

# RESEARCH ARCH REPORT

2024

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"TRANSITIONING TO RENEWABLE ENERGY IN ZAMBIA:  
BALANCING CRITICAL MINERALS EXTRACTION WITH  
HUMAN RIGHTS AND ENVIRONMENTAL  
PROTECTION"

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How Clean Is Clean  
Energy?

CLEAN4CLEAN  
ENERGY (C4C)  
PROJECT

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## **ACKNOWLEDGEMENT**

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# EXECUTIVE SUMMARY

The study's focus was to provide an exhaustive analysis of the extraction of critical minerals, focusing on their effects on human rights and environmental health. The emphasis was placed on investigating and understanding the impacts of critical minerals, mining on human rights and environmental health in Southern province specifically in Chilobe and Chilubwa.

It delved deeper into the complex relationship between the mining of critical minerals like lithium and the welfare of local communities, workers, and vulnerable groups. This included the potential for human rights infringements, the exacerbation of gender inequalities, the environmental impacts linked to climate change, and the prevalence of exploitation and abuses in relation to child labor.

The research was conducted across mining areas: Chilobe and Chilubwa, located in Zimba district and Mapatizya constituency of Chalimongela and Musika wards respectively. The research employed a methodology that integrated various data collection approaches, including a review of interviews with key stakeholders such as mining companies, local councils, community members, and traditional leadership. This methodological mix facilitated a comprehensive understanding of the intricate dynamics associated with mining of critical minerals and its impact of human rights.

The study conducted in Chilobe and Chilubwa mining communities has uncovered twelve different minerals are mined, inclusive of critical minerals.

However, pricing discrepancies between

the local and global market prices, extensive economic exploitation, poor working conditions, gender inequality, environmental degradation, health and safety risks, and inadequate legal enforcement. Discrepancies between local and global market prices for critical minerals such as lithium, tin, and aquamarine result in economic exploitation of local miners. Increased extraction activities have led to environmental harm, health hazards, and heightened socio economic vulnerabilities. Furthermore, there is a troubling disregard for miner welfare, with reports of child labor, gender disparities, health risks, lack of proper safety equipment, and fear induced by military presence. Market access for miners is limited, allowing exploitation by buyers. Poor access to clean water and sanitation, coupled with insufficient collaboration among government bodies, exacerbates these issues.

Drawing from these findings, several recommendations were proffered to address identified challenges, these included but not limited to;

## **1. Formalization of Artisanal and Small-Scale Mining**

Promoting the formalization of artisanal and small-scale mining happening in Chilubwa and Chilobe can help bring informal miners into the legal framework. Providing support in terms of technical assistance, access to finance, and capacity building can improve their productivity, reduce environmental impacts and contribute to economic growth.

## **2. Development of Value Addition and Beneficiation Programs**

Rather than just selling raw minerals, programs could be developed to add value to these critical minerals within the country.

This could increase revenues and create additional jobs. Value addition should be done in the province to ensure that communities enjoy the benefit of having minerals in the area and it will ensure employment creation for the locals.



Possible Indicators of success to this: develop craft skills centres in Chilobe and Chilubwa for communities to develop skills in mining and mineral development. In addition to the value addition centres established and being operational.

### **3. Establishment of a Critical Minerals Tracking System**

A tracking system for critical minerals could be established to ensure that the extraction, sale and export of these minerals are properly recorded. This could help to prevent illegal trade and ensure that revenues are accurately calculated.

### **4. Strict Enforcement of Labor Laws**

To protect children and uphold labor rights, there must be strict enforcement of labor laws. This includes measures to prevent child labor and ensure fair treatment and payment for all miners.

### **5. Promote Gender Equality**

There should be interventions to address gender disparities in the mining sector. This could include programs to educate communities about the importance of gender equality and measures to ensure women receive equal pay for their work. There is need for government to enforce existing laws to protect human rights and safeguard the environment

### **6. Implement Sustainable Mining Practices**

To mitigate environmental damage, mining practices need to be made more sustainable. This could include measures to reduce deforestation, manage soil erosion, and ensure safe disposal of mining waste.

### **7. Develop Local Markets**

To reduce exploitation and improve economic benefits for local miners, efforts should be made to develop local markets for minerals. This could include creating platforms for miners to sell their products directly to buyers, by-passing exploitative middlemen.

With this increase in the demand for critical minerals, the Government should take advantage by being

aggressive and prioritizing the establishment of ethical supply chains when putting green policies into practice. Government should further invest in infrastructure development such as good road networks to ensure efficient movement of the critical minerals from mines to markets. This investment will enhance accessibility and improve market competitiveness.

### **8. Address Military Presence**

The government should consider the impact of military presence on local communities and take steps to ensure that it does not lead to human rights abuses or intimidation. There is need for the reduction of military presence in the mining sites, or at least ensure they are there to safeguard the interests of the local community rather than intimidate them. Possible Indicators of success to this: Decrease in military presence, decrease in reported cases of violence and human rights violation.

### **9. Pricing**

The chieftaincy to work in partnership with headmen in facilitating pricing agreements that will cut across all mining communities. This can be done by holding meetings with buyers and drawing up documentation that prohibits selling at exploitative prices, below the agreed upon amount.

Further, they should be deliberate about ensuring that all buyers in the area have purchasing permits and that all other supporting documentation are in place.

**10. Engage Traditional leadership** Local councils (Zimba) to work with traditional leadership by holding community meetings that aim to build and strengthen communities' capacities on business conducts, human rights, child labour, gender equality and equity.

### **11. Enhance Collaboration**

Ministry of Green Economy and Environment to have presence in the region and collaborate with the local council to educate the communities on the effects of deforestation, water pollution and soil erosion.



The communities can also be encouraged to grow trees where they had them cut down, level and cover un-reclaimed mining pits and recycle mining waste. The local councils to work in tandem with the ministry of mines regional office through enhanced collaboration and provision of checks and balances on the conduct of private entities (buyers) as well as facilitate effective management of the conduct of business and mineral extraction.

In conclusion, the study addresses the human rights impacts and environmental consequences of mining critical minerals in local communities and it's requiring a comprehensive and multi-faceted approach involving all stakeholders, including governments, mining companies, local communities, and civil society organizations. By prioritizing sustainable practices, respecting human rights, and safeguarding the environment, it is possible to strike a balance between the economic benefits of mining and the well-being of local communities



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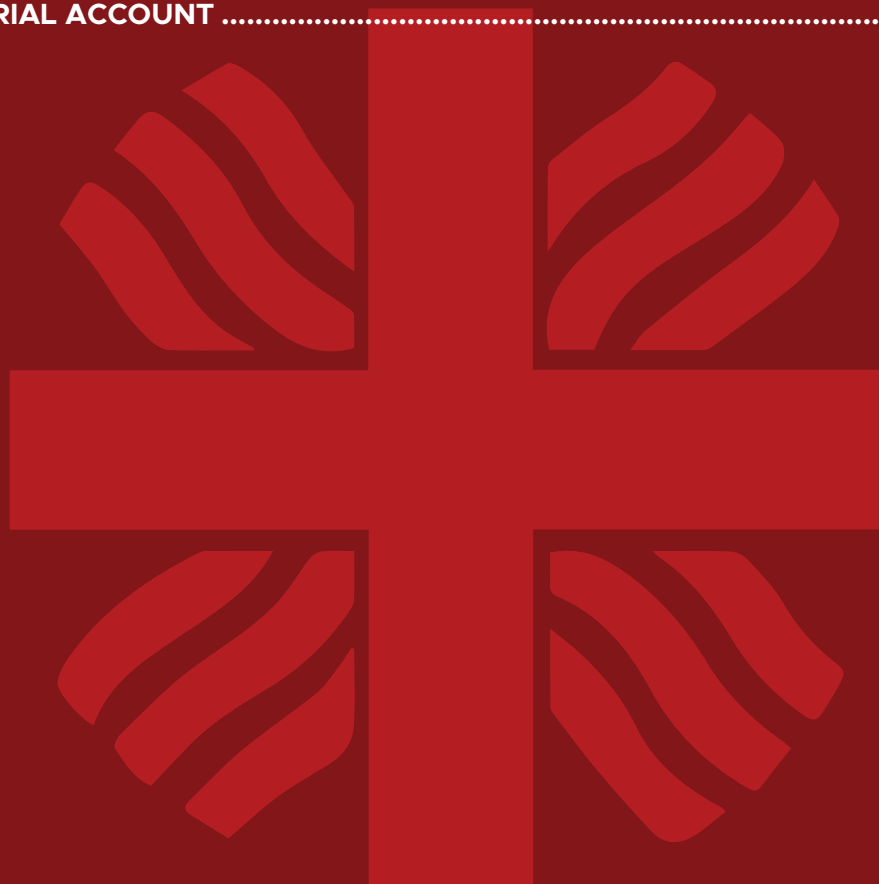
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## 1. INTRODUCTION

Caritas Zambia, in collaboration with Diakonia, embarked on a research project titled “Transitioning to Renewable Energy in Zambia: Balancing Mineral Extraction with Human Rights and Environmental Protection.” The research was conducted in the Southern province of Zambia district, Mapatiziya constituency, with the focus communities being Chilobe and Chilubwa.

This study aims to provide an exhaustive analysis of the extraction of critical minerals, focusing on their effects on human rights and environmental health.

The report delves into the complex relationship between the mining of critical minerals like lithium and the welfare of local communities, workers, and vulnerable groups. This includes the potential for human rights infringements, the exacerbation of gender inequalities, the environmental impacts linked to climate change, and the prevalence of exploitation and abuses in relation to child labor.

The report is structured to provide a comprehensive understanding of the issue at hand. It begins with a background section that sets the context for the research, outlining why the investigation is essential and the objectives it seeks to fulfill. The methodology section outlines the data collection and analysis processes. The findings section presents the research results, drawing from individual interviews and focus group discussions.

The recommendation section provides suggestions for actions that government, stakeholders, and community members can take to address the identified issues. The report also addresses limitations that may have influenced the research findings and conclusions, including the scope of the study, data availability, and time constraints. The report concludes by summarizing the key findings and

discussions.

## 2. BACKGROUND

This section delves into the specific situation in the Southern province of Zambia, where mineral-rich areas are being exploited both legally and illegally. It also discusses the role of Caritas Zambia, a non-profit organization, in educating local communities about mining laws, child labour, and human rights.

This research served as a buildup, on the Strengthened Accountability Programme Phase II Project (SAP II), implemented in Chilobe and Chilubwa areas. Since 2019, Caritas Zambia through the Justice and Peace members of Mata dei Parish in Kalomo has worked with mining communities in the said communities towards formalizing their activities through the formation of co-operatives and the acquisition of mining licenses, in mining areas attracting over 400 illegal miners, who are mostly women across different age groups, consisting of mostly youths.

Caritas Zambia's core mandate is bordered around accelerating the attainment of integral human development through the promotion of social Justice, which has been its driving force, working with target communities through building and strengthening their capacities in mining legislation, child labour, activation and enjoyment of human rights leading on to formalization and legalization of their mining activities. This research, however, extends to balancing the extraction of minerals critical to the transitioning towards the use of clean energy with human rights and environmental protection at the core.

The effects of Climate change have posed great environmental problems world over, perpetuating the infringement of fundamental human rights such as the right to water, health, and life. Cases of men, women and children losing their lives as a resultant effect of the combustion of fossil fuels, which also harm biodiversity and the ecosystem have been reported.



In addition, a notable increase in the greenhouse gas emissions has led to catastrophic effects of climate change that have worsened structural prejudices and inequities as can now be seen in all the provinces across Zambia. The global economy has then, made calls to shift away from the use of fossil fuels towards renewable sources of energy. To make this transition a reality, a vast expansion of metal and mineral mining is required.

However, this increase in the demand for transitional energy minerals generates more risks to human rights violations, such as exploitation, gender inequality, child labour and environmental degradation.

Despite critical minerals playing a crucial role in mitigating climate change through the production of renewable technologies, their extraction and processing can have adverse environmental consequences, such as deforestation, water and land pollution, and greenhouse gas emissions. The promotion of sustainable practices that translates into an energy system that is genuinely clean and green, where respect for human rights is paramount during resource extraction is cardinal. This conversation around the responsible conduct of businesses on transitioning towards the use of renewable energy has shown a significant increase in the usage of rechargeable batteries to power electric vehicles. The world will likely require at least twice as much nickel, eight times as much manganese, ten times as much cobalt, and twenty times as much lithium by 2030 to meet anticipated demand Savacool (2019)<sup>1</sup>

Zambia is rich in mineral deposits not limited to copper, which are fundamentally mined by Artisanal and Small-Scale miners. This research is specific to Southern province, which primarily consists of minerals such as Amethyst, aquamarine, tourmaline, Tin, Tungsten, Tantalite, white quartz, Lithium, with the latter gaining prominence due to the increase in the demand for minerals critical to the realization of the global transition from the use of fossil fuels towards the use of clean and reusable energy, further continuing the unprecedented growth of the ASM sector experienced over the years, in southern province.

Artisanal and Small-scale mining (ASM) is commonly practiced in various parts of the nation and southern province is no exception. Being heavily endowed with mineral resources and has potential to significantly contribute to the nation's mineral revenues, if the resources are properly harnessed, regulated and managed. However, this potential has not been realized due to the inability of ASM operations to operate as legal business entities, that respect and uphold the rights of the host communities.

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<sup>1</sup> Benjamin K. Sovacool (2019) The precarious political economy of Cobalt: Balancing Prosperity, Poverty, and Brutality in Artisanal and Industrial mining in the Democratic Republic of Congo.



Chilobe and Chilubwa areas, of Chalimongela and Musika wards respectively, of Mapatizya constituency have shown an increasing demand and production of some minerals, inclusive of some critical minerals such as lithium and Amethyst.

These mining activities are carried out on a very rudimentary level, using basic tools such as picks and shovels, and occasionally, mechanized equipment, with unprotective gear.

With the intensification of these informal activities, contributing to the illegal mineral supply chain accompanied by increasing environmental degradation with little to no technical know-how on mining legislation and rights of host communities, Caritas Zambia through the Justice and Peace members of Matadei Parish in Kalomo sought to address these noted issues. Thus conducting in-depth research on mining, with a specific focus towards business and human rights, that would help understand whether the exploitation of these raw materials poses a threat to human rights.

Further, it to identify existing mining firms, operating both legally and illegally and if there are any difficulties faced by the local communities during the extraction of transitional minerals.

## **2.1 PROBLEM THAT NECESSITATED THE RESEARCH**

The primary issue that necessitates this research is the observed increase in human rights violations closely linked to the mining of critical minerals in the Chilobe and Chilubwa regions. The exploration and extraction of these valuable minerals, essential to the global transition towards renewable energy, have inadvertently led to a myriad of human rights concerns within these

communities. The indiscriminate mining practices have not only disrupted the socio-economic fabric of these communities but have also led to significant

environmental degradation, thus further exacerbating the situation. Therefore, this research aims to delve into these pressing issues, seeking to understand the depth of the problem and subsequently propose effective and sustainable solutions.

## **2.2 GENERAL OBJECTIVE**

The overarching objective of this research was to investigate and understand the impacts of critical minerals mining on human rights and environmental health in Southern province specifically in Chilobe and Chilubwa.

## **2.1 SPECIFIC OBJECTIVES**

- To investigate the availability of critical minerals and the scale of extraction in the targeted areas
- To examine the extent and nature of human rights violations resulting from critical minerals mining activities in Chilobe and Chilubwa.
- To identify and understand the specific challenges and issues faced by local communities as a result of mining activities.
- To document the current regulatory measures and their effectiveness in controlling mining activities and protecting human rights.
- To provide insights into how the Zambian government and relevant stakeholders can balance the need for critical minerals extraction with the imperative of upholding human rights and environmental protection.



### 3.0 METHODOLOGY

To examine the effects of critical minerals mining on human rights in the Southern province, a robust and comprehensive research methodology was adopted, incorporating both qualitative and quantitative data through a mixed methods approach. The primary objective was to delve deeply into the interplay between mining of critical minerals and its repercussions on the human rights of local communities.

Our research design was cross sectional, providing a real-time snapshot of the current state of mining and its implications on the host communities. This design facilitated a multifaceted exploration of the interactions and associations between mining activities and human rights concerns. We collected and analysed both qualitative and quantitative data to holistically address our research questions.

#### 3.1 OUR MIXED-METHODS APPROACH INCLUDED THE FOLLOWING

##### 1. Structured Questionnaire

We disseminated a structured questionnaire to a sample of 80 community members. This quantitative tool was aimed at acquiring concrete information concerning the perceptions and lived experiences of these community members in relation to the mining activities in their vicinity.

##### 2. Key Informant Interviews

A series of semi-structured interviews were conducted with operating at distinct

hierarchical levels within the community and district, this included government institutions, faith leaders and communities and Focus Group Discussions (FGDs). These interviews offered a platform to probe into the key informants viewpoints, insights, and experiences with respect to critical minerals, mining practices, and their overarching impact on human rights.

##### 3. Field Observations

In order to fortify the validity of our findings, the research team conducted site visits at various mining facilities. Through these field observations, the team was able to glean first-hand insights into the daily operations, work procedures, and the tangible impacts of mining on host communities.

The data collection was performed in two selected mining areas: Chilobe and Chilubwa, located in Zimba district and Mapatizya constituency of Chalmers and Musika wards respectively. We believe these carefully chosen areas offer a representative sample of the broader mining activities taking place in the Mapatizya district. The research included five Focus Group Discussions (FGD) with miners in Chilobe (2) and Chilubwa (3), and six key informant in depth interviews.

It was envisaged that focusing on these carefully selected stakeholders would be relevant and inclusive.



Stakeholder	Number	Sector/Location	Capacity/Role
Local Council	2	Local Government (Zimba Town Council and Kalomo Town Council)	Council Secretary Deputy Council Secretary
Government Ministry	1	MMMD	Regional Director
Faith leaders	1	Monze Diocese	CCJP Coordinator
Traditional Leaders	5	Village head Persons	Headmen
Community Members	80	Chilobe and Chilubwa Area	Small-Scale Miners
Community Leaders	5	Chilobe and Chilubwa Area	Cooperative Chairperson

In addition to primary data, secondary data was collected through extensive desk research, engaging diverse stakeholders such as community members, Zimba Town Council, Ministry of Mines and Minerals Development regional office, Kalomo Town Council, traditional leaders, community leaders, and faith leaders.

The data collected from both questionnaires and key informant interviews underwent a rigorous analysis process. Quantitative data was subjected to statistical analysis to generate measurable insights into the communities' perceptions and experiences. On the other hand, qualitative data derived from interviews and field observations were scrutinized using thematic analysis, identifying recurring themes, concepts, and narratives that emerged from the participants' responses. The richness of qualitative data added context, depth, and nuance to the quantitative findings.

Finally, findings from both quantitative and qualitative analyses were aggregated and synthesized to provide a comprehensive understanding of the impact of mining activities on local communities. This

integrated approach allowed for a well-rounded interpretation of the findings, creating a panoramic view of the implications of critical minerals mining on human rights in the Southern province.

## LITERATURE REVIEW

Handelsman (2002)<sup>2</sup> reported on how Human rights have been a major issue for mining companies since the mid 1990s, covering a broader scope of issues than corporate responsibility. Also, how mining can contribute to sustainable

development, stating a new debated dynamic about corporations and human rights. Also, the report stipulates the growing public awareness of human rights with growing criticism by NGOs and others of both corporations and nation states. With Mining companies are beginning to recognize the changing relationship between business and society.

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<sup>2</sup> Simon D. Handelsman, (2002) Human Rights in the Minerals Industry



Sovacool (2019)<sup>3</sup>, makes reference to the World Bank's estimated 3 billion tons of critical minerals needed to decarbonize the global energy system to meet the need for clean energy. Meeting the demand for critical minerals on such an enormous scale will require changes to the existing order of production and trade regulation of critical minerals. This report also states the contrast to the strong demand for these minerals being that many of these deposits are in developing and highly underdeveloped countries, where historically, mining has had challenges with corruption, pollution, human rights, and violence, with Mineral extraction, often becoming a catalyst for negative community impacts.

Greenen (2011)<sup>4</sup> questions if the boom in mining activities translates into positive development for the Congolese people, with many Civil society organizations and the media having published reports and articles asserting that the informal mining sector in the DRC ignores occupational safety and health standards and violates human rights protections.

### 3.2 JUSTIFICATION OF THE STUDY

The increasing global demand for critical minerals, required for the transition to renewable energy, has intensified mining activities, especially in mineral-rich regions like Chilobe and Chilubwa in Zambia. Unfortunately, this surge in mining activities has led to a series of human rights violations and environmental degradation, making this research both timely and relevant. The study aims to shed light on the extent and nature of these violations, providing a comprehensive understanding of the issues at hand. The research will also investigate the effectiveness of existing regulatory measures, identifying gaps and areas for improvement. Moreover, the focus on gender dynamics and child labor within mining communities adds another dimension to the research, addressing often overlooked aspects of the mining sector.

### 3.3 SIGNIFICANCE OF THE STUDY

The findings of this research have the potential to inform policy, regulation and practices related to mining operations in Zambia, and potentially,

other similar contexts. By identifying the specific challenges and issues related to human rights violations and environmental impact, the study can guide the development of strategies and interventions to mitigate these problems. The research will provide valuable insights for various stakeholders, including government authorities, civil society organizations, academia and the mining industry, facilitating informed decision-making and the promotion of sustainable mining practices. This report will be used as an awareness raising tool that advocates for the adoption of responsible mining practices that prioritize upholding of human rights, environmental conservation and preservation; and gender equality as well as fostering the well-being of communities affected by the increased extraction of critical minerals.

Further, it will contribute to the wealth of knowledge that promotes the development of strategies and policies that will enhance ethical business practices and sustainable production and responsible sourcing of critical minerals, fostering a more equitable and just society. Governments, businesses, investors, and consumers have a chance to contribute to a renewable energy transition that really upholds and defends environmental and human rights.

The focus on gender and child labor issues can also contribute to social justice efforts, highlighting areas where more action is needed to protect vulnerable groups within mining communities. Ultimately, the research supports the broader goal of balancing the need for critical minerals extraction with the imperative of upholding human rights and environmental protection

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<sup>3</sup>Benjamin K. Sovacool (2019) The precarious political economy of Cobalt: Balancing Prosperity, Poverty, and Brutality in Artisanal and Industrial mining in the Democratic Republic of Congo.

<sup>4</sup>Sara Geenen (2011) A dangerous Bet: The Challenges of Formalizing Artisanal Mining in the Democratic Republic of Congo.

### 3.4 LIMITATIONS

The study provides valuable insights into the conditions of the mining communities in Chilubwa and Chilobe. However, like any study, it also had potential limitations. These limitations included:

#### 1. Limited Geographic Scope

The study focuses only on two areas, Chilubwa and Chilobe. These findings might not be representative of the conditions in other mining communities in Zambia.

#### 2. Lack of Quantitative Data

The study relied largely on qualitative data. It does not have enough quantitative data necessary to fully understand the scope of the problems described, such as exact income levels, precise numbers of children involved in mining, or specific health statistics.

#### 3. Absence of Perspectives from Other Stakeholders

The study seems to primarily represent the views of the local communities. The perspectives of other stakeholders, such as mining companies, or international investors, are not included. Therefore, it might not fully capture the complexity of the situation.

#### 4. Lack of Longitudinal Data

The study provides a snapshot of the

situation at a specific point in time. It does not track changes over time, trends which could provide a more comprehensive understanding of the issues faced by these communities.

#### 5. No Verification of Self-Reported Data

The study relies on self-reported data, which is not verified independently with some community members not being unaware of some minerals mined in the area, disadvantaging our research from having all the information on the type of minerals mined or misreported the scale of extraction.

#### 6. Accessibility

Accessing the target sites involved covering long distances to research the communities of Chilobe and Chilubwa, also worsened by the bad road network that is usually inaccessible during the rainy season, making travel time long thus eating into the research time.

#### 7. Military Presence

The presence of the military has caused fear in the community, as the community is intimidated by them. This has caused the members to not want to disclose some information and whenever they see a vehicle from a distance they go into hiding.

## 4. RESEARCH FINDINGS

### Introduction

This section presents the findings of the research. Key findings that include the extent of human rights violations and environmental damage caused by mining activities, the effectiveness of current policies and regulations, and the impact of these activities on local communities.

**The research findings provide an in depth exploration of the state of mining in the Chilubwa and Chilobe regions, shedding light on the socio-economic and environmental impacts of this vital industry. The study revealed abundant mineral resources in these areas, with a total of 12 different minerals identified by miners in the five mines visited Chilubwa (2) and Chilobe (3), including critical commodities such as Tungsten, Tin, White quartz, Red Garnet, Pink Stone, Tantalite, Aquamarine, Iron, Black Tamarind, Copper malachite, Amethyst and Lithium.**

**Similar disparities were noted for other minerals such as tin, white quartz, tantalite, aquamarine, and tungsten. This price inequality reflects a broader systemic issue of economic inequality and exploitation that undermines the prospects for a sustainable and equitable energy transition and future for the mining communities of Chilobe and Chilubwa.**

The prices at which some of these critical minerals are sold were said to fluctuate with Tin being sold for K140 per kg. The price however keeps fluctuating, sometimes reaching a low of K80 per kg. Tungsten fluctuates between K80 and K100 per kg. White quartz however comes in three (3) types, namely, the big size, selling at K100 per Kg, the battery size sold at K50 per kg and the finger size, ranging between K5 to K30 per kg. Aquamarine is sold between K7 and K15 per kg. In some mines visited, lithium was being extracted and sold at K10 per Kg.

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<sup>5</sup> <https://www.mining.com/lithium-price-plummet-due-to-continue#:~:text=Rising%20production%20has%20slashed%20the,year%2C%20according%20to%20the%20report.>





### *Visuals of Lithium and Tungsten*

The selling price of minerals by local communities falls significantly short of global market rates, highlighting economic exploitation. For instance, the sharp rise in lithium prices from \$6,000 per tonne in 2020 to \$78,032 per tonne in 2022, contrasts starkly with the low rates received by local communities. Similar under-pricing is observed in the case of tin, white quartz, tantalite, aquamarine and tungsten. This disparity underscores the economic injustice being perpetrated against these communities.

These disparities in prices reflect denying the communities of Chilobe and Chilubwa a truly just and sustainable future, with buyers exploiting them by setting price points of minerals. This exploitation affects miners especially the women and children in these areas by taking advantage of their desperation to earn a living. This is also compounded by the fact that buyers continue using exploitative and unfair pricing which in the long term worsens the human rights abuses experienced by mining communities.

***The study also delves into the escalating scale of extraction of critical minerals, which has***

***inadvertently created economic vulnerabilities for these communities. The increased extraction of minerals, notably following the discovery of lithium, has attracted investors from across the country and globally. This influx heightens competition for limited opportunities and exacerbates potential conflicts over land ownership.***

Reliance on mining activities for livelihoods in the target areas has created economic vulnerability for communities thereby increasing the scale of extraction of mineral resources. From the focus group discussions conducted, participants highlighted that there was an increase in scale of extraction of minerals in both areas over the years with a drastic spike in extraction of minerals being in 2022.

This was mainly attributed to the discovery of lithium in the target areas. The influx of investors in the area to exploit the discovered critical mineral, often from different regions of the country and abroad has potential to strain local mineral resources, increase competition for limited opportunities and fuel conflicts over land ownership.



***the study highlights a disturbing disregard for commitments by some companies extracting critical minerals. This breach of trust not only underscores the economic exploitation of these communities but also exemplifies a gross violation of their economic rights.***

Local communities also cited that they were subjected to economic exploitation. They stated that companies have failed to honour their agreements after soliciting work from them, as evidenced by the abandoned 120,000 tonnes of lithium, leaving communities unpaid and economically disadvantaged. There were some companies that offered community members K200,000 for 20 Tonnes of Lithium. This was done and the communities were paid. The same contractor offered the communities again to supply 120,000 tonnes and communities were divided into 6 groups. The investors/contractor has not shown up since even after the

communities had done the work of extracting the lithium. The piles of abandoned lithium can be seen.



*Piles of abandoned lithium*

This unscrupulous behaviour reflects a gross violation of economic rights and deepens the financial vulnerability of already marginalized communities.

***The environmental impact of mining activities of critical minerals is another pressing issue brought to light by this study. The communities reported significant deforestation, leading to infertility and barrenness of land and unreclaimed mining pits that pose severe health hazards.***

infertile and bear land in the community. Also, they further mentioned that the un-reclaimed mining pits are causing health hazards as children like playing around those areas and its unsafe for them.

From the focus group discussions and the one-on-one interviews held with both the women and men in the community, issues of environmental damage were highlighted. Some women mentioned how the increasing rates of deforestation has led to having





### ***A visual of the environmental damage and un-reclaimed pits***

In addition, the men spoken to in both Chilobe and Chilubwa affirmed that these mining operations often involve clearing of large areas of forests to access mineral deposits. This leads to loss of critical habitats and disrupts ecological balance. Soil erosion is another environmental impact associated with mining in Chilobe and Chilubwa. The removal of topsoil and vegetation, leave the land vulnerable to erosion by wind and water. While in Chilobe, the men and women lamented about the serious water pollution resulting from mining activities as eroded soil can end up in rivers and streams, leading to sedimentation and reduced water quality, as the case of Chisikili and Lusowa rivers. This issue affects their daily lives as they must walk for miles to find water.

These practices not only harm local ecosystems but also pose potential hazards to the communities. Moreover, women, who often bear the brunt of socio-environmental costs due to their caregiving roles, receive a disproportionately inadequate share of the benefits, thus further deepening gender-based disparities.

***The research also identified serious legal and moral infractions, particularly concerning child labor and***



***gender inequality. The study found that children are involved in mining activities, a clear violation of Zambian laws and international child rights. Similarly, gender disparities were evident, with women often deprived of their fair share of mining proceeds.***

Violations of labour laws and the involvement of children in mining practices are very prevalent in artisanal mining nationwide. Insights made by the respondents from Chilubwa highlighted the increase in the number of children, adolescent boys and girls, working in the mines during school holidays who utilise the money made from sales to purchase books, trousers, contributing to the family and other little things that they might need. One father who was interviewed mentioned that after his son has made money from selling the minerals, he takes the money from the child and buys some farm produce.



Other respondents stated how middlemen take advantage of the situation and purchase minerals directly from children without any adult present.

***The involvement of children in the mining of minerals is a glaring violation of Zambian laws and international child rights. Children are not only exposed to dangerous working conditions but are also entering into contractual obligations with mineral buyers. This exploitation of child labour raises serious concerns about the safety, welfare, and future of these children.***

As of Chilobe, some members stated how the headmen have taken a more proactive role, rebuking the presence of children in these mining sites by sending them away if spotted. In terms of the presence of babies at the mining sites, nursing mothers present during the focus group discussions, informed the data collectors that the reason why babies are carried with them to the mining site is because they have no alternatives away from carrying them

on their backs whilst working. This exposes the babies to harsh weather conditions and other health risks.

***The gender disparities present in mining sites, particularly evident in the Chilobe and Chilubwa areas, are striking and warrant comprehensive analysis. Women in these areas are often subjected to exploitative practices, with their efforts in mining and subsequent sales of minerals not being adequately rewarded.***

Cases of Gender disparities mostly prevail in mining sites. During one on-one discussions, some women in Chilobe mentioned that after successfully mining and selling the minerals, their husbands grab all the money from the sales, leaving them with nothing. They mentioned that some of their husbands are neither self employed nor employed, staying home all day, awaiting money from their wives' sales. In Chilubwa however, a group of women stated that after the sale of the minerals, they share their proceeds with their husbands equally, despite them doing all the work.







*Focus group discussions underway in both Chilobe and Chilubwa.*

The women in Chilobe further walk long distances every day to the mining sites, where they work under hush conditions only for their spouses to get all the proceeds made. One woman mentioned how unfair this was because she works hard for her money and would like to utilise it to purchase personal clothing

and food for herself as well as for her Children. For some of the women in Chilubwa and Chilobe who work in collaboration with men at the mining sites, they highlighted that their fair share of the profits isn't awarded to them after sales of the minerals are made despite putting equal efforts in the extraction.

Women involved in the mining and the subsequent sale of the minerals are often at the receiving end of discrimination and exploitation, leading to socio-economic disadvantages for women. This practice perpetuates gender inequality and undermines the economic empowerment of women in these households.

The health and safety risks associated with mining activities in these areas are alarmingly high. Backaches, headaches, chest pains, and coughs are common complaints among the miners, while some women reported experiencing miscarriages and decreased libido due to the intensity of their work. Incidents of mining-related accidents, including cave-ins leading to serious injuries and even death, are not uncommon. The lack of knowledge and awareness about the long-term health effects of exposure to minerals like lithium compounds these issues, leaving the community members vulnerable to chronic conditions and other serious health risks.



*The mining of critical minerals in Chilobe and Chilubwa are marked by a disregard for health and safety regulations. Miners often lack access to proper personal protective equipment, which significantly increases their susceptibility to accidents and occupational diseases. The mines themselves are characterized by poor ventilation and unstable structures, further exacerbating the risk of accidents and collapses. Oversight and safety inspections are notably absent, which allows these hazardous conditions to persist unchecked.*



*Focus group discussions and one-to-one interviews with miners from Chilubwa and Chilobe.*

Mining activities being conducted in both areas are operated without adherence to health and safety regulations. Miners engaged in mining activities lack access to proper personal protective equipment thereby exposing the lives and well-being of miners to health and safety risks such as higher incidence of accidents, occupational diseases and long-term health consequences. Lack of proper ventilation, and unstable mine structures increase the risks of accidents, cave-ins and collapses. The absence of safety inspection at the mines further exacerbates these risks as there is limited oversight to ensure compliance with safety standards.

When asked about the existing perpetuation of unsafe mining practices, a man in Chilubwa responded stating that he had no money to

purchase these protective clothing as they are quite expensive. Most respondents mentioned that they have no alternatives as mining is their main source of livelihood, carrying the needs of the family on their shoulders and ensuring that their needs are met to some extent despite the risky nature of the job.

Other respondents shared reports of injuries recorded with at least two miners losing their lives.

*One miner asked, do you know about the health impacts of exposure to minerals like lithium is a significant issue, he said “no for what, if even it kills us we shall mine, that’s the only thing to do here”*





***Access to markets for trading the extracted minerals is another significant problem faced by the miners. The existing market dynamics allow for exploitation by the few buyers that frequent the area, who often use local intermediaries to their advantage.***

***This lack of market access and competition forces many miners to settle for less than fair prices for their minerals, further compounding their economic hardship.***

Interviews held in both Chilobe and Chilubwa brought out issues regarding the lack of accessible markets to trade the minerals. The miners mentioned this as a challenge, with many settling for less just to make a sale. The area currently has two buyers frequenting the place, who have engaged agents who are mostly headmen to play the intermediary role and do their bidding, taking advantage of this gap to trade and exploit the miners.

***The presence of military personnel in Mapatizya district has created an atmosphere of fear and intimidation among the locals. This heavy-handed approach has the potential to lead to significant human rights violations, and the psychological trauma this induces is readily apparent in the local population.***

***This situation is further worsened by instances of direct threats from buyers, such as a Chinese buyer who***

***reportedly threatened to bring in the military if miners refused to sell at his set price.***

There search established that the government deployed military personnel in Mapatizya district which has created an intimidating atmosphere for the locals. The presence of military personnel has potential to perpetuate significant human rights violations which may result in psychological trauma among locals. The men and women of both Chilubwa and Chilobe, feel intimidated by military personnel who would ask for their identity documentation and interrogate them on whether they are Zambian nationals or not. One woman mentioned how the military presence makes them feel scared to walk freely in the community as they may be stopped. This is evidenced by the observation made of them running whenever they see vehicles approaching, thinking it's the military. Also, a group of female respondents mentioned how a Chinese buyer once threatened the miners with bringing the military to shake them up if they refused to sell the minerals at his set price. This intimidation infringes on the communities' right to assemble and freedom of movement which is a violation of their basic human rights.

***The lack of access to clean and safe drinking water in both Chilobe and Chilubwa, as well as proper sanitation facilities, at the mining sites poses additional health risks. The miners are forced to use unsafe water sources and share inadequate sanitation facilities, which increases the risk of waterborne diseases like typhoid and cholera. This is a clear violation of their basic human rights to water and sanitation.***

The women and men interviewed alluded to not having proper sanitation at the mining sites, with only one existing toilet that both sexes are succumbed to use. They hinted at the uncomfortable nature of the situation and the constant occupation of the lavatory, one man mentioned that whenever he wants to use the toilet its always occupied leading him to use the nearby bushes to ease himself. This is true for the other members of the community as well.

***Finally, the apparent lack of collaboration between government institutions, such as the Ministry of Mines and Mineral Development, Ministry of Green Economy and Environment, and local authorities, hampers effective natural resource governance and coordinated action on these issues. This lack of oversight and cooperation indirectly enables the ongoing violations and impedes the formulation of effective solutions to these pervasive problems.***

A meeting with government officials acknowledged being aware of the mining activities happening in Chilobe and Chilubwa areas. They also stated Minister of Mines and Minerals Development had visited some mentioned areas when the discovery of Lithium was made. Also, they clearly expressed having conducted some capacity building meetings with communities on awareness and interrogation of buyers' permits and supporting documentation. They further gave insights on the deployment of soldiers in the said areas, due to the increase in the demand for Amethyst

and Lithium. However, they acknowledged the lack of engagement and collaboration between line Ministries, such as Ministry of Mines and Mineral Development, Ministry of Green Economy and Environment and local authorities in districts like Zimba.

This noted gap in collaboration undermines the potential for implementing coordinated action and effective governance. The lack of cooperation and oversight may indirectly encourage violations and prevent the formulation of effective solutions to curb these issues.

## **5. RECOMMENDATIONS**

The communities face significant challenges and constraints, including health and safety risks, unsafe mining practices, limited access to markets, an intimidating military presence, and issues related to water, sanitation, and hygiene. The study paints a stark picture of the harsh realities faced by miners in these communities, highlighting the urgent need for comprehensive reforms and interventions. Based on the findings from the research, here are some specific recommendations that could be considered:

### **12. Formalization of Artisanal and Small-Scale Mining**

Promoting the formalization of artisanal and small-scale mining happening in Chilubwa and Chilobe can help bring informal miners into the legal framework. Providing support in terms of technical assistance, access to finance, and capacity building can improve their productivity, reduce environmental impacts and contribute to economic growth. The ASM is primarily driven by poverty and supports a significant number of the rural population aside from agriculture. Despite a multifaceted realization that the subsector has the potential to improve the country's resource basket significantly, it has received little attention, as evident from the informalities that continue to plug its growth.



### 13. Development of Value Addition and Beneficiation Programs

Rather than just selling raw minerals, programs could be developed to add value to these critical minerals within the country. This could increase revenues and create additional jobs. Value addition should be done in the province to ensure that communities enjoy the benefit of having minerals in the area and it will ensure employment creation for the locals. Possible indicators of success to this: develop craft skills centres in Chilobe and Chilubwa for communities to develop skills in mining and mineral development. In addition to the value addition centres established and being operational.

### 14. Establishment of a Critical Minerals Tracking System

A tracking system for critical minerals could be established to ensure that the extraction, sale and export of these

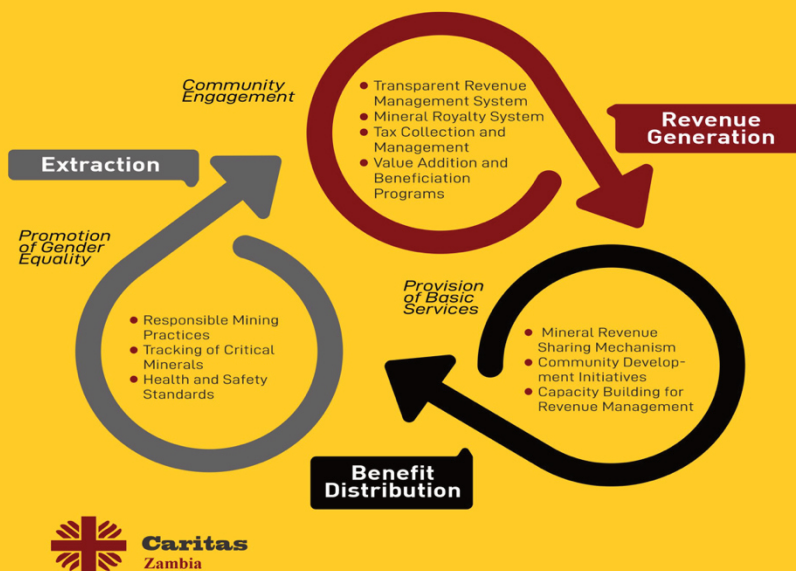
minerals are properly recorded. This could help to prevent illegal trade and ensure that revenues are accurately calculated.

### 15. Strict Enforcement of Labor Laws

To protect children and uphold labor rights, there must be strict enforcement of labor laws. This includes measures to prevent child labor and ensure fair treatment and payment for all miners.

There is need for government and local authorities to pay an interest in the child labour issues in the mine sites. There are a lot of reported cases of child labour and thus the need for government to push for stricter enforcement of child labour laws. Advocate for children's education and welfare. Possible indicators of success to this: government visits to mine sites, decrease in child labour cases, increase in school enrollment.

## Sustainable and Equitable Critical Mineral Extraction Model



**16. Promote Gender Equality** *There should be interventions to address gender disparities in the mining sector. This could include programs to educate communities about the importance of gender equality and measures to ensure women receive equal pay for their work.* There is need for government to enforce existing laws to protect human rights and safeguard the environment e.g. The Environmental management act of 2023, Convention on the Elimination of all forms of Discrimination against women, this is an international treaty that focuses on eliminating discrimination against women in all areas of life.

**17. Capacity Building for Revenue Management**

Training programs should be developed to enhance the capacity of government officials and community leaders to manage and oversee the revenue from mineral extraction. This could help to ensure that revenues are used in a way that benefits local communities and promotes sustainable development.

**18. Implement Sustainable Mining Practices:** *To mitigate environmental damage, mining practices need to be made more sustainable. This could include measures to reduce deforestation, manage soil erosion, and ensure safe disposal of mining waste.*

There is need to establish a monitoring mechanism to ensure compliance with set regulations and help keep the community in place in the long-term. In this case, strengthening the monitoring of mining sites to avoid the eroding of soil into water sources as well as building and strengthening capacities of communities to form monitoring committees. These monitoring committees can be trained to ensure that set regulations are followed. This will help the communities to hold each other to account.

**19. Improvement of Tax Collection and Management**

Efforts should be made to improve tax

collection and management in the mining sector. This could involve training for tax officials, the use of digital technology to improve tax collection and enforcement of tax laws.

**20. Promotion of Responsible Mining Practices**

Mining companies should be encouraged to adopt responsible mining practices. This could involve adhering to environmental standards, respecting human rights, paying fair wages, and contributing to local development. Companies that adhere to these practices could be given tax incentives or other benefits.

**21. Develop Local Markets**

To reduce exploitation and improve economic benefits for local miners, efforts should be made to develop local markets for minerals.

This could include creating platforms for miners to sell their products directly to buyers, by-passing exploitative middlemen. With this increase in the demand for critical minerals, the Government should take advantage by being aggressive and prioritizing the establishment of ethical supply chains when putting green policies into practice. Government should further invest in infrastructure development such as good road networks to ensure efficient movement of the critical minerals from mines to markets. This investment will enhance accessibility and improve market competitiveness.

**22. Address Military Presence**

The government should consider the impact of military presence on local communities and take steps to ensure that it does not lead to human rights abuses or intimidation. There is need for the reduction of military presence in the mining sites, or at least ensure they are there to safeguard the interests of the local community rather than intimidate them.

Possible Indicators of success to this: Decrease in military presence, decrease in reported cases of violence and human rights violation.



### **23. Establishment of a Transparent Revenue Management System**

A transparent revenue management system should be established to ensure that revenues derived from the extraction of critical minerals are accurately recorded, managed and distributed. This could involve the use of modern technology to track revenues and prevent corruption or mismanagement.

### **24. Improve Health and Safety Standards.**

**There is a need for improved health and safety standards in mining operations. This includes providing proper personal protective equipment, ensuring proper ventilation in mines, and conducting regular safety inspections.**

Zimba and Kalomo councils to revisit social services provision in the said areas and ensure that services are delivered even to the furthest of places. The Water, health and sanitation issues can be addressed if the said local councils are deliberate and aggressive.

### **25. Implement policy and legislation**

One of the objectives of the Mines and minerals resources policy of 2022 speaks to the Facilitation development and growth of the Artisanal and Small-scale Mining (ASM) sub-sector to enhance its contribution to economic development and wealth creation. Therefore, the ministry of mines fully implements the formalization clause of the mines and minerals resources policy and provides incentives to the ASM sector. The provision of incentives to Artisanal miners would propel and accelerate the legalization and regulation of these activities and further contribute to the national cake/GDP.

### **26. Pricing**

The chieftaincy to work in partnership with headmen in facilitating pricing agreements that will cut across all mining communities. This can be done by holding meetings with buyers and drawing up documentation that prohibits selling at exploitative prices, below the agreed upon amount. Further, they should be deliberate about ensuring that all buyers in the area have purchasing permits and that all other supporting documentation are in place.

### **27. Engage Traditional leadership**

Local councils (Zimba) to work with traditional leadership by holding community meetings that aim to build and strengthen communities' capacities on business conducts, human rights, child labour, gender equality and equity.

### **28. Enhance Collaboration**

Ministry of Green Economy and Environment to have presence in the region and collaborate with the local council to educate the communities on the effects of deforestation, water pollution and soil erosion. The communities can also be encouraged to grow trees where they had them cut down, level and cover un-reclaimed mining pits and recycle mining waste.

The local councils to work in tandem with the ministry of mines regional office through enhanced collaboration and provision of checks and balances on the conduct of private entities (buyers) as well as facilitate effective management of the conduct of business and mineral extraction.

### **29. Raise awareness**

Stakeholders can provide education by conducting campaigns and educational programs to teach local communities about their rights, the importance of conserving the environment and available alternative livelihoods. Empowering individuals with knowledge is key to giving them options so that they can make informed decisions.

### **30. Form multi-stakeholder partnerships**

Collaboration between civil society organizations, government and other development partners and communities is crucial in implementing interventions that are sustainable. For example, all the stakeholders can partner and dig a borehole for the community, this will help them in actualizing alternative livelihood like farming.

### **31. Have Alternative livelihoods:**

Embrace the idea of venturing into alternative livelihoods, as mining is a wasting asset and not sustainable in the long run. This can be achieved by them putting into practice the alternatives shown to them by various well-wishing stakeholders.



## 32. Cover Un-reclaimed pits

Communities to practice environmental conservation and preservation by leveling up and covering up un-reclaimed and open mining pits as well as planting trees.

## 6.0 CONCLUSION

This section summarizes the main points of the research, restating the problem, the findings, and the recommendations. It also discusses the implications of the research for future policy decisions and actions and propose areas for further research.

This research report aimed to provide a comprehensive understanding of the issues at hand surrounding the impact of the increased extraction of critical minerals in Chilobe and Chilubwa areas on human rights and to offer practical recommendations for promoting environmental justice, human rights, and sustainable exploitation of mineral resources in Zambia. It is hoped that this research will contribute to ongoing efforts to ensure a truly clean and green energy transition that respects human rights and the environment.

The research employed a qualitative methodology designed to capture in-depth insights to determining a combination of various qualitative methods which included Semi Structured Interviews with government institutions, faith leaders and communities, Focus Group Discussions (FGDs), field Observations and desk reviews.

Furthermore, the report underscored the human rights concerns associated with the mining operations of critical minerals in Chilobe and Chilubwa areas.

From a human rights perspective, these illegal mining activities lead to increases in environmental degradation, child labour, gender inequality, exploitation of host communities by the buyers through unfair pricing, loss of water sources due to segmentation of water sources, therefore reducing water levels, loss of arable land and biodiversity, affecting their agriculture-based

livelihoods.

The findings showed evidence of environmental damage from deforestation, un-reclaimed mine pits and soil erosion as well as the abuse and violation of human rights evidenced in the economic inequality women face and the inherent child-abuse. Also, the presence of the military despite it being a progressive move, has often led to intimidation of communities, with buyers riding on this intimidation to frustrate the miners into selling their minerals at exploitive prices.

To mitigate these impacts, it is crucial to prioritize sustainable mining practices and ensure effective regulation and oversight.

Furthermore, strengthened meaningful and regular engagements and consultations amongst government institutions such as the local councils and MMMD is strongly encouraged. Government institutions need to play a proactive role in engaging and strengthening capacities of communities to own their rights and facilitate the formalization of mining activities. Alternative livelihoods, access to sanitation, clean water and healthcare services should be encouraged and provided to affected communities. Additionally, government should enforce robust regulations to ensure adherence to health and safety standards, conduct regular monitoring, and hold mining companies accountable for any violations of human rights or environmental standards.

In conclusion, addressing the human rights impacts and environmental consequences of mining critical minerals in local communities requires a comprehensive and multi-faceted approach involving all stakeholders, including governments, mining companies, local communities, and civil society organizations. By prioritizing sustainable practices, respecting human rights, and safeguarding the environment, it is possible to strike a balance between the economic benefits of mining and the well-being of local communities.





## PICTORIAL ACCOUNT





## PICTORIAL ACCOUNT







