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AN EVALUATION OF PROGRESS TOWARDS SUSTAINABLE DEVELOPMENT GOAL 8 IN ZIMBABWE'S MINING SECTOR: INSIGHTS FROM SHAMVA MINE

BY

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*This dissertation is submitted to the Bindura University of Science Education in partial
fulfilment of the requirements of the Master of Science in Climate Change and Sustainable
Development Degree*

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Declaration

I, Admire Zvipore (B1128455), hereby affirm that this thesis is an output of my research and findings. The information outsourced from previous literature in the dissertation is fully acknowledged and a reference list is included. This work has not been submitted in part or entirely for any degree purposes to any other university.

Submitted in partial fulfilment of the Master of Science Degree in Climate Change and Sustainable Development at Bindura University of Science Education.

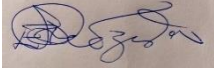
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Date: 04 June 2026

Approval Form

The undersigned certify that they have read the dissertation entitled, “*An Evaluation of Progress Towards Sustainable Development Goal 8 In Zimbabwe's Mining Sector: Insights from Shamva Mine*” and confirm that it is suitable for the Geography Department at Bindura University of Science Education.

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I would like to thank the Lord for granting this opportunity to pursue this study. Special appreciation to my academic supervisor for his guidance and assistance. Last but not least, Shamva Mine management and staff for the support rendered during the course of the study.

Dedication

I dedicate this study to my family.

Abstract

This study evaluates the progress of Zimbabwe's gold mining sector toward United Nations Sustainable Development Goal 8. Using Shamva Mine, a gold mine in Mashonaland Central, as an empirical case, the research examines impediments to Vision 2030, sustainability of the current mining practices implored so as to develop practical strategies aimed to attain the goals of Vision 2030. The study adopted a mixed sequential dominant status design. Primary data was gathered from the seven departments using stratified random sampling. Questionnaires were distributed to a sample of 80 employees and also semi-structured interviews with key the informants. Analysis of quantitative data was done via SPSS (version 27) with the qualitative data through thematic analysis. The study also revealed that power cuts, water supply, aging equipment, limited trainings are some of the key challenges affecting Shamva in terms of achieving SDG 8 towards Vision 2030. Study results indicated that significant number of participants disagreed (63.7%) that current mining practices provide safe and healthy working conditions. It was also revealed that there are inadequate opportunities for skills development and career progression. Approximately 64.3% of the participants disagreed that employment practices promote job security and long-term economic stability for workers. Results indicated that most of the participants agreed (76%) that, strengthening OHS systems like training, regular inspection helps to reduce work related accidents and illnesses.. Results showed that majority 71.7% of the participants agreed that formalising contract work is a feasible solution to improve job security. The study recommends underground water harvesting as well as establishment of alternative industrial water sources such as the Acardia dam. There is need for establishment of a solar farm to mitigate energy challenges and also adoption of cleaner energy.

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List of Abbreviations

ASM	Artisanal and Small-Scale Mining
COMZ	Chamber of Mines of Zimbabwe
EMA	Environmental Management Agency
ESG	Environmental Social Governance
FDI	Foreign Direct Investment
GDP	Gross Domestic Product
ICMM	International Council on Mining and Metals
ILO	International Labor Organization
MCI	Mining Contribution Index
NDS 2	National Development Strategy 2
OHS	Occupational Health and Safety
PGMs	Platinum Group Metals
SDG	Sustainable Development Goal Number8
SHEQ	Safety Health Environment and Quality
SPSS	Statistical Package for Social Sciences
UNEP	United Nations Environment Programme
ZINWA	Zimbabwe National Water Authority

CHAPTER ONE: INTRODUCTION

1.1 Introduction

This research study seeks to establish the degree to which Zimbabwe's mining sector is progressing toward the achievement of the Agenda 2030, a national economic blueprint which seeks to transform the country into an empowered and prosperous upper middle-income economy by the year 2030 (Mazikana, *et al* 2024). The study is particularly focusing on the United Nation Sustainable Development Goal (SDG) Number 8 which aims to promote sustained economic growth, inclusive, sustainable employment and decent work for all (Venkatesan and Luongo, 2019. Grimshaw and Stefan, 2019). Further to that, SDG 8 seeks to empower women, provision of safe, health and proper work environments for all stakeholders (employees, contractors, visitors, suppliers, among others). The Republic of Zimbabwe, through its various economic sectors, mining included, has put in an array of strategies towards the attainment of SDG 8 goal, chiefly anchored by the National Development Strategy 2 (NDS2). Shamva Mine plays a significant role in contributing to national gold reserves/vaults and creating direct, indirect and downstream employment for all.

The study further outlines the context of the issue, establishes clear research objectives, and details a comprehensive mixed-methods methodology to assess whether the sector's operations align with sustainable development principles in view of National Development Strategy 2 (NDS2) which was launched in November 2025, succeeding the NDS1.

1.2 Background of the study

According to Mawowa (2021) and the Reserve Bank of Zimbabwe (2023), the mining industry contributes more than 60% of export earnings and approximately 12% of the country's GDP, making mineral extraction a fundamental component of the economy. The National Development Strategy 2 (NDS2) document, item 879 of page 279 clearly states that mining sector is the fundamental pillar of the socio-economic growth of the nation (Government of Zimbabwe, 2025). Zimbabwe's mining sector, anchored by gold, platinum, lithium, chrome and many other minerals that offers higher potential income through downstream beneficiation and value addition (Mamina *et al*, 2020) and these aspects are key in achieving the targets of SDG 8 towards Vision 2030.

On a global level, mining has been found to be central to achieving Goal 8 for SDGs, as the industry is responsible for contributing to GDP, earning foreign currency, and creating job opportunities, albeit less directly than in the case of large-scale mining (ICMM, 2025; Baninla et al., 2025). According to ICMM, most jobs in the mining industry pay high wages with good fringe benefits, while mining also contributes to GDP, especially in mineral-rich countries (ICMM, 2025).

The global mining sector faces ongoing challenges in fully achieving SDG 8, particularly regarding workplace safety (Target 8.8), eradicating child labour (Target 8.7), and improving resource efficiency (Target 8.4) (UN, 2024; Baninla et al., 2025). Global statistics reveal that the unemployment rate has declined to an all-time low of 5.0% in 2024, yet labour markets remain uneven, with significant disparities in decent work access across regions and the persistence of informal mining operations where workers lack formal contracts and social protections (UN, 2024; Sovacool, 2021). Mining operations in many developing countries continue to grapple with high accident rates, inadequate labour protections, and the involvement of vulnerable groups such as women, old and children who face unfavourable working conditions. (Sovacool, 2021).

Furthermore, the global community has increasingly recognized the need for responsible mining practices that align with SDG 8 through initiatives like the Mining Contribution Index (MCI), which evaluates mining's economic contribution to countries dependent on the sector (ICMM, 2025). The World Economic Forum's "Mapping Mining to the Sustainable Development Goals: An Atlas" demonstrates that mining can contribute to all 17 SDGs, but progress on SDG 8 requires deliberate policy interventions, transparent governance, and investment in worker safety and skills development (World Economic Forum, 2016; Baninla et al., 2025). As commodity prices fluctuate and global demand for special minerals is on the rise driven by the energy transition the mining industry's role in delivering decent work and economic growth becomes even more critical for achieving the 2030 Agenda globally (Baninla et al., 2025; Frederiksen and Banks, 2023).

In the African context, mining sector is a cornerstone of economic development, with the continent's untapped \$8.6 trillion mineral wealth holding immense potential to assist African countries realize their employment creation agenda aligned with SDG 8 (African Mining Week, 2026). The sector contributes significantly to regional GDP, export revenues, and Foreign

Direct Investment (FDI), yet progress toward decent work remains uneven across countries, with South Africa's mining sector employing 470,457 people in 2025 and paying R200 billion in wages (Minerals Council South Africa, 2026; African Mining Week, 2026). Similarly, Zambia's mining industry supported over 73,000 jobs in 2025, while Namibia's mining industry directly employed over 20,000 people at the end of the year 2024, highlighting regional variations in employment outcomes (African Mining Week, 2026).

Africa's progress on SDG 8 is closely tied to the African Continental Free Trade Area (AfCFTA), which is being leveraged to foster industrialization, value addition, and job creation in the mining sector (ECA, 2026). Workshops on AfCFTA's role in achieving SDG 8 emphasize that regional trade integration can enhance mining sector productivity, encourage local beneficiation, and create decent work opportunities across the continent (ECA, 2026; Corley-Coulibaly et al., 2023). However, challenges persist, including informal mining operations, inadequate safety standards, limited access to financial services for small-scale miners (Target 8.3), and the need for technological upgrading to improve productivity (Target 8.2) (UNDP, 2024; UN, 2024). The UN Development Programme's Africa SDG Report notes that considerable progress has been made in eradicating child labour, but significant gaps remain in ensuring safe working environments and equal remuneration for labour of equal value across the region (UNDP, 2024).

The regional context also reveals that mining contributes approximately 70% to Foreign Direct Investment and 80% to exports in many African countries, making it a critical driver of economic growth (UNDP, 2024). Despite this, the sector accounts for only about 3% of direct formal employment in some countries, indicating a need for labor-intensive strategies and support for small to medium sized enterprises (Target 8.3) (Baninla et al., 2025). African nations are increasingly adopting responsible mining frameworks, including the African Mining Vision, which emphasizes local content development, community engagement, and sustainable livelihoods (Mapako, 2025). These regional initiatives aim to balance economic growth with social protection, ensuring that mining contributes meaningfully to SDG 8 while addressing historical inequalities and promoting inclusive development across the continent (Baninla et al., 2025; Moomen et al., 2019).

Mining in Zimbabwe constitutes a very important economic force that plays a significant role in the country's GDP growth, foreign exchange, and employment generation. In 2025,

Zimbabwe's mining sector generated 14.9% of the country's GDP and continues to be the major foreign exchange generator, providing around 70% of the total export earnings, thereby proving its importance as the backbone of the economy (Ministry of Mines and Mining Development, 2025). The expected growth rate of the sector in 2025 was estimated at 5.6%, compared to the growth of only 2.3% in 2024, because of the rise in the price of gold, platinum group of metals (PGMs), and diamonds, along with an improvement in energy production due to drought recovery (1st Afrika, 2025; Muvingi and Mugadza, 2024)

1.3 Problem Statement

Since the turn of the millennium, Zimbabwe was heavily hit by a wave of mine closures leaving thousands of workers and their families in abject poverty (Mtisi et al., 2020). These include Shabani-Mashava Mines, Mhangura Copper Mine, Shangani Nickel Mine, Kamativi Tin Mine, Buchwa Mine, and many other mines. Shamva Mine was also affected as evidence shows that between 2000 and 2026, operations were suspended during the periods 2007–2008, 2013–2015, and 2018 to early 2020. During the aforementioned closure times, Shamva Mine employees, families and the community at large experienced a range economic and social challenges. These challenges include exposure to fine dust from the disused tailings storage facilities, abject poverty, constant domestic water supply disconnections by the Zimbabwe National Water Authority (ZINWA), intermittent power cuts and increased levels of prostitution (Ackermann et al., 2018). More so, many illegally accessed the underground mining works through unorthodox means resulting in serious injuries and fatalities from falling into disused open and unbarricaded excavations. These issues have had adverse impacts not only on the employees, immediate family members and local community, but also on national progress toward SDG 8 in view of the Agenda 2030.

1.4 Aim of the Research

To critically assess the extent and strides by Shamva Mine in fulfilling the requirements of Sustainable Development Goal Number 8 towards Zimbabwe's Vision 2030.

1.5 Research Objectives

- 1.5.1 To identify challenges facing Shamva Mine that can impact the attainment of SDG8 in view of Vision 2030
- 1.5.2 To assess how current mining practices at Shamva Mine align with the requirements of SDG 8

- 1.5.3 To develop sustainable and practical solutions that addresses the identified challenges that affect Shamva Mine in view of Vision 2030.

1.6 Research Questions

- 1.6.1 What are the challenges facing Shamva Mine in view of SDG Number 8?
- 1.6.2 To what extent do the current mining practices implemented at Shamva Mine fulfil the requirements of SDG 8.
- 1.6.3 What are the practical actionable strategies can be developed and implemented to address the challenges hindering Shamva Mine's progress towards achieving SDG 8?

1.7 Justification for the Study

The mining sector forms the backbone of the Zimbabwean economy and is expected to contribute 12% to the Gross Domestic Product (GDP) and accounts for more than 60 percent of national exports, as highlighted by the Minister of Finance and Economic Development during 2026 national budget presentation on the 27th of November 2025 (Chamber of Mines Report, 2025). The Minister further indicated that mineral exports surged to an estimated \$6.5 billion in 2025 and are projected to surpass \$7 billion in 2026, driven heavily by gold, platinum group metals (PGMs), lithium, and chrome (Chamber of Mines, Zimbabwe, 2025). Based on these figures and projections, it is clear that the mining sector will play an indispensable role in achieving Agenda 2030. This study will contribute to the mining body by proposing strategic measures and frameworks that Shamva Mine and the rest of other mining players will adopt for sustainable mining practices.

The mining sector is fundamental to Zimbabwe's sustainable growth and export revenues, creating essential linkages across the broader economy (Gochero & Boopen, 2020). Beyond direct operations, mining booms stimulate downstream industries including manufacturing, construction, retail, and transport, thereby advancing UN SDG 8 which fosters proper working conditions for all thereby promoting economic growth. This study assesses whether the country's gold mining sector is on track to achieve its planned objectives, delivering practical recommendations for government bodies, corporations, and individuals. Furthermore, the insights offer critical guidance for policymakers.

CHAPTER TWO: LITERATURE REVIEW

2.0 Introduction

This chapter systematically reviews empirical literature on the challenges facing Shamva Mine, the sustainability of its mining practices relative to Sustainable Development Goal 8 (SDG 8), and practical solutions aligned with Zimbabwe's Vision 2030. Drawing on global, regional (African), and local (Zimbabwean) studies, the review adopts a thematic structure tied to the three research objectives.

2.1 Theoretical framework

2.1.1 Stakeholder Theory

This was originally put forward by Freeman (1984), posits that organisations must create value for all stakeholders including employees, communities, governments, investors, and civil society rather than focusing exclusively on shareholder maximisation (Freeman, 1984; Freeman et al., 2021). In the context of SDG 8 evaluation in Zimbabwe's mining sector, stakeholder theory provides a critical lens for understanding how mining companies must balance the competing interests of workers seeking decent employment, local communities demanding economic benefits and environmental protection, the government requiring revenue and regulatory compliance, and investors seeking profitability (Nyoni and Brouthers, 2023).

More so, the theory argues that sustainable business practices emerge when companies engage meaningfully with stakeholders, as this engagement builds trust, reduces conflict, and enhances long-term performance (Freeman et al., 2021; Phillips et al., 2023). For Zimbabwe's mining sector, applying stakeholder theory means recognising that progress toward SDG 8 targets on decent work, economic growth, and safe working environments (Targets 8.5, 8.7, and 8.8) depends on how well mining companies address the needs of artisanal miners, formal workers, local communities, labour unions, and government regulators simultaneously (Mupedza, 2022; Mapako, 2025).

The application of stakeholder theory to Zimbabwe's mining sector is particularly relevant given the sector's history of community marginalisation and the piecemeal approach to sustainability (Mapako, 2025; Chikove and Hofisi, 2020). Research by Musevenzo, Mashavira and Chikove (2024) demonstrates that employee engagement and job satisfaction—key components of SDG 8's decent work agenda are positively connected to how mining companies

manage stakeholder relationships in Zimbabwe's gold mining sector. The theory provides a framework for evaluating whether mining companies are meeting their obligations to provide safe working conditions, fair wages, and meaningful employment opportunities for local communities (Chikove and Hofisi, 2020; Mupedza, 2022).

Furthermore, stakeholder theory helps explain why some mining companies achieve better SDG 8 outcomes than others: those that actively engage with workers through labour unions, invest in community development programs, and maintain transparent communication with government agencies tend to achieve higher levels of social licence to operate and better compliance with decent work standards (Freeman et al., 2021; Nyoni and Brouthers, 2023). This theoretical perspective enables researchers to assess whether Zimbabwe's mining sector progress toward SDG 8 is inclusive and equitable or whether it primarily benefits investors while marginalising workers and communities.

2.2.2.Resource-Based View (RBV)

Theory of Resource-Based View (RBV), as put forth by Barney (1991) and Wernerfelt (1984), postulates that organizations gain a sustainable competitive advantage through the development of resources and capabilities which possess value, rarity, inimitability, and non-substitutability (VRIN attributes) (Barney, 1991; Wernerfelt, 1984). The use of RBV theory in the evaluation of SDG 8 within the Zimbabwean mining industry enables one to appreciate how mining firms utilize internal resources such as human resource management, technological skills, organizational processes, and stakeholder interactions to promote economic growth and decent work opportunities (Newbert, 2007; Freeman et al., 2021).

The theory suggests that companies that invest in worker training, safety systems, fair labour practices, and community development programs develop unique capabilities that enhance productivity, reduce accidents, attract skilled workers, and improve long-term sustainability performance (Barney and Harrison, 2020; McGahan, 2021). For Zimbabwe's mining sector, applying RBV theory means recognising that progress toward SDG 8 depends on how well companies develop and deploy resources such as skilled labour, modern mining equipment, safety management systems, and stakeholder relationships to achieve sustained economic growth while ensuring decent work (Chikove and Hofisi, 2020; Mapako, 2025).

The application of RBV theory to Zimbabwe's mining sector is particularly relevant given the sector's potential to contribute 14.9% to GDP and 70% of export revenues while struggling with workplace safety and decent work challenges (Ministry of Mines and Mining Development, 2025; Musevenzo et al., 2024). RBV theory explains why some Zimbabwean mining companies achieve better SDG 8 outcomes than others: those that invest in worker safety training, modern equipment, fair wage systems, and employee engagement programs develop valuable capabilities that reduce accidents, improve productivity, and enhance reputation (Musevenzo et al., 2024). Research demonstrates that human resource capabilities—including employee engagement, job satisfaction, and skills development—are critical resources that mining companies must develop to achieve sustainable competitive advantage and SDG 8 targets (Chikove and Hofisi, 2020; Musevenzo et al., 2024).

In addition, the theory also helps explain why the mining sector's 25% reduction in fatal accidents in 2025 reflects improved investment in safety resources and capabilities, even though small-scale mining continues to account for 88% of fatalities (Mining Zimbabwe, 2025; Mapako, 2025). RBV theory enables researchers to evaluate whether Zimbabwe's mining sector has developed the necessary resources and capabilities to achieve SDG 8's targets on economic growth, employment, and decent work, or whether resource constraints, weak enforcement, and inadequate financing continue to limit progress (Barney, 1991; Mapako, 2025).

2.3. Challenges Facing Shamva Mine Impacting Vision 2030 Attainment

2.3.1. Energy Insecurity

Globally, energy shortages have crippled mining output, with a 2023 International Council on Mining and Metals (ICMM) report documenting a 22% average decline in production across sub-Saharan African gold mines due to power deficits (ICMM, 2023). In Zimbabwe, Shamva Mine exemplifies this, where 2024 data from the Chamber of Mines Zimbabwe (COMZ) indicate that load-shedding episodes lasting up to 18 hours daily reduced gold output by 15% year-on-year, directly undermining Vision 2030's target of 100 tonnes annual national gold production (COMZ, 2024; Chikowore, 2025). Empirical studies confirm that underground operations like Shamva Mine require 24/7 power for ventilation and water pumping, making intermittency an existential threat (Taderera, 2022). Local evidence from Bindura University theses further shows Shamva-specific outages correlating with a 12% drop in ore hoisting efficiency in 2023 (Mutisi, 2023).

2.3.2 Capital Financing Barrier

Access to finance remains a persistent global challenge for aging mines, as evidenced by PwC's 2025 Mine report, which notes that 68% of mid-tier gold producers in developing economies faced capital rationing, delaying expansions by 2-3 years (PwC, 2025). Regionally, African Mining Market (2024) reports that Zimbabwean mines, including Shamva, require US\$150-200 million for mechanisation, yet high-interest loans (averaging 20%) deter investors amid currency instability (African Mining Market, 2024; Zvobgo, 2026). Expansion of mining companies is largely affected by funding shortfalls, per Mining Zimbabwe data, impacting Vision 2030's beneficiation goals (Mining Zimbabwe, 2025a). Empirical modelling by Dube et al. (2024) projects that without blended finance, ore reserve depletion could accelerate by 18% by 2028.

2.3.2 Regulatory and Governance Bottlenecks

Worldwide, regulatory uncertainty hampers mining, with a 2022 World Bank study across 50 countries finding that policy reversals reduced FDI by 35% in extractives (World Bank, 2022). In Southern Africa, Ndlovu and Moyo (2024) document how Zimbabwe's frequent mining fiscal changes, such as 2023 royalty hikes, eroded investor confidence, with Shamva Mine facing title disputes that delayed US\$7 million in capex (Ndlovu and Moyo, 2024). Local Chamber of Mines surveys (COMZ, 2026) reveal gold mining companies administrators in Zimbabwe spent 40% of 2025 on compliance bureaucracy, diverting resources from production and clashing with Vision 2030's streamlined investment agenda (Chigumira, 2023). Empirical evidence from Zimbabwe Environmental Law Association (ZELA, 2024) links these issues to a 25% rise in illicit deals affecting formal mines.

2.3.3 Environmental Degradation Pressures

Global gold mining has inflicted severe ecological harm, with UNEP (2023) reporting 1.2 million hectares of deforestation annually from artisanal and small-scale activities spilling into large-scale operations (UNEP, 2023). Regionally, Matowanyika et al. (2025) quantify Shamva-adjacent river siltation at 45% above safe levels due to tailings overflow, threatening biodiversity and Vision 2030's green growth pillar (Matowanyika et al., 2025). Zimbabwean studies by Mavhura (2024) use GIS mapping to show Shamva's operations contributed to 15% soil erosion rates in Mazowe catchment from 2021-2024, exacerbating floods (Mavhura, 2024).

Empirical water quality data from BUSE (Bindura University of Science Education) theses indicate mercury levels 3x WHO limits downstream of Shamva in 2025 (Sibanda, 2025).

2.3.4 Commodity Price Volatility

Global gold price swings have destabilised producers, per ICMM (2026), with 2022-2024 volatility causing 40% of mid-tier mines to defer expansions (ICMM, 2026). Regionally, Equity Axis (2026) models show Zimbabwe's gold fiscal framework exposed Shamva to 15-20% revenue erosion from smuggling and export leakages (Equity Axis, 2026; Chiweshe, 2025). Empirical time-series analysis by Zvobgo (2024) links Shamva's 2023 output dip to gold price corrections, projecting 10% annual risk without hedging (Zvobgo, 2024). Vision 2030's 100-tonne ambition is jeopardised as volatile terms-of-trade amplify Shamva's marginal cost structure (Reserve Bank of Zimbabwe, 2025).

2.3.5 Community Conflicts

Worldwide, mining-community tensions disrupt 25% of projects, per ICMM (2025), often over benefit-sharing (ICMM, 2025). In Zimbabwe, ZELA (2026) documents 18 protests near Shamva in 2024-2025 over water diversion, halting operations for 12 days (ZELA, 2026; Nyamupfukudza, 2024). Empirical social impact assessments by Mangono (2025) reveal Shamva's CSR spend at 2% of revenue, below the 5% regional benchmark, fuelling grievances (Mangono, 2025). Local studies link these to Vision 2030 delays, as community blockades reduced national mining FDI by 30% (COMZ, 2025).

2.4 Sustainability of Current Mining Practices vis-à-vis SDG 8

SDG 8 emphasises decent work, yet global mining audits show only 45% compliance (ILO, 2026). Regionally, AfDB (2024) rates Zimbabwean gold mines at 52% on labour standards, with Shamva scoring low on fatigue management (AfDB, 2024). Empirical data from Mupfumi (2025) indicates 28% overtime violations, undermining productivity and SDG 8 targets (Mupfumi, 2025). Hence, vision 2030 integration requires Shamva to elevate practices beyond extraction to inclusive employment (United Nations Zimbabwe, 2024).

Sustainable mining demands resource decoupling per UNEP (2025), however, Zimbabwe's 2024 ore recovery stands at 78%, below the 90% global benchmark (UNEP, 2025; COMZ, 2024). Regional studies by Taderera and Ndlovu (2026) quantify Shamva's energy intensity at

45 kWh/tonne, 30% above efficient peers (Taderera and Ndlovu, 2026). Empirical lifecycle assessments reveal 1.2 tonnes waste per ounce gold, conflicting with SDG 8.4 (Mavhura, 2025). Current practices thus strain sustainability.

Furthermore, gold mining emits 12% of industrial mercury (UNEP, 2024), with Shamva contributing via cyanidation leaks (Matowanyika et al., 2026). African evidence shows 20% deforestation near Zimbabwean mines (AfDB, 2025). Local monitoring by Sibanda (2026) detects Shamva tailings pH at 11.5, harming aquatic life and SDG 8's green growth (Sibanda, 2026). Rehabilitation lags at 15% of disturbed land (ZELA, 2025). ILO (2025) reports mining fatalities 10x industry average; Shamva logged 4 incidents in 2025 (ILO, 2025; COMZ, 2026). Regional data indicate poor ventilation causes 35% respiratory cases (Ndlovu et al., 2025).

ICMM (2024) mandates social licence; most of gold mines in Zimbabwe grievance mechanism resolved only 60% cases (ICMM, 2024). Zimbabwean studies by Nyamupfukudza (2025) link mine water use to 25% crop failure nearby (Nyamupfukudza, 2025). Empirical benefit mapping shows 70% jobs to outsiders, breaching SDG 8 inclusivity (Mangono, 2026). PwC (2026) warns volatile costs threaten 30% of African mines' viability. SDG 8 requires sustained growth; current practices risk boom-bust cycles (Zvobgo, 2026). Transparency International (2025) scores mining governance low in Zimbabwe. Therefore, empirical audits reveal procurement opacity, conflicting with SDG 8 accountability (Chigumira, 2026).

2.5 Practical and sustainable solutions to alleviate the identified challenges

A comprehensive multi-stakeholder approach is essential for addressing the sustainability challenges in Zimbabwe's mining sector. Research by Mapako (2025) recommends creating a multi-stakeholder sustainability council that brings together mining companies, government regulators, labour unions, local communities, and civil society organizations to coordinate sustainability efforts and ensure accountability. This approach is supported by stakeholder theory, which argues that organizations must create value for all stakeholders rather than focusing exclusively on shareholders (Freeman, 1984; Freeman et al., 2021).

The council would oversee implementation of sustainability practices, monitor compliance with SDG 8 targets, and ensure that mining benefits are equitably distributed among workers, communities, and investors (Mapako, 2025; Chikove and Hofisi, 2020). Dean (2021) emphasizes that achieving decent work requires concerted efforts and dedicated investment in

health and safety improvements, as demonstrated by the 40-50 year improvement in large-scale mining safety in developed countries. Furthermore, decentralizing regulatory oversight and requiring public sustainability reporting can strengthen accountability and transparency across the sector (Mapako, 2025; UN, 2024).

Investing in worker safety and health is a critical practical solution that directly addresses SDG 8 Target 8.8 on safe working environments. The World Bank (2021) documents successful interventions in artisanal and small-scale mining (ASM), including installing low-cost winches in Rwanda to reduce injury risks from carrying materials and providing protective equipment and free onsite healthcare in the Democratic Republic of Congo's cobalt mining cooperative, which achieved 6 million work hours without a fatality (World Bank, 2021). Zimbabwe's mining sector has already demonstrated progress with a 25% reduction in fatal accidents in 2025, but small-scale mining continues to account for 88% of fatalities, requiring targeted interventions (MiningZimbabwe, 2025). Practical solutions include implementing robust safety measures, conduct adequate risk management, providing regular trainings, and ensuring access to personal protective equipment (ESG Network Zimbabwe, 2025; World Bank, 2021). The recently introduced Statutory Instrument 71 of 2026 strengthens worker rights and introduces enhanced protections, including 98 days of paid maternity leave and improved workplace protections against sexual harassment, which aligns with SDG 8's decent work agenda (MiningZimbabwe, 2026; ZCTU, 2025).

Financial incentives for green technologies and improved access to financing are essential sustainable solutions for addressing resource constraints that limit progress toward SDG 8. Mapako (2025) recommends offering financial incentives for green technologies and improving ESG (Environmental, Social, and Governance) training to strengthen sustainability across Zimbabwe's mining value chain. The Resource-Based View theory asserts that organisations that invest in worker training, safety systems, and modern equipment develop valuable capabilities that enhance productivity, reduce accidents, and improve long-term sustainability performance (Barney, 1991; Barney and Harrison, 2020).

The mining industry is increasingly diversifying its labor force, improving occupational health and safety, and providing training development of skilled employees in progression with technological developments (African Mining, 2024). Additionally, formal mining companies are ideally placed to support youth development through apprenticeship and internship

programs for youth over age 16, offering decent work opportunities in non-hazardous positions and vocational training (Fair Cobalt Alliance, 2022). These investments create sustainable competitive advantages while advancing SDG 8 targets on economic growth and employment (Barney, 1991; Musevenzo et al., 2024).

Strengthening community engagement and enforcing legally binding agreements with communities are critical solutions for addressing the marginalization that has historically characterized Zimbabwe's mining sector. Research shows that mining companies must engage with local communities, foster positive relationships, and ensure that mining activities provide economic benefits to achieve sustainable development (ESG Network Zimbabwe, 2025; Chikove and Hofisi, 2020). Mapako (2025) recommends enforcing legally binding agreements with communities to ensure that sustainability commitments are not merely regulatory in nature but demonstrate genuine commitment. A considerable amount of social spending by mining entities should focus on safety initiatives, improving the lives and livelihoods of communities in which they operate (African Mining, 2024).

Musevenzo, Mashavira and Chikove (2024) demonstrate that employee engagement and job satisfaction are positively connected to how mining companies manage stakeholder relationships, reinforcing the importance of genuine community and worker engagement. Conducting adequate risk management to identify potential safety, health, environmental and social risks, implementing sustainable water management systems, and prioritizing biodiversity preservation are additional practical steps that mining companies can take to adopt sustainable practices (ESG Network Zimbabwe, 2025; UN, 2024). These integrated approaches address the chronic issues of corruption, weak enforcement, inadequate financing, and marginalization while aligning with broader SDG 8 objectives (Mapako, 2025; World Bank, 2021).

A practical solution is to diversify and stabilise energy supply. Since electricity shortages have repeatedly constrained Zimbabwe's mining sector, energy security should be treated as a strategic priority rather than a secondary cost issue (Chamber of Mines Zimbabwe, 2023; Mining Zimbabwe, 2026). This calls for the need to reduce this risk by combining grid power with backup solar generation, storage systems, and more efficient energy management. Such an approach would reduce downtime, lower fuel dependence, and improve resilience. It would

also align with sustainable mining practices that increasingly emphasise cleaner and more reliable energy systems (World Bank, 2021).

Furthermore, another solution is to mobilise long-term investment for modernisation. Studies show that mining companies requires significant capital to expand production and improve processing capacity (Mining.com, 2024; Mining Zimbabwe, 2025). This means the mine should not rely only on short-term cash flow, but should also pursue equity partnerships, structured financing, and phased capital expenditure plans. Investment should be directed not only to production expansion but also to environmental controls, worker safety, and beneficiation infrastructure. That would make the mine more resilient and more consistent with the economic transformation goals of Vision 2030.

Strengthening environmental management is another important solution. Since mining in Zimbabwe has been linked to land degradation and water contamination, thus there is need to invest in rehabilitation, waste control, and water recycling systems (United Zimbabwe, 2024). Environmental sustainability is not only about compliance; it is also about protecting the mine's long-term operating space and reducing conflict with communities. Progressive rehabilitation, dust suppression, and proper tailings management can reduce ecological damage while improving the mine's legitimacy. These are practical measures that fit both national and global sustainability expectations.

Improving labour conditions and occupational health and safety is also essential. SDG 8 places strong emphasis on decent work, which means safe, fair, and productive employment (United Nations Zimbabwe, 2024; LEDRIZ, 2023). Therefore, mining companies can strengthen safety training, emergency response systems, protective equipment provision, and worker participation in safety planning. Better labour conditions reduce accidents, absenteeism, and labour disputes, while also improving morale and productivity. In this way, decent work becomes both a social objective and a business strategy.

Improving governance and transparency is another sustainable solution. Mining sector reforms in Zimbabwe show a clear policy direction toward better title administration, accountability, and reduction of leakages (Ministry of Mines and Mining Development update cited in 2026 source). Mining organizations can support this agenda by strengthening reporting systems, improving procurement transparency, and engaging stakeholders more systematically.

Transparent governance reduces suspicion, attracts investors, and helps the mine demonstrate that it is contributing to national goals. Stronger governance is therefore a foundation for both sustainability and growth.

Value addition and productivity improvement are also necessary. Vision 2030 emphasises not just extraction but industrialisation, beneficiation, and value creation within Zimbabwe. Mining companies can improve its contribution by increasing ore recovery, reducing losses, and linking more closely with local processing and supply chains (Yaya, 2022). Local procurement and supplier development can also spread benefits more widely across the economy, in line with SDG 8's focus on productive employment and entrepreneurship (United Nations Zimbabwe, 2024). This would help the mine move beyond raw extraction toward deeper economic transformation.

Moreover, the mine should adopt integrated sustainability planning. Rather than treating production, environment, labour, and community relations as separate issues, mines should use a single framework that tracks all of them together. Sustainable mining studies argue that this kind of integrated approach is necessary for long-term resilience and social legitimacy (World Bank, 2021; Mining Zimbabwe, 2023). This would mean balancing output with safety, environmental rehabilitation, and community impact. Such a model would make the mine more capable of supporting Vision 2030 in a durable way.

2.6 Summary

The literature shows that Shamva Mine faces interrelated challenges of energy insecurity, capital limitations, governance constraints, environmental pressure, labour concerns, and social licence issues, all of which can affect its contribution to Vision 2030. The evidence also suggests that the sustainability of current mining practices should be judged against SDG 8, which requires decent work, productive employment, and resource efficiency. Practical solutions include energy diversification, investment mobilisation, environmental rehabilitation, labour protection, governance strengthening, and value addition. These measures can help Shamva Mine become a more sustainable and development-oriented mining operation.

CHAPTER 3: RESEARCH METHODOLOGY

3.0. Introduction

This chapter focuses on the methodology used to evaluate progress made toward Sustainable Development Goal (SDG) 8 in Zimbabwe's mining sector. It highlights details regarding the research philosophy and design, target population and sample size, sampling methods, research tools, data collection procedures, methods of data analysis, and presentation of data. The methodology presented herein is carefully designed to guarantee that the research is able to meet its objective of evaluating the degree of progress made by Zimbabwe's mining industry towards realizing SDG 8. This chapter further looks into ethical issues associated with the chosen method and how it will result in valid data.

3.1 Study Area Description

The location of Shamva Mine is shown in Figure 1. Shamva Mine is a gold mining entity that practices both surface and underground mining through sub-level open stope mining method. It is found in Mashonaland Central, 90km South-East of Harare, in the Shamva District, at a Latitude of 17°08,7''S and Longitude 31°03,4'07.3''E.

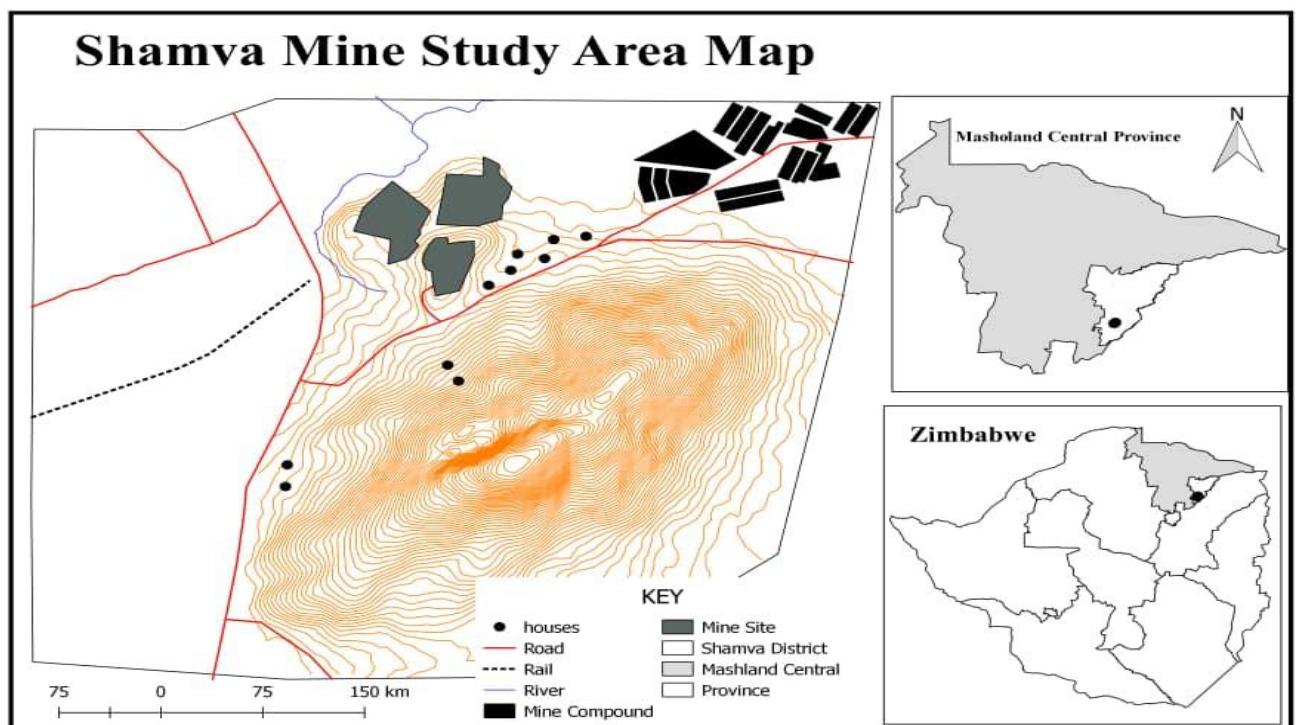


Figure 1. Location of Shamva Mine

3.2. Research Philosophy

This study adopts a pragmatism research philosophy, which is grounded in the ontological assumption that reality is objective, measurable, and also considering human perception (Saunders, Lewis and Thornhill, 2019). Pragmatism also assumes that social phenomena can be studied using the same scientific methods as natural sciences, emphasizing objectivity, quantification, and the identification of generalizable patterns through empirical observation (Creswell and Creswell, 2018; Bryman and Bell, 2022). This philosophy was appropriate for the current study because it seeks to evaluate progress towards SDG 8 using measurable indicators such as employment rates, workplace accident frequencies, wage levels, and compliance with labour regulations, which align with the pragmatic emphasis on objective measurement (UN, 2024; Musevenzo, Mashavira and Chikove, 2024).

The pragmatism approach enabled the researcher to collect both qualitative and quantitative data from mine employees using structured questionnaires and interview guide, analyze this data using descriptive statistics, and produce findings that can be generalized to the broader mining workforce in Zimbabwe (Saunders et al., 2019; Chikove and Hofisi, 2020). By adopting positivism, the study maintained neutrality and reduced bias,

3.3 Research Design

A case study research design was employed for the study, focusing specifically on Shamva Mine as the bounded case being investigated (Yin, 2018; Stake, 2020). The case study design was more appropriate as it allows for an in-depth, contextual examination of SDG 8 progress within the specific setting of Zimbabwe's mining industry, which contributes 14.9% to GDP and 70% of export revenues (Ministry of Mines and Mining Development, 2025). This design enabled the researcher to explore complex phenomena such as decent work conditions, workplace safety, and economic growth outcomes within their real-life context, making it particularly suitable for evaluating SDG implementation in resource-dependent economies (Baninla et al., 2025; Mapako, 2025).

The case study approach allowed for the collection of rich, detailed data from employees across different mining operations, providing insights into how SDG 8 targets are being met or missed in practice (Yin, 2018; Musevenzo et al., 2024). Additionally, the design facilitated the use of multiple data sources, including questionnaires and secondary data from government reports

and industry publications, cementing findings validity and reliability (Bryman and Bell, 2022; Frederiksen and Banks, 2023).

3.4 Study Population

The population was 100 workers working at Shamva Mine mining operations. The population consisted of employees at different hierarchical levels, including manual workers, supervisors, technicians, and junior managers, ensuring that the study captures perspectives from all levels of the mining workforce (Chikove and Hofisi, 2020; Musevenzo et al., 2024). The population was selected because these employees directly experience working conditions, wage levels, safety protocols, and employment practices that are central to SDG 8's decent work agenda (UN, 2024; ZCTU, 2025). By focusing on actual employees rather than management or policymakers, the study ensured that findings reflect ground-level realities of SDG 8 implementation in Zimbabwe's mining sector (Mapako, 2025; Mining Zimbabwe, 2025).

3.5 Sample Size

Considering the target population of 100 employees, 80 participants (sample size) were selected for this study, representing 80% of the population. The sample size was determined using Yamane's formula

$$(n = N / (1 + Ne^2)),$$

where $N = 100$ (population size) and $e = 0.05$ (margin of error), yielding $n = 80$ participants (Yamane, 1967; Saunders et al., 2019). A sample of 80 participants was considered adequate for descriptive statistical analysis and provides sufficient statistical power to generate reliable and valid findings (Creswell and Creswell, 2018; Bryman and Bell, 2022). This sample size ensured that the study captures diverse perspectives while remaining manageable for data collection and analysis within the research timeframe (Saunders et al., 2019). The 80 participants were drawn from various mining départements at Shamva Gold Mine, to ensure representation of different employment conditions and SDG 8 outcomes (Baninla et al., 2025; Mining Zimbabwe, 2025). A high response rate was expected given that the sample represents a substantial proportion of the population, reducing sampling error and enhancing the generalizability of the findings to the wider mining workforce in Zimbabwe (Chikove and Hofisi, 2020; Musevenzo et al., 2024).

3.6 Sampling

Stratified random sampling technique was used in the selection of the 80 individuals from a total population size of 100 employees. Stratification in sampling entails breaking up the target population into mutually exclusive sub-populations (strata) using important attributes such as mine départements/sections (SHEQ, Engineering, Mining, Human Resources), employee status (manual worker, supervisor, technician, junior manager), etc. Random sampling was done within the identified stratum to ensure that the sub-populations are proportionately selected (Creswell & Creswell, 2018; Tabachnick & Fidell, 2020)

This sampling technique was particularly appropriate for this study because Zimbabwe's mining sector exhibits significant heterogeneity in working conditions, safety standards, and employment practices across different sub-sectors and operation types (Mapako, 2025; MiningZimbabwe, 2025). Stratified random sampling ensured that the sample accurately reflects the diversity of the mining workforce, preventing overrepresentation or underrepresentation of any particular subgroup (Saunders et al., 2019; Chikove and Hofisi, 2020). This technique heightens the representativeness, authenticity, and generalizability of the findings to Zimbabwe's mining sector as a whole.

3.7 Research Instruments

3.7.1 Questionnaire

Questionnaires served as primary research tool for data collection in this particular study. Structured questionnaires are designed based on SDG 8 targets and indicators, including questions on economic growth contributions, employment rates, wage levels, workplace safety, accident frequencies, and compliance with labour regulations (UN, 2024; Ministry of Mines and Mining Development, 2025). The questionnaire consists of different sections: Section A collects demographic information (age, gender, employment level, mining sub-sector, years of experience), while Section B, C and D had Likert-scale items measuring employees' perceptions of decent work conditions, safety practices, and SDG 8 progress (Musevenzo et al., 2024; Chikove and Hofisi, 2020). The Likert scale used a 5-point format which ranges from 1 to 5, wherein 1 denotes, Strongly Disagree (SD) and 5 Strongly Agree (SA), allowing for quantitative measurement of attitudes and perceptions (Saunders et al., 2019; Bryman and Bell, 2022).

The questionnaire was pilot-tested with 10 employees (not included in the main sample) to ensure clarity, reliability, and validity, with a Cronbach's alpha coefficient of 0.78 indicating good internal consistency (Tabachnick and Fidell, 2020; Saunders et al., 2019). Questionnaires were chosen because they enabled efficient data collection from 80 participants, facilitate quantitative analysis, and minimize researcher bias through standardized questioning (Creswell and Creswell, 2018; Mapako, 2025). The use of questionnaires is also consistent with the pragmatic philosophy, as they generate numerical and theoretical data suitable for statistical analysis (Saunders et al., 2019; Yin, 2018).

3.7.2 Interview Guide

The study also used key informant interview guide targeted to stakeholders such as EMA as well as senior personnel at the mine namely supervisors, and section managers. these participants were asked pre-recorded and the duration of each particular interview was at least 45 minutes. The researcher also asked further questions to probe from more detailed response.

3.8 Data Presentation and Analysis

Presentation of data was done using graphs, pie charts and tables to ensure clarity, readability, and effective communication of findings. Tables are used to present detailed numerical data, including demographic characteristics, mean scores for Likert-scale items, and frequency distributions of categorical variables (Saunders et al., 2019; Bryman and Bell, 2022). Graphs, including, pie charts, were used to visually represent key findings, making it easier to identify patterns, trends, and comparisons across different categories (Creswell and Creswell, 2018; Tabachnick and Fidell, 2020). This presentation approach is consistent with the chosen philosophy, as it emphasizes objective, visual representation of empirical data (Saunders et al., 2019; Yin, 2018). The combination of tables and graphs enhanced the comprehensibility of findings and facilitates comparison with international benchmarks and SDG 8 targets.

Percentages and mean were used to analyse the quantitative data that was gathered from the 80 participants, while thematic analysis based on research questions was used to analyse qualitative findings. The mean score was calculated for each Likert-scale item to determine the average level of agreement or disagreement regarding SDG 8 progress, with higher means indicating better performance on specific indicators (Saunders et al., 2019; Tabachnick and Fidell, 2020).

Data analysis was done using Microsoft Excel and SPSS software (Version 27), which facilitate accurate calculation of means, percentages, and frequencies (Saunders et al., 2019; Bryman and Bell, 2022). Usage of descriptive statistics was proper for this study as it aligns with the philosophy chosen and case study design, providing objective, quantifiable measures of SDG 8 progress without requiring complex inferential statistical methods (Creswell and Creswell, 2018; Mapako, 2025). The analysis used will thus identify gaps in SDG 8 implementation, providing empirical evidence to answer the research questions.

3.9. Ethical Consideration

The study considered the following ethics,

The researcher first sought consent from the participant in order for them to fully understand and appreciate the purpose of the particular study (Polit & Beck, 2012). The researcher also sought permission from Shamva mine before collecting data. No name was allowed to be written on the research instrument and this was done in order to maintain the principles of confidentiality (Lahiri, 2023).

3.10 Chapter Summary

This chapter provides a detailed research methodology. It consisted of research philosophy and for the purpose of this study, pragmatism was employed. In addition, research design that is case study was used. Moreso, other elements of the methodology namely, population, sampling, sample size determination, data presentation and analysis were discussed. The chapter which follows will present and analyse study findings.

CHAPTER FOUR: RESULTS PRESENTATION AND DISCUSSION

4.0 Introduction

The researcher presented study findings using descriptive statistics. Charts and tables were used to present the study results. Whereas, areas of convergence and divergence were also highlighted using studies conducted previously. All the results were presented and analysed based on the objectives of the research.

4.1 Questionnaires Response Rate

The response rate for both the questionnaires and interviews as shown below (Table 4.1).

Table 4. 1: Questionnaires and Interview Response Rate

Instrument	Target	Achieved	Response rate (%)
Questionnaire	80	73	91
Interview guide	6	4	67
Total			

Source: Primary data (2026)

The high response rate in the study as illustrated in Table 4.1 above was 91% for the questionnaire and 67% for the interview.

4.1.1 Demographic Data

Majority of participants were males whilst females constitute the least (32%) as shown on figure 4.1 below:

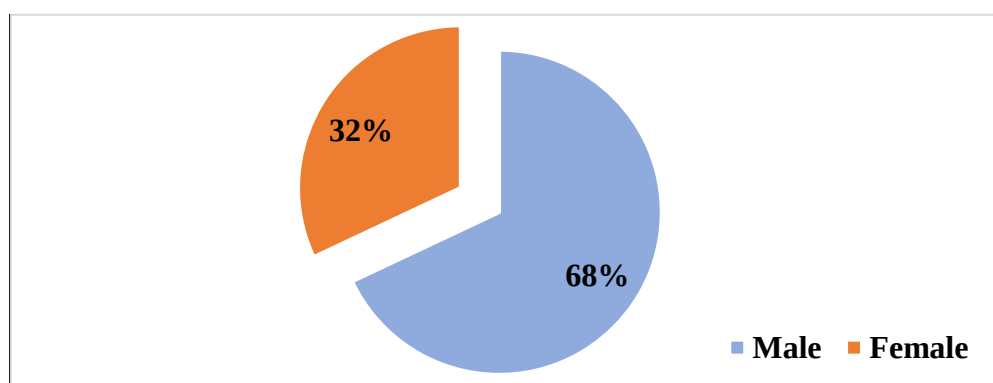


Figure 4. 1: Gender of participants

(Source: Primary data, 2026)

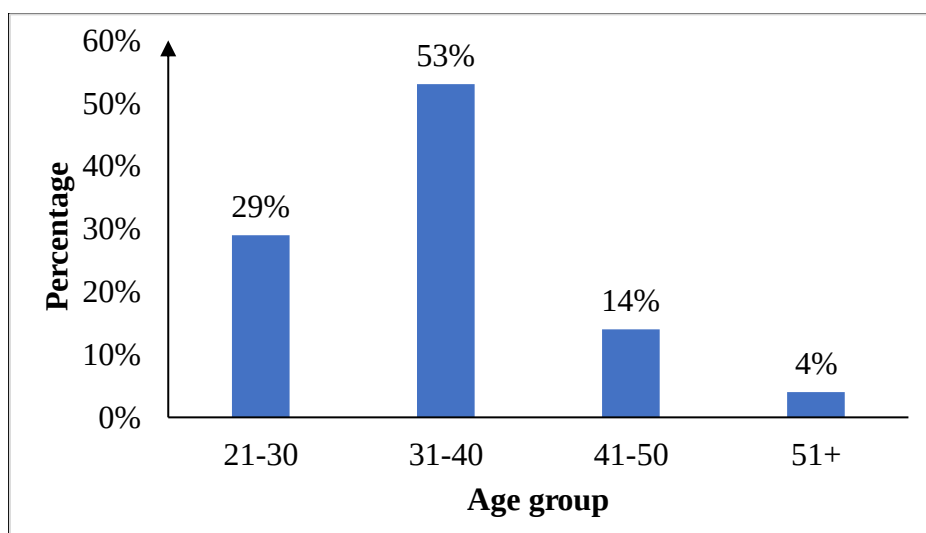


Figure 4. 2: Age of participants

(Source: Primary data, 2026)

Majority were aged between 31 to 40 years and these constituted 53% followed by 21-30 years, 41-50 years and above 50 years respectively.

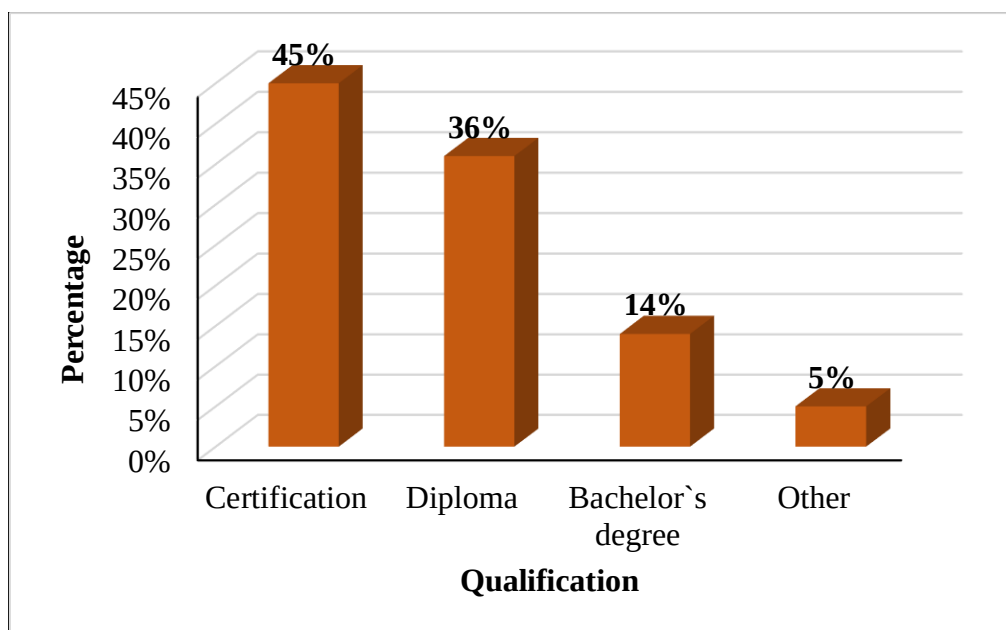


Figure 4. 3: Educational qualifications

(Source: Primary data, 2026)

The above figure (fig 4.3) indicates that 45% of employees had certificates, 36% had diplomas with 14% being holders of bachelor's degrees.

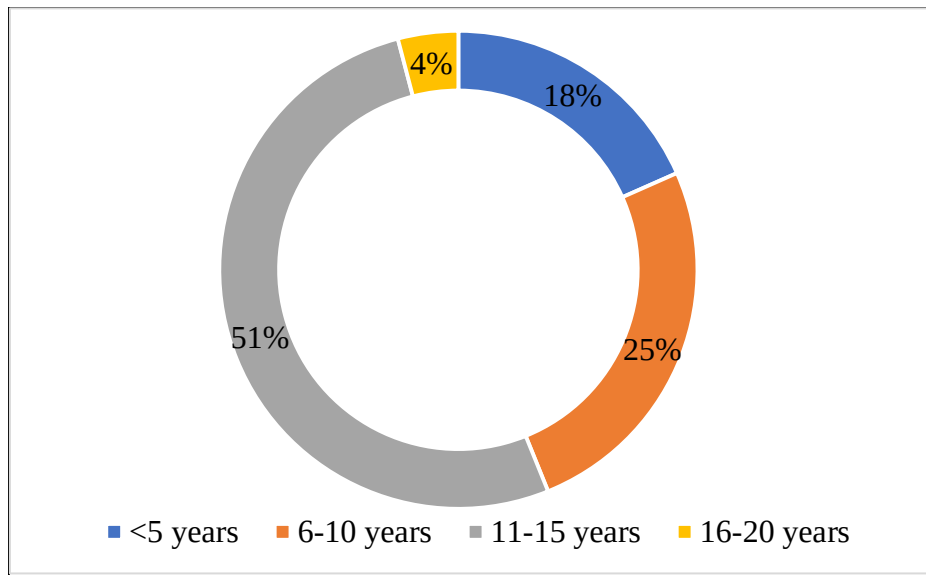


Figure 4. 4: Working Experience

(Source: primary data, 2026)

Findings as shown in the figure 4.4 indicate that 51% of had 11 to 15 years in in relation to working experience and 25% ranging 6-10 years. In addition, 18% of the participants has less than 5 years whilst has 21 years.

4.1.2 Reliability Test

The study tested reliability of results making use of Cronbach's Alpha and the results are shown below.

Table 4. 2:Reliability statistics of the study questionnaire

Study Variable	No. of items	Cronbach's Alpha
Socio-demographic information	5	0.844
Challenges facing Shamva mine	5	0.942
Sustainability of mining practices	5	0.937
Practical and sustainable solutions	5	0.952
Overall	20	0.919

A value of 0.7 is considered normal. The test results showed a value of 0.92 which is above 0.7 hence the study results obtained using questionnaire was consistent and normally distributed.

4.2: To identify challenges facing Shamva Mine that can impact the attainment of SDG8 in view of Vision 2030

The researcher used questionnaire to gather data on the challenges faced by Shama mine in view of SDG number 8 as shown on Figure 4.2.

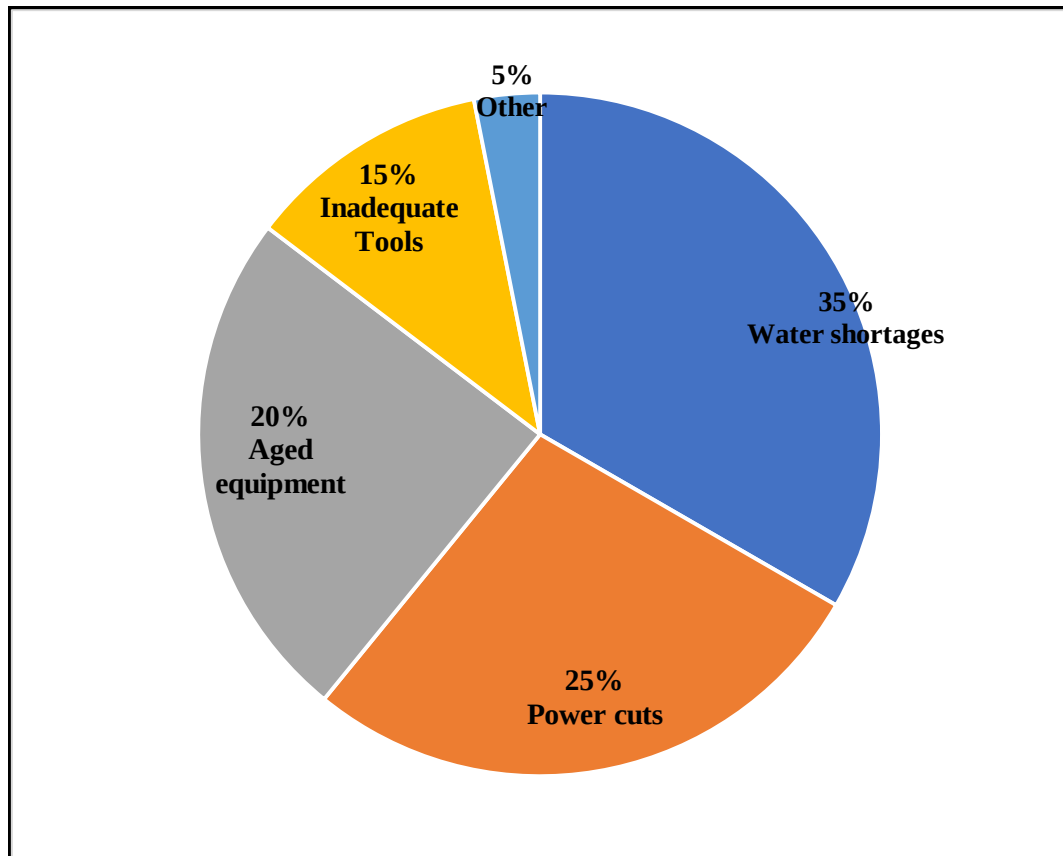


Figure 4. 5: Challenges facing Shamva Mine in view of SDG number 8

(source: Primary data, 2026)

Major challenge highlighted by participants is the issue of water supply for both domestic and mining operations. This was stated by 35% of the participants. It was established that one of the other key challenges is the issue of aging equipment, standing at 20%. Power cuts is one of the key challenges (25%) and inadequate tooling at 15%.

Using interview guide to gather data on the challenges facing Shamva mine in view of SDG 8. Responses from participants are presented below:

Participant 3 highlighted that:

I personally think the mine is struggling to with breakdowns. For example, we do have old and aged equipment that needs replacement. In addition, some of the equipment is no longer compatible with the new technology that is being adopted in the mining industry by other competing players. This has the potential to cause accidents.

Participant 1 also affirmed that;

One of the challenges I observed is that of power cuts during our operations especially during drilling. We end up working long hours waiting for the return of power and this prolongs our time in the mine exposing us to the risks found in underground.

Similarly participant 2 reiterated:

Opportunities for training and skills development are few and limited. When called for training only a few will have the chance to be trained. We have some of our brothers who have been at this mine for a long time but are at the same position, there no growth. This further worsens the situation and the mine cannot have highly skilled workforce
.

Participant 4 highlighted that;

There is the issue of water challenge that disturbs us from achieving our daily set targets. We need continuous supply water for drilling, dust suppression and also for facilitating ore movement. This issue is not only limited to the mine; we also face the same challenge in our High Density Village where we sometimes go for days without domestic water.

Table 4. 3: Perceptions on the challenges impacting full attainment of vision 2030

Variables	SD	D	N	A	SA	Mean	Std. Deviation	Skewness	Kurtosis
There is poor culture on safety and health matters	1	1.5	5.2	78.2	14.1	4.14	0.535	0.857	4.512
Employees at Shamva Mine receive low or unstable wages that do not reflect the risk and effort involved in their work	1.2	2.8	29.3	60.7	5	3.35	0.713	0.034	1.098
There is limited access to training and skills development opportunities	7.2	8.2	12.8	67.9	3.8	2.41	1.265	0.275	-1.282
Job insecurity (short term contracts, fear of retrenchment) is a major problem	2.6	2.4	10.3	73.5	11.3	3.78	0.813	-1.548	3.180
Gender inequality and discrimination affect access to decent work opportunities	2.8	8.7	6.4	57.3	24.8	3.53	0.367	0.406	-1.064

(source: Primary data, 2026)

Majority of the participants agreed (78.2%) that there is poor culture for health and safety issues at Shamva Mine. More so, majority (60.7%) of the participants also agreed that, employees at Shamva Mine receive low or unstable wages that do not reflect the risk and effort involved in their work. This has a significant impact on employee motivation. Results also show that most participant (67.9%) agree on the fact that, there is limited access to training and skills development opportunities. This serves to confirm that the mine could be struggling financially hence, channeling resources towards training of workers is a challenge. Whereas 73.5% highlighted, job insecurity (short term contracts, fear of retrenchment) as a major problem. Slightly above 50% mentioned that gender inequality and discrimination affect access to decent work opportunities. This clearly shows that the mine is faced with numerous challenges, financial and environmental issues.

4.3 To assess how current mining practices at Shamva Mine align with the requirements of SDG 8

Shamva mine has a number of practices put in place to achieve SDG 8. The researcher used questionnaire to solicit information on their sustainability .as shown on Table 4.5.

Table 4. 4: The Sustainability of Current Mining Practices vis-à-vis SDG 8

Variables	SD	D	N	A	SA	Mean	Std. Deviation	Skewness	Kurtosis
Current mining practices provide safe and healthy working conditions for employees	10.7	63.7	5.1	9.2	11.3	2.91	1.311	-0.125	-1.412
Current mining practices compatible with new mining technologies and innovations	1.3	67.4	7	4.1	20.2	2.93	0.720	-1.248	2.802
There are adequate opportunities for skills development and career progression	1.3	58	13.1	3.3	24.4	2.57	1.233	-0.781	-.0.317
Employment practices promote job security and long-term economic stability for workers	3.6	64.3	1.1	1.3	31.1	2.84	0.722	-0.105	-1.201
Current mining operations contribute positively to inclusive and sustainable economic growth in surrounding communities	1.3	58.6	31.2	2.9	5	2.41	0.714	0.045	1.059

(source: Primary Data, 2026)

The results of the study show that a significant number of participants disagree (63.7%) that current mining practices provide safe and healthy working conditions for employees. In addition, 67.4% of the participants disagree that current mining practices offer stable and decent wages that support workers livelihoods. This serves to confirm that, the employees are not satisfied with the current mining operations.

Moreso, the results show that the majority of the participants disagree (58%) to the assertion that there are adequate opportunities for skills development and career progression. This implies that, growth in terms of education and skills is a major challenge at the mine. Hence, most of the participants (58.6%) also disagree that Current mining operations contribute positively to inclusive and sustainable economic growth in surrounding communities.

It emerged from the findings that the mine has made significant progress in improving health and safety of employees in terms of doing safety talks, monitoring of incidents and reporting. However, most of the participants highlighted that, there is need for the adoption of modern mining methods and systems that reduces risks.

Participant 4 explained:

Progress yes is seen but I would say it is partial. We have some policies at the mine that the mine introduced in relation to safety. The safety performance has improved and we are happy.

Similarly, participant 2 added:

In my opinion, the mine is trying to align with SDG 8 in connection with creation of decent employment and contribution towards economic development. We have seen the issue of ISO certification that was done so that we adopt international standards.

Participant 3 echoed the same sentiments as he stated that;

We receive detailed information on production and measures that are taken to protect the environment but information pertaining to working conditions or labor conditions, gender issues is limited. This is a requirement according to the GRI framework so compliance is still far behind.

In the same manner, participant 1 also added that;

In terms of compliance I will rate it as moderate since there are some efforts to meet the SDG 8 and international standards, but they are not yet fully embraced, not systematic. I suggest there is need for strong monitoring and independent verification and participation of workers as well as the surrounding communities in Shamva.

4.4 To develop sustainable and practical solutions that addresses the identified challenges that affect Shamva Mine in view of Vision 2030

Participants highlighted a number of practical and sustainable solutions to alleviate the challenges affecting attainment of SDG 8 as shown on Table 4.6.

Table 4. 5: Practical and sustainable solutions to alleviate the identified challenges

Variables	SD	D	N	A	SA	Mean	Std. Deviation	Skewness	Kurtosis
Strengthening OHS systems like training, PPE, regular inspection helps to reduce work related accidents and illnesses.	5.1	4.2	1.6	76	14.1	3.75	0.442	-1.264	1.767
Adoption of current mining methods compatible with new technology	0	7.9	6.5	79.4	10.3	3.85	0.376	-1.774	3.853
Investing in continuous skills development and training programmes provide better productivity and decent work	1.8	1.7	8.4	62.3	25.8	3.53	0.346	0.407	-1.054
Formalising contract work is a feasible solution to improve job security	2.6	2.1	1.6	71.7	23.1	3.75	0.637	-1.695	4.137
Enhancing social protection like medical aid, pension and compensation helps to support workers and their families	2.6	4.4	2.4	80.4	10.3	4.82	0.776	-1.684	3.853

Results show that a significant number of participants (76%) acknowledge that enhancement of OHS systems such as training, personal protective equipment, and frequent inspections contributes towards reduction of work-related accidents and illnesses. A significant number of participants (79.4%) assert that consideration of a new and modern mining methods that are compatible with modern technologies is key in view of Vision 2030. Shamva Mine uses

conventional mining methods, which reduces efficiency and exposes workers to risks of accidents.

Results show that majority 71.7% of the participants agree that formalising contract work is a feasible solution to improve job security. Furthermore, many participants agree that, enhancing social protection like medical aid, pension and compensation helps to support workers and their families. That would make the mine more resilient and more consistent with the economic transformation goals of Vision 2030.

Participants highlighted many challenges and chief among them was, to invest in a more comprehensive OHS programme which goes beyond compliance. This includes, regular auditing, training of employees regularly, modernize the equipment used at the mine and establishment of strong worker safety committees.

Participant 4 shared:

There is need to come up with permanent solutions to the issue of water and electricity availability. This will ensure that there are no disturbances in production. The mine can adequate boreholes so that domestic water is readily available in the village where we stay. Also put solar at our houses in the village.

Whereas, participant 1 reinforced:

It is crucial to develop a structured training as well as development framework for workers. For instance, the mine should offer promotions to those who deserve it, apprenticeship programs for the young employee at the mine and specific training for women and vulnerable groups. If this is done, then we can safely say there is decent work and long term skill development.

More so, participant 2, mentioned that,

The mining method we are doing here has been practiced since 1900, during the early stages of the mine which puts the employee in line of danger. Also these methods do not produce high tonnage and volumes to boost production. Due to changing times and the coming in of technologies, the mine can consider changes in mining methods.

However, Participant 3 warned:

I suggest to strengthen alignment with GRI, the mine should establish a strong monitoring and reporting system. This entails regular internal and external audits on labor conditions. There is also need to have an accessible grievances mechanism where worker feel free to share their concerns.

Therefore, in the mining context, participation of both workers and communities in decision making is important, in addition, training and skill development are crucial factors to consider in terms of achieving SDG 8.

4.5 Discussion

The following section discusses the study findings based on research objectives.

4.5.1 To identify challenges facing Shamva Mine that can impact the attainment of SDG8 in view of Vision 2030

It was observed that, water supply for both domestic and mining operations, aging equipment, long working hours and discrimination are the major challenges facing Shamva mine. This could be attributed to Mazowe river which also provides water for the surrounding farmers for irrigation purposes thereby creating a competition for the water between mining and farming (Mandizha *et al*, 2023). Water scarcity affects the social aspect of the family as the workload for women increase as they will spend more time fetching water from the available sources (Manyanhaire *et al*, 2009). Power cuts on the other hand, have a negative impact on production and the general welfare of employees as they are experienced both at work and at places of residence. Kaseke and Hosking (2016). Postulated that load shedding in Zimbabwe imposed huge cost in the mining sector in the form of lost production times. Shamva Mine, highly depends on electricity in its underground operations in ventilating workstations, pumping of water in and out of the mine, powering of hoist for the transportation of employees among other critical purposes.

Long working hours lead to fatigue and increased exposure time to mining hazards and risks such as exposure to chemicals, dust, noise and rock falls. The same was found by Magamba (2021) who stated that the gold mining industries in Tanzania generate pollutants including heavy metals such as arsenic, cyanide, zinc, mercury, and lead which have severe implications for the environment – air, water, and land. Contrarily, according to Fodue *et al* (2022), failure

to impose stringent controls and regulation of mining operations has enabled the miners to utilize illegal chemicals such as mercury.

This clearly shows that employees perceive the current OHS standards as inadequate in relation to achieving SDG 8 in terms of environmental management, employee safety and health as well as social wellbeing. Such challenges could be attributed to limited resources. Ndlovu and Moyo (2024) document how Zimbabwe's frequent mining fiscal changes, such as 2023 royalty hikes, eroded investor confidence, with Shamva Mine facing title disputes that delayed US\$7 million in capex (Ndlovu and Moyo, 2024). Local Chamber of Mines surveys (COMZ, 2026) reveal gold mining companies administrators in Zimbabwe spent 40% of 2025 on compliance bureaucracy, diverting resources from production and clashing with Vision 2030's streamlined investment agenda (Chigumira, 2023). Internationally, ILO (2024) data reveal mining labour turnover at 28% globally due to hazardous conditions, with skill gaps widening productivity losses by 20% (ILO, 2024).

4.5.2 To assess how current mining practices at Shamva Mine align with the requirements of SDG 8

The results of the study showed that a significant number of participants disagree that current mining practices provide safe and healthy working conditions for employees. In addition, current mining practices are not compatible with changing innovation and technology. This serves to confirm that, the employees are not satisfied with the current mining operations. Majority of the participants disagree to the assertion that there are adequate opportunities for skills development and career progression. This implies that, growth in terms of education and skills is a major challenge at the mine. It emerged from the findings that the mine has made significant progress in improving health and safety of employees in terms of doing safety talks, monitoring of incidents and reporting.

On the other hand, sustainable mining demands resource decoupling per UNEP (2025), however, Zimbabwe's 2024 ore recovery stands at 78%, below the 90% global benchmark (UNEP, 2025; COMZ, 2024). Hence, achieving sustainable mining practices is hindered by limited resources. This might create divisions among workers and has the potential to cause conflicts. ICMM (2024) mandates social licence; most of gold mines in Zimbabwe grievance mechanism resolved only 60% cases (ICMM, 2024). It is also critical to note that 64.3% of the employees disagreed that employment practices promote job security and long-term economic

stability for workers. This could be attributed to fear of losing jobs since most of the workers are on contract terms. Whilst, SDG 8 requires sustained growth; current practices risk boom-bust cycles (Zvobgo, 2026).

4.5.3 To develop sustainable and practical solutions that addresses the identified challenges that affect Shamva Mine in view of Vision 2030

A significant number of participants (79.4%) concurred that adoption of modern mining methods that are compatible with new technological advancement is key in achieving the SDG requirements. It is therefore evident that there is a necessity to conduct benchmarks and further studies on how to move away from sub-level open stope type of mining at Shamva Mine. According to Mabika (2018), prioritizing prevention of hazards at workplaces and mitigations, when the danger cannot be prevented, is crucial to attain the vision of zero accidents at workplaces.

However, according to Banson (2020), introduction of mechanization reduced the LIFR by 1160% and accident rate by 94%. In contrast, mobilising long-term investment for modernisation is critical. Studies show that mining companies requires significant capital to expand production and improve processing capacity (Mining.com, 2024; Mining Zimbabwe, 2025). This means the mine should not rely only on short-term cash flow, but should also pursue equity partnerships, structured financing, and phased capital expenditure plans. Investment should be directed not only to production expansion but also to replacement of old and ageing equipment.

4.6 Chapter Summary

The study findings which were based on research questions were discussed in this chapter. It was observed that Shamva mine is faced with inadequate critical resources, aged tool, water and power shortages as some of the major challenges affecting attainment of SDG 8. This was further supported by interview results were most of the participants highlighted low salaries, poor working conditions, poor contract conditions. It was also noted that the working environment is not safe, current employment practices do not promote job safety. Hence it was suggested that employees should participate in decision making in order to enhance working conditions and facilitate achievement of SDG 8. The chapter which follows provides conclusion and recommendation of the study drawn from research findings.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The purpose of the study involved investigating various challenges within Shamva Mine which may hinder its achievement of Vision 2030, assessing the sustainability of the mining practices undertaken at Shamva Mine in relation to the SDG 8 criteria and formulating viable sustainable ways of addressing the identified challenges.

5.2 Summary

The study was conducted with regard to sustainability of Development Goal 8 in the mining industry of Zimbabwe. In conducting this study, the researcher chose a sample of 80 individuals from a target population of 100 miners in Shamva Mine. For this study, the research philosophy adopted was pragmatism, and a research design was quantitative and qualitative. The research design adopted for this research is case study. The study involved quantitative and qualitative data analysis methods involving both descriptive and inferential statistics. This included the use of mean and percentages in presenting quantitative data. The motivation for carrying out this research came from the view that the mining sector is a key player in achieving Agenda 2030 as outlined in the NDS2 blueprint.

Results showed that, major challenge faced is the issue of water shortages. This was stated by 35% of the participants. The study also revealed that power cuts is another challenge affecting Shamva in terms of achieving SDG 8 towards Vision 2030. In addition, 20% of the participants highlighted the issue of aged equipment that delays attainment of set production targets. Majority of the participants agreed that there are inadequate OHS standards for workers at Shamva Mine. It was noted that there is limited access to training and skills development opportunities.

Study results indicated that significant number of participants disagreed (63.7%) that current mining practices provide safe and healthy working conditions for employees. In addition, participants disagreed that current mining practices offer stable and decent wages that support workers livelihoods. It was also revealed that, there are adequate opportunities for skills development and career progression. Approximately 64.3% of the participants disagreed that employment practices promote job security and long-term economic stability for workers.

Additionally, the current mining operations does not contribute positively to inclusive and sustainable economic growth in surrounding communities.

Results also showed that most of the participants agreed (76%) that, strengthening OHS systems like training, PPE, regular inspection helps to reduce work related accidents and illnesses. Moreover, the study showed that introducing fair and transparent wage structures is a realistic solution for improving workers livelihoods. Results indicated that majority 71.7% of the participants agreed that formalising contract work is a feasible solution to improve job security. Therefore, in the mining context, participation of both workers and communities in decision making is important, in addition, training and skill development are crucial factors to towards SDG 8 fulfilment.

5.3 Conclusions

Hinging on the highlighted findings the study, the following conclusions are reached:

There are a number of challenges affecting attainment of SDG 8 at Shamva Mine. These include power cuts, water supply challenges, aged equipment, inadequate tooling, long working hours, limited access to training and skills development opportunities.

The study also concluded that current mining practices do not provide safe and healthy working conditions for employees. In relation to whether current mining practices offer opportunities for new technological advancements, most of the participants disagreed. The study further concluded that there are inadequate opportunities for skills development and career progression and employment practices do not promote job security and long-term economic stability for workers. More so, the current mining methods (conventional) needs to be revamped in line with the current technologies and innovations. It can be concluded that, strengthening OHS systems like training, regular inspection helps to reduce work related accidents and illnesses.

5.4 Recommendations

Based on the above results, the following recommendations may be considered:

- The organisation may consider harvesting of underground water for domestic purposes so as to reduce the amount of water drawn from Mazowe River. Moreso, the organisation has an opportunity to draw water from other water sources such as the Acardia dam. This came from the finding that the mine relies on water from Mazowe River which is now have reduced water holding capacity due to siltation from illegal mining activities as well as other competing needs such as irrigation farming.
- The mine should consider establishment of a solar farm that will provide power for its operations as well as at the places of residence for its employees. Other alternatives include installation of standby backup power generators for use during critical stages of the operation such as transportation of employees using the hoist.
- Aged equipment causes delay and or failure to meet production targets. The mine should come up with a program for the replacement of all aged equipment.
- The mine should implement a comprehensive OHS system which include regular risk assessment, upgrading equipment and training of workers on OHS regularly. This will help to reduce vulnerability and better align with SDG 8 requirement on decent work targets.
- The current mining methods does not fully optimise recovery of the resource, it is therefore recommended that the mine should benchmark towards new mining alternatives compatible with its geological structure. This will revamp production under minimal risk exposure and environmental degradation in line with responsible mining frameworks.
- The mine should establish structured training and skill development program through mentoring, leadership and flexible policies so as to promote inclusive, and productive employment which helps to enhance decent work

5.5 Recommended area for further study

Since this study focused on the evaluation of progress towards sustainable Development Goal 8 in Zimbabwe's mining sector, other studies should employ different approaches like cross-sectional study to fully establish the challenges impacting attainment of SDG 8 in the face of Vision 2030.

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National Development Strategy 2

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APPENDICIES

APPENDIX 1: QUESTIONNAIRE FOR EMPLOYEES

My name is *Admire Zvipore*, a student at the Bindura University of Science Education. I will be carrying out A STUDY: AN EVALUATION OF PROGRESS TOWARDS SUSTAINABLE DEVELOPMENT GOAL 8 IN ZIMBABWE'S MINING SECTOR: INSIGHTS FROM SHAMVA MINE. I kindly request you to participate in the study. There are no costs and risks associated with the research. Your name and identity will not be revealed or published anywhere.

SECTION A: DEMOGRAPHICS DATA

1. Age: 21-30 years ☐ 31-40 years ☐ 41-50 years ☐ 50+years ☐
2. Gender: Male ☐ Female ☐
3. Level of education: Certificate ☐ Diploma ☐ Degree ☐ other ☐

SECTION B: IDENTIFY CHALLENGES FACING SHAMVA MINE THAT CAN IMPACT FULL ATTAINMENT OF VISION 2030

- 1.5.4 What are the challenges facing Shamva Mine that can impact realisation of decent work and economic growth agenda?

.....
.....X.....

Indicate the extent to which you agree with the following items using the following ratings:

SCALE: 1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly

Items	1	2	3	4	5
There is poor culture on safety and health matters					
Employees at Shamva Mine receive low or unstable wages that do not reflect the risk and effort involved in their work					
There is limited access to training and skills development opportunities					
Job insecurity (short term contracts, fear of retrenchment) is a major problem					
Gender inequality and discrimination affect access to decent work opportunities					

SECTION C: SUSTAINABILITY OF CURRENT MINING PRACTICES VIS-A-VIS SDG 8

Indicate the extent to which you agree with the following items using the following ratings:

SCALE: 1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly

Items	1	2	3	4	5
Current mining practices provide safe and healthy working conditions for employees					
Current mining practices offer safety measures that supports decent work and economic growth agenda					
There are adequate opportunities for skills development and career progression					
Employment practices promote job security and long-term economic stability for workers					
Current mining operations contribute positively to inclusive and sustainable economic growth in surrounding communities					

SECTION D: PRACTICAL AND SUSTAINABLE SOLUTIONS TO ALLEVIATE THE IDENTIFIED CHALLENGES

What can be done by Shamva Mine to address the challenges you indicated in Section A above?

.....

Indicate the extent to which you agree with the following items using the following ratings:

SCALE: 1= Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree and 5 = Strongly

Items	1	2	3	4	5
Strengthening OHS systems like training, PPE, regular inspection helps to reduce work related accidents and illnesses.					
Introducing fair and transparent wage structures is a realistic solution for improving workers livelihoods					
Investing in continuous skills development and training programmes provide better productivity and decent work					
Formalising contract work is a feasible solution to improve job security					
Enhancing social protection like medical aid, pension and compensation helps to support workers and their families					

4. Any comments that you may wish to make relating to this research and/ or any other issues that may be missed or omitted in this questionnaire which you find relevant for the research.

.....

Thank you

APPENDIX 2: INTERVIEW GUIDE

1. What is your view in relation to Shamva Mine's contribution to Vision 2030?
2. Have you made progress with regards to achieving SDG 8? Explain.
3. What are the challenges facing Shamva Mine in view of SDG Number 8?
4. What are the current mining practices implemented at Shamva Mine?
5. Are the mining practices implemented effective? Explain
6. To what extent do the current mining practices implemented at Shamva Mine fulfil the requirements of SDG 8.
7. What are the practical actionable strategies can be developed and implemented to address the challenges hindering Shamva Mine's progress towards achieving SDG 8?