. These factors have gradually combined force and resulted in an increased number of child labor as more parents alongside their children have been carrying out ASM activities.⁴⁴⁶ Although the economic crisis goes beyond domestic economic policies, they reflect the policies implemented by Mugabe's administration. The ultimate result has been increasing trends of people pursuing mining work, including ASM gold activities, to make up for the meager income lost from participating in the informal market of selling small merchandise and declining crop yields from subsistence farming. The rate of children's involvement in ASM activities have soared, indirectly bringing attention to the rise of trafficked children, child abuse, and sexual and labor exploitation of children. Moreover, children are being subjected to violence and illicit activities, causing long-term effects on their physical and psychological health. Full implementation and greater efforts put towards actualizing programs such as the Mining Girl Child Indaba, National Action Plan for Orphans and Vulnerable Children, formalization, and an easier access to mining permits, as well as national governmental increasing their gold buying rate, would help curb child labor in Zimbabwe. And be beneficial to the holistic development of the country. Moreover, a complete implementation of the most recent land reform enacted by Zimbabwe's current President, Emmerson Mnangagwa, have promises of mitigating the historically low crop yields which will presumably decrease child labor in ASM as family income from agricultural returns is predicted to increase controlling for environmental impact.

⁴⁴³ Tufo, R., Jacot, C., & Singo, J., 2020.

⁴⁴⁴ Tufo, R., Jacot, C., & Singo, J., 2020.

⁴⁴⁵ Encyclopædia Britannica, March 28, 2022.

⁴⁴⁶ Aaron O'Neill, "Zimbabwe - Inflation Rate 1986-2026," Statista, November 24, 2021, <https://www.statista.com/statistics/455290/inflation-rate-in-zimbabwe/>.

Gap Analysis & Conclusions

Gap Analysis

Gaps were identified in four major categories that spanned the literature and interview process. The first related to the case of Mozambique in which the Portuguese and English language barrier hindered availability of information. Official Mozambican documents detailing policies on child labor and artisanal mining were written in Portuguese and were unable to be translated due to time and financial restraints of the project scope. Second, overall supply chain traceability lacked specific details for all case studies about locations and direct legal trade and illegal smuggling routes. Assumptions for hotspots can be made from the recurring mentions of supply chain depots across the region and globally, however only few sources cited specifics on mineral traceability. Third, literature and statements of work from international actors, i.e., business, and local non-government organizations (NGOs), lacked results-based evidence. Especially in the case of international businesses that released statements on their products and opposition of child labor but lacked direct evidence for steps and policies enacted on a local level. Significant gaps in information regarding ASM and emeralds, diamonds, and copper in each country were noted by the research team. Available data was overly generalized and did not address the real difficult and meaningful questions about human security impacts. Interviews were conducted to try to fill as many gaps as possible. Finally, and relevant to the overall scope of work, is the dependency on availability of resources and responsiveness of research participants. In-field research did not take place due to the ongoing pandemic and guidelines in the scope of work which may influence the number of available resources on the project.

Conclusion

Formalizing of the ASM sector was explored in all three cases as national governments attempt to more efficiently implement policies to protect against child and forced labor. It was identified that weak state institutions end up undermining the benefits of formalization. For example, Zambia's formalization of its emerald sector has been used as a tool for state control and displacement of ASM operators. This disproportionately hurts families that rely on ASM as their primary source of income.

Therefore, policies must be specifically designed for ASM, and institutions should be strengthened to provide sufficient support for formalization. Currently, a lack of state support and a policy framework skewed in favor of large-scale copper mining has worsened the outcomes of ASM operators, especially Zambia's emerald sector. Additionally, Mozambique has struggled to formalize and implement policies without support from mining communities. To mitigate informality the Mozambican government has shifted to encouraging artisanal mining for the overall economic benefit of their impoverished population. Zimbabwe had been lenient about ASM and mining regulation, but during the rise of the industry they took a sharp turn to regulate following losses in national profits.

All cases presented showcase similar trends across child and forced labor, supply chains and security. Overall general lack of stable *enforcement* institutions and funding are two of the main resources that are inhibiting the formalization of ASM and therefore, the control of child labor in the industry. Forms of hazardous child labor and the dangers of ASM have only been exacerbated by the COVID-19 pandemic as the industry continues to take a toll on public

health and the environment. A key aspect in the cycle of ASM given the mining demographics connections to agricultural subsistence farming. Financial benefits will continue to encourage participation from local miners and allow the domestic government to turn a blind eye if they receive a slice of the profits. This business model will only continue to incentivize criminal groups to invest and control aspects of the informal sector and put children at risk for both labor and other forms of exploitation. Evidence gathered from the case studies point towards continued labor participation from children unless concrete policies and enforcement take place. Mineral artisanal mining is a lucrative business for participants, national government, and foreign investors. The sector's informality cultivates an environment where profits outweigh human rights and environmental protections.

Appendix

Interview Questions

Please review the questions below prior to your interview and be prepared to discuss the following topics as it relates to your work: child labor, global mineral supply chains, artisanal and small-scale mining, and security forces. Conversations will be guided by responses from interviewees and knowledge already known by the interviewer.

Standard Questions:

1. What is your general connection to the areas we are researching?
2. How is child labor perceived by local communities or government? Industry Actors or NGOs?
3. How is artisanal small-scale mining perceived from a local perspective?
 - a. What do individuals think are the positives of ASM? What are the benefits?
 - b. What do people see as the negative effects of ASM? What improvements could be made?
4. Do private “security forces” often engage in corruption or act as special security in the mineral sector? Are children active in these forces?
5. How do minerals make their way to local depots/markets? Are there traceable supply routes for localized trade?
6. Are there active programs or policies by NGOs or national governments that curb child labor? Informal artisanal small-scale mining?
 - a. Barriers to program effectiveness?
7. What does the impact of artisanal and small-scale mining look like in the areas of your expertise? This includes environmental and public health impacts.
8. How has COVID affected ASM in your region(s) of expertise?
9. What are the challenges faced by 1) corporations, 2) governments, 3) other actors in regulating the artisanal mining space?
10. In your industry, what have been the challenges to effective supply tracing and buying ethically? What has been useful in tracing minerals?

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