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EXPLORING CONFLICT BETWEEN MINERS AND HOST COMMUNITIES IN MATABELELAND SOUTH, ZIMBABWE

BY

MAXINE KUNDAI TADYANEHONDO

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Abstract

This research investigated the reported relationship between miners and the host community in Matobo District, to ascertain the conflict observed and reported. The researcher wanted to establish the root cause as well as to document the nature of the impacts of these conflicts. Agriculture and mining are powerful sectors that drive the economy of Zimbabwe. Conflicts between the two sectors have however been recorded at local community levels where artisanal small-scale mining affects the environment, agriculture, and a wide range of socio-economic activities. In Matobo District of Matabeleland South, conflicts between the community and small-scale miners are frequently reported and observed. Interviews were conducted as a data collection method, using questionnaires that had close- and open-ended questions which were administered to 30 community members from the Matobo District who were randomly selected as well as 30 small-scale miners from the same area who were sampled using the snow-ball non-probability sampling method. The data from the questionnaires was both qualitatively and quantitatively analysed as this study utilised a mixed methods approach. This study revealed significant differences between community members and small-scale miners' incomes with the latter significantly earning more ($p < 0.05$) from mining activities. The income from mining operations acts as a motivating factor for the youth to choose mining over other economic activities such as farming in Matobo District, as well as Matabeleland South Province. The income margin also brews conflict, as the farmer perceive the gap between these two incomes as a disadvantage to them after comparing the income generated against the income projected from the same piece of land now used for mining. The farmers blame the miners for disrupting their farming activities thus depriving them of their expected income value from their lands thereby increasing tension according to the study. The causes of conflicts were reported by both sampled groups which according to them occur as a result of the overlap in land uses. These overlaps are causing serious environmental and socio-economic impacts that include cattle falling into pits dug by the small-scale miners resulting in loss of livestock. This is of concern as these livestock are a source of wealth for the communities which secures their economic statuses. Collective efforts are required so that these conflicts are addressed through policy harmonisation, at local community level, before the conflicts escalate to fully blown wars. Any major conflicts that arise without any resolution might attract international interventions as well as worsen their effects on the economic development of the nation.

Keywords: community; conflict; farmers; Matobo; mining;

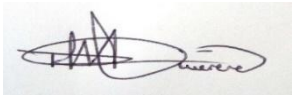
Declaration Page

I declare that this dissertation is my original work except where sources have been cited and acknowledged. The work has never been submitted, nor will it ever be submitted to another university for the award of a degree.

Maxine Kundai Tadyanehondo _____ _____

29/04/2024

Student's Full Name Student's Signature (Date)



Dr. David Makwerere _____ _____

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Main Supervisor's Full Name Main Supervisor's Signature (Date)

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"If you look around the room, and you're the smartest person in the room, you're in the wrong room" by Lorne Michaels. No man is an island, and surely to prove this, support came in different forms and from various directions, for this research to pull through. I thank the Almighty God, for guiding me, giving me the knowledge, wisdom and understanding to sail through the dissertation process. I would like to acknowledge my family including Alexandra-Chisomo, Vita, Bryson, Willis and Ninnete. I want to thank the Zimbabwe Parks and Wildlife Management Authority; Matobo Rural District Council; Zimbabwe Republic Police – Matobo; and the Chief for the support, guidance and permission to carry out my research within their jurisdictions. There is no greater relief than for you to have a supervisor and his colleagues that are supportive and connective. I want to thank Dr Makwerere; Dr Nyikadzino; Ms Takudzwa; Prof Murairwa and the rest of the University staff, as they made this research come to life, with their constant communication and guidance. I also thank my friends and colleagues for their reliability and assistance including Mrs R. Chikerema-Mandisodza; Mr B. Mpofu; Mr F. Mushayamano; Ms M. Magura; Mr T. Comfort; Mr W. Chinaka; Ms L. Sibanda; Mr D. Moyo; and all those I failed to mention by name, but are dear to me. Lastly, I want to thank the participants, who made the research possible, considering that without their responses and cooperation, there would not have been any results to talk about entirely.

Dedication

I dedicate the research document to my daughter, Alexandra Chisomo, as she continues to be the reason why the mother strives towards greatness. I also dedicate this research to my family which stands by me, and believes in me, constantly and consistently. Lastly, I dedicate this to my Supervisor, College of CBPLG – MPPG, ZPWMA, and all the policy makers, authorities, researchers and decision-makers who continue to contribute towards a better nation.

List of Acronyms and Abbreviations

EMA	Environmental Management Agency
FTLRP	Fast Track Land Reform Programme
GDP	Gross Domestic Product
RDC	Rural District Council
SDG	Sustainable Development Goal
SPSS	Statistical Package for Social Sciences
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organisation
ZIMPARKS	Zimbabwe Parks and Wildlife Management Authority
ZRP	Zimbabwe Republic Police

Definition of Key Terms

Artisanal mining Artisanal mining is defined as a mining sector that is largely informal and includes workers who utilise basic extraction tools to obtain minerals from the earth.

Communal land Communal land according to the Act of Parliament of Zimbabwe refers to the land under the leadership of a Chief which is set aside in accordance with the customary law by members of a community.

Conflict A conflict refers to an activity that occurs when groups or individuals carry out acts that are mutually inconsistent which concerns their needs, wants or obligations.

Land degradation Land degradation is defined as the reduction in the capability of the land to produce benefits that result from land uses by human activities as well as habitation patterns.

Pollution Pollution is defined as the alteration of the physical, thermal, biological or radioactive properties of any system (terrestrial, aquatic, air) in such a way that create hazards to safety, human health or welfare of any living species.

Socio-economic Socio-economic refers to the general description of people or groups based on their income, education and employment.

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CHAPTER 1

INTRODUCTION

1.1 Background to the Study

Zimbabwe was known as the breadbasket of Africa exporting maize, tobacco and wheat to other African countries and beyond (Kauma & Swart, 2022). The country has since lost this status due to significant changes in the commercial agriculture sector that include the Fast Track Land Reform Programme (FTLRP), economic sanctions and fluctuating rainfall patterns among others (Söderberg, 2023). Zimbabwe's land is still suitable for agricultural production and has the potential to grow the economy based on the agricultural sector (Chauruka et al., 2023). Recently, agricultural production has increased due to the government policies that support indigenous farmers, the youth and women (Simango, 2021). In 2022, Zimbabwe registered its largest wheat harvest of 375 000 tons, making the country a self-sufficient agricultural powerhouse (Gbane, 2023).

Simultaneously, Zimbabwe is rich with minerals that have the potential to boost the economy when utilised adequately (Müller, 2023). The mining industry of Zimbabwe provides formal employment for more than 30,000 individuals and generates more than 60% of export earnings (Sanderson et al., 2021). The importance of minerals in Zimbabwe grew after disturbances of the agriculture sector in the aftermath following the FTLRP which ran from 1999 to 2006 (Sanderson et al., 2021). Gold has been central to the economy of Zimbabwe since the pre-colonial era as Cecil John Rhodes settled in

Zimbabwe (formerly Rhodesia) due to large gold deposits (Sanderson et al., 2021). In Manicaland, diamonds were mined in the Chiadzwa area although revenue generated was marred with a lot of controversies (Madimu, 2017). Lithium was recently discovered in Zimbabwe and currently boosting the economy of Zimbabwe (Müller, 2023).

There is however, an overlap between agriculture and mining as they both use the same resource, which is land. Agriculture is the major source of livelihood for communities in the rural areas (Moomen & Dewan, 2015) and artisanal mining has become another additional source of livelihood around the country. Farming and mining are regarded as Zimbabwe's sources of income in this present day (Jelsma et al., 2021). Small-scale and artisanal mining are an economic activity practiced by various social classes with different backgrounds in terms of education and economics (Mkodzongi, & Spiegel, 2019). These small-scale miners have been observed to significantly impact local as well as national activities both positively and negatively. They provide positive local impact through socio-economic benefits to communities such as through increased local trade (Aryee et al., 2003). In Zimbabwe, mining interests are generally given priority and agriculture is treated as the second option which creates conflicts between miners and farmers when the former encroaches into agricultural or communal lands. These miner-farmer conflicts have also been reported in other African countries that include South Africa, Angola, Liberia, DRC, Nigeria, Ghana, and Sierra Leone (Alade, 2019; Chikuni, 2023). There is therefore a need for proper land planning such that the mining and agricultural sectors can be utilised to their fullest potential instead of contradicting each other.

Disputes between farmers and miners in Zimbabwe have been reported on various media platforms (Mkodzongi & Spiegel, 2019). This is of concern as both sectors significantly contribute to the economy of Zimbabwe and when they conflict, economic progress is derailed. There is need to continuously study and research on land policies in relation to land utilisation and national development. This can be supported by constant revision in the way environmental impact assessments are carried out so as to get maximum benefits from the land, with minimal negative impacts (Edwards et al., 2014). Owing to the literature gap described above, this study will focus on the disputes between miners and the host community at local level focusing on Matobo District in Matabeleland South of Zimbabwe.

1.2 Statement of the Problem

Mining and farming are activities that support the economy of Zimbabwe and specifically sustain livelihoods of communities practicing these activities (Mkodzongi & Spiegel, 2019). In recent years, farmer-miner conflicts (particularly the small-scale or artisanal miners) have been on the rise, particularly in rural areas of Zimbabwe. Conflicts arise when farmers and miners have prospects for the same piece of land as mining requires vast land (Chikuni, 2023). These conflicts extend from competition for the land itself, to competition for natural resources, including water and minerals. Mining activities that include drilling, blasting and excavation can cause destruction of crops, soil erosion and water pollution leading to livelihood losses for the affected communities. What makes the situation worse are the parallel policies from the Ministry of Mines and Mining Development (hereafter referred to as Min. of Mines), and the

Ministry of Lands, Agriculture, Fisheries and Rural Development (hereafter referred to as Min. of Lands) respectively. Information about the conflicts between communities and miners has been reported on various media platforms but scholarly articles are generally lacking which have the potential to provoke the generation of possible solutions to this concerning issue. It becomes apparent to undertake this study by filling this scholarly gap in literature looking at Matobo District in the Matabeleland South Province of Zimbabwe. The other concerning issue is the presence of Matobo Hills, which is a UNESCO World Heritage Cultural Site of international importance. Any mining activities whether legal or illegal have serious implications on biodiversity, cultural heritage as well as livelihoods.

1.3 Research Aim

The study generally aims to investigate the issue of conflicts between miners and the indigenous host community in Matobo District. The specific objectives are stated below.

1.3.1 Research Objectives

To achieve the aim of this research stated in 1.3 above, the following specific objectives were looked at:

- To compare the socio-economic benefits between community economic activities and small-scale mining activities in Matobo District as a contribution to conflict.
- To determine the causes of miner-host community conflicts in Matobo District.
- To determine the role of government and other organisations in the miner-host community conflict resolution in Matobo District.

- To investigate solutions from the host community and miners to tackle the problems emanating from the conflicts.

1.4 Research Questions

1. What if the impact of socio-economic benefits from community economic activities and mining on conflict issues in Matobo District?
2. What is the root cause of conflicts amongst miners and the host communities of Matobo District?
3. What is the role of government and/or other organisations in resolving the miner-host community conflicts in Matobo District?
4. What plausible solutions can be made to tackle the problems emanating from the conflicts in order to have sustainable communities?

1.5 Assumptions and Hypotheses

1.5.1 Assumptions

- The conflict arose due to the emergence of illegal miners.
- The agricultural sector and farmers in Matobo District are the losers in this conflict.
- Mining is winning in this conflict.

1.5.2 Hypotheses

H_0: The income from small-scale mining in Matobo District outweighs income from community economic activities.

H_1: The income from community economic activities outweighs income from small-scale mining in Matobo District.

H_0: The root cause of conflicts in Matobo District is not the rise in small-scale mining.

H_1: The root cause of conflicts in Matobo District is the rise in small-scale mining.

H_0: The government and/or other organisations offer support in resolving the miner-community conflicts in Matobo District.

H_1: The government and/or other organisations do not offer support in resolving the miner-community conflicts in Matobo District.

1.6 Significance of the Study

The current situation concerning mining activities in Zimbabwe justifies this study, in the case where illegal Artisanal Small-scale Miners (ASM) keep trooping into communities for minerals at the expense of farming, environmental degradation, as well as health hazards. Conflicts between miners and communities will continue to escalate unless relevant authorities step up to address the situation. Many of the members of these communities are farmers and their lands they use for farming operations are the same lands that Artisanal Small-scale Miners (ASMs) prospect, thus making agriculture fade gradually in these communities. It is necessary to study the causes of these conflicts and recommend possible solutions that can nip them in the bud before they become full blown conflicts in Matobo District, which will have eventual effects on the whole

country particularly on the socio-economic developments. Host communities appear to be helpless, since efforts to curb illegal mining activities seem to be non-existent and they continue to lose their lands. The parallel policies from the two ministries: Min. of Mines, and Min. of Lands respectively, exacerbates the conflicts. The study aims to harmonise the land tenure system such that the two ministries can have complimenting policies that enable progression and development rather than stagnation, antagonism and regression within the economy. It aims to reduce negative impacts on the socio-economy, particularly severe negative impacts on the livelihoods of the affected communities. The study can also serve as a baseline study on the land use policies in Matobo District, Matabeleland South and for the whole of Zimbabwe.

1.7 Delimitations of the Study

The study is only conducted in Matobo District, Zimbabwe. The participants are members of the community, as well as the miners in Matobo District.

1.8 Limitations of the Study

The land can be constitutionally the property of the state; hence the state may have the final say in what the land owner should do e.g., the government of Zimbabwe periodically interfered in the land tenure system by transferring authority to distribute land amongst different local authorities (Adams et al., 1999; Feder & Feeny, 1991). It is known that the Min. of Mines is entitled to first preference in land use thus adequate research is needed to allow policy-makers to construct more efficient and functional policies that complement rather than suppress each other. The other limitation of this study is that respondents might be very cautious in giving information. This will make

information difficult to get, especially when the respondents are both community members and artisanal miners; as well as when respondents are asked to the declare their estimated income generated per year.

1.9 Summary

Presented in this chapter is an outline of the study starting with the background and the statement of the problem. The background revealed the issues surrounding communities in Zimbabwe where conflicts arise when farmers and miners have prospects for the same piece of land as mining requires vast land. These conflicts extend from competition for the land itself, to competition for natural resources, including water and minerals. The aim of the study as presented in this chapter is to investigate the issue of conflicts between miners and the indigenous host community in Matobo District where conflicts have been anecdotally reported. A set of objectives and research questions were presented to support the aim. Studies like these are important to establish the causes of these conflict and recommend possible solutions that can nip them in the bud before they become full blown conflicts in Matobo District. The delimitations and limitations of the research were presented in the last sections of the chapter. The next chapter discusses the literature related to the study topic.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature where the researcher elaborates conflicts between artisanal miners and local communities. The chapter begins with presenting the start of mining to discuss how the industry evolved from the Stone Age period to the current digital era. The small-scale mining is then presented together with the benefits and disadvantages of the practice. The chapter further reviews literature around land use conflicts focusing on artisanal mining and local communities around the world and in Zimbabwe. The legislation that governs mining and communal lands is discussed as literature is reviewed. The theoretical framework to describe the theories underpinning the research problem is then presented and the chapter ends with a summary. For the purpose of this chapter, search engines such as SCOPUS, Google Scholar and university libraries were used to search for journal articles, theses, book chapters and other academic material relevant for this study.

2.2 The Beginning of Mining

The discovery of precious minerals and metals across the world and their valuation has contributed to the rapid expansion in demand for more metals and minerals to trade globally (Bond & Kirsch, 2015). Metals and minerals have always been historically mined as ceramics, metals and stones have been in use since the Stone Age for tools and

weapons (Bond & Kirsch, 2015). The major tools that were used in mining to excavate were wedges and picks created from deer antlers and shovels were made from cattle shoulder blades (Kaur, 2023). The first kinds of minerals and metals that were first mined were copper and gold (Asmussen & Long, 2020). Copper was mined in large amounts as it was used to manufacture weapons and tools and this was around 3000 BC (Schauer et al., 2021). During this Stone Age period, mining was mainly done by small groups and lone individuals as a by-product of hunting and gathering. Mining was conducted at a minor scale (Kaur, 2023). In the middle age period, mining shifted from locating minerals near the surface to accessing them farther below the earth surface. Mining developed into a labour-intensive, highly structured industry to extract minerals from further underground. Animal-powered technology, such as horse-drawn wagons and water wheels were used together with hand tools (Kaur, 2023). Mining during the middle age period was much more organised and regulated as compared to the Stone Age period. In the 20th century, advancements in technology, changes in political and socio-economic systems, and an increased demand for minerals contributed to substantial developments in mining sector (Batterham, 2017; Kaur, 2023). In the current digital era, advances in technology have brought significant changes to the mining industry as efficient mining practices are currently being used (Goparaju et al., 2017). Mining organisations presently have access to a wealth of data that can be used to streamline mining processes as they are able to access geological information using technology which gives results in a very short period of time (Chen & Wu, 2017; Goparaju et al., 2017; Ahmed et al., 2021; Kaur, 2023). The best extraction methods can therefore be determined which are environmentally friendly, cost effective and less dangerous to human life (Sánchez & Hartlieb, 2020). Currently, there are some large

mining companies which are well established to the extent of being able to use these technologies for the extraction of precious minerals and metals. The next section presents the artisanal mining.

2.3 Small-scale Mining

Not all mining is conducted by large companies with the use of expensive machinery deep below ground or large open pits (Schwartz et al., 2021). Millions of people use primitive tools to extract minerals. This workforce of is commonly itinerant, without much training or education and is generally termed artisanal and small-scale mining (Schwartz et al., 2021) (hereafter referred to as artisanal mining).

Artisanal mining is an informal economic sector that includes miners who extract minerals from the earth from gemstones and gold to vital metals such as tin, cobalt, tantalum and tungsten using basic tools and low-tech equipment (World Bank, 2019, 2020; Girard et al., 2022; Villegas, 2023). Artisanal mining is very prevalent in many developing countries particularly in sub-Saharan Africa and Asia, and to a large extent, it is mainly driven by poverty (Girard et al., 2022; Villegas, 2023). The fifty-four African countries are blessed with some of the best valuable mineral resources in the world, however, due to the lack of development in Africa, these minerals are mostly mined by artisanal miners (Omotehinse & Ogunlade, 2022). In Africa alone, approximately 60 million people are dependent on artisanal mining to extract minerals for their livelihoods (World Bank, 2019).

Artisanal miners extract these minerals from wide surface holes or deep underground tunnels (Schwartz et al., 2021). This is usually done by individuals, groups, cooperatives

or families with minimal or no mechanisation (Mhlongo et al., 2019; Schwartz et al., 2021; Girard et al., 2022; Ofosu et al., 2022; Omotehinse & Ogunlade, 2022). The artisanal mining sector is labour intensive with low investment levels and makes use of rudimental equipment and technology to extract the minerals on a small-scale (Mason et al., 2019; Girard et al., 2022). The most mined mineral by artisanal miners in Africa is gold (Omotehinse & Ogunlade, 2022). Other minerals include diamonds, sapphire and gemstones among other minerals (Omotehinse & Ogunlade, 2022).

2.4 Benefits of Artisanal Mining

Artisanal mining is important for several reasons around the world as it considered to be the most important indispensable non-farm activity in developing countries (World Bank, 2019; Schwartz et al., 2021; Laing et al., 2023). Artisanal mining contributes approximately 20-25% of the world's annual production of diamonds, gold, tin, lithium, cobalt and tantalum (Schwartz et al., 2021). These metal resources are important to the world's economies as they play a crucial role in the manufacture of medical devices, mobile phones, tablets, rechargeable batteries, computers, airplanes among other important material (Villegas, 2023). As long as the demand for these minerals around the world stays high, artisanal miners will continue to extract these minerals and in so doing, they power economies (Schwartz et al., 2021).

Turning backs on artisanal mining is not a viable solution as artisanal mining provides a vital livelihood for tens of millions of people around the world with further tens of millions more being supported by the sector directly or indirectly (Delve 2020; Geenen et al., 2020; Omotehinse & Ogunlade, 2022; Laing et al., 2023). These include family

members, small business owners and entrepreneurs along the artisanal supply chain (Schwartz et al., 2021). Artisanal mining drives development in local communities particularly the remote areas where there are often few opportunities available to generate income (Geenen et al., 2020). In these areas, artisanal mining offers people to develop economically by building better homes, buying cars, cattle and be able to send their children to schools (Dondeyne & Ndunguru, 2014; Rutherford & Chemane-Chilemba, 2020; Omotehinse & Ogunlade, 2022).

The average income per day for artisanal miners in Africa is between US$4 and US$7. Artisanal miners in Senegal earn between US$4-$US$7/day (Persaud et al., 2017). In Ghana, artisanal miners earn up to US$8/day (Bansah, 2019; Owusu et al., 2019) while in Burkina Faso, artisanal miners earn between US$7.50-US$9.50/day (Geenen et al., 2020). Women artisanal miners in Sierra Leone earn between US$4-$US$8/day (Omotehinse & Ogunlade, 2022). In Uganda, women involved in gold washing earn about US$2.7/day which mostly depend on the quantity of gold ore washed and obtained from the ore (Omotehinse & Ogunlade, 2022). Some women however do not receive any payment if no gold is found (Serwajja & Mukwaya, 2020). In Zimbabwe, artisanal miners earn up to $US$6/day (PACT, 2016) and in Nigeria, they earn up to US$12 per day (Omotehinse & Ogunlade, 2022). These earnings greatly contribute to the household economy (Omotehinse & Ogunlade, 2022)

Overall, artisanal mining also positively contributes to many of the UN SDGs that include zero poverty (SDG1), zero hunger (SDG 2), good health and well-being (SDG 3), and decent work and economic growth (SDG 8) (Hilson & Maconachie, 2019; Geenen

et al., 2020). Clifford (2022) however argues that overall, artisanal mining does not meaningfully contribute towards the SDGs as it is not formalised in most countries. Further to these, it contributes to some SDGs whilst going against others for example the destructive methods derail the attainment of SDG 5 (gender equality), SDG 6 (clean water and sanitation), SDGs 13, 14 and 15 (climate action, life below water and life on land, respectively) (Clifford, 2022). The next sub-section presents the negative impacts associated with artisanal mining.

2.5 Negative Impacts of Artisanal Mining

Artisanal mining is however associated with several negative impacts that often overshadow its numerous benefits described in the previous section. Artisanal mining brings acute environmental troubles (Dzoro et al., 2023). In Sub-Sahara Africa, woodland vegetation have been degraded due to artisanal gold mining expansions (Gandiwa & Gandiwa, 2012; Dzoro et al., 2023). Artisanal mining created serious land degradation in Tanzania, Ghana, Zimbabwe and Mozambique (Dzoro et al., 2023). With this erosion, soil profile, structure and fertility is lost as well as the aesthetic value of the area (Chakuya et al., 2023). Figure 2.1 shows the evidence of environmental impacts that are caused by artisanal mining in Zimbabwe.

Figure 2.1: Impacts of artisanal mining on the environment. Photos taken from Chimanimani National Park, Zimbabwe. Source: Gandiwa and Gandiwa (2012).

Abandoned pits and gullies that develop pose serious hazards to both humans and wildlife in the area as they risk falling into such pits (Chakuya et al., 2023). Artisanal mining in some cases involves the use of heavy metals and chemicals such as Mercury and Cyanide which are very dangerous to many biotic components (Gandiwa & Gandiwa 2012; Markham & Sangermano, 2018; Tampushi et al., 2022; Chakuya et al., 2023). Apart from the primary environmental impacts of artisanal mining, it is associated with wildlife poaching (Chakuya et al., 2023). When vegetation is lost

through artisanal mining, the habitat for wildlife habitat and feed are lost. This exposes wildlife to poaching by the very same artisanal miners who would have destroyed wildlife habitats (Chakuya et al., 2023). These disturbances also affect wildlife migration and distribution and threatens biodiversity at a larger scale (Gandiwa & Gandiwa 2012) for example in Chewore Safari Area in Zimbabwe where alluvial gold was discovered in 2009 (Chakuya et al., 2023).

Artisanal mining also causes serious human health issues (Landrigan et al., 2022). The exposure to mercury used for gold extraction produces harmful effects on various body systems which may be fatal (WHO, 2017). Non mercury users downstream may take it in from polluted fish (Diringer et al., 2015). Other dangerous exposures in artisanal mining include lead, cadmium, cobalt and arsenic exposures which have multiple adverse health implications (Yabe et al., 2020). Severe injuries are also associated with artisanal mining and include falls from heights, crush injuries from cave-ins, amputations and lacerations (Landrigan et al., 2022). Because there is little separation between the community where locals live and where they conduct their artisanal mining operations, the miners and the community are constantly exposed to hazards associated with the mining operations. Prolonged exposure to physical hazards, noise and airborne dust also causes serious health problems for example, loss of hearing and respiratory diseases (Singo et al., 2022). In addition, artisanal mining camps are associated with drug abuse and prostitution which exposes the communities and miners to increased risks of sexually transmitted diseases (Singo et al., 2022; Tampushi et al., 2022).

Also of concern, is how artisanal farming clashes with agriculture. The agricultural industry is threatened by mercury which bioaccumulates in the soil and degrades the quality and fertility of the soil (Tampushi et al., 2022). In Zimbabwe, Save, Odzi, Mazoe and Mutare rivers have been silted and contaminated through unregulated artisanal mining which compromised water quality for irrigation and the production of horticultural crops that were grown along these major rivers (Marume, 2023). In Ghana, biological evidence showed that crop yields especially cocoa and maize drastically fell owing to heavy metals that came from artisanal mining (Eludoyin, 2017). Further to this, artisanal mining encroaches in agricultural lands which create serious land use conflicts (Mkodzongi & Spiegel, 2019; Chari et al., 2021). These conflicts between communities and artisanal farmers are the study focus and these are discussed in the next section.

2.6 Conflicts between Farmers and Artisanal Miners

Agriculture powers the economic growth of many African countries, with 25% of arable land around the world being present in Africa (Chari et al., 2021). The continent has an estimated GDP of 30% derived from agriculture (Chari et al., 2021). Artisanal mining also is also equally important as it contributes a significant percentage to the GDP of African economies.

Farming and artisanal mining synergies in sub-Saharan Africa have been captured by many studies (Hilson, 2016; Alade, 2019; Mkodzongi & Spiegel, 2019; Chari et al., 2021; Chikuni, 2023; Marume, 2023). In the last two decades, public policies have supported agricultural models that aspire towards diversified, multi-functional activities (Hilson, 2016; Chari et al., 2021). Farmers must therefore be able to make use of other

economic activities other than agricultural production to supplement their income and research has reported situations in which the two sectors have generated funds that complement and support each other (Hilson, 2016). Mhondoro-Ngezi communities were involved in mining of gold and used their earnings to raise capital to support their farming projects to bring food to the table (Mkodzongi & Spiegel, 2019). This diversification reduces the vulnerability of a household to food insecurity. Given the frequency of extreme events for example, the drought being experienced in Zimbabwe, the profits from artisanal mining strengthen the entitlements to supplementary food access through market exchange platforms (Marume, 2023). Similarly, in Amansie Central District, Ghana, farmers diversify into artisanal mining to reduce the risks associated with food crop and cocoa farming. These risks include erratic rainfall patterns, lower producer prices for cocoa, lack of farm inputs and credits (Marume, 2023).

In most cases however, the two sectors have often clashed (Adonteng-Kissi & Adonteng-Kissi, 2017; Chari et al., 2021). Conflicts between farmers and artisanal miners have even escalated to violence as reported by Marume (2023). The negative externalities generated by artisanal mining have direct and significant adverse impacts on farming (Adonteng-Kissi & Adonteng-Kissi, 2017). Artisanal farming has increased poverty levels among farmers due to the loss of arable lands to artisanal mining activities (Chari et al., 2021). In Mashonaland Central and the Midlands provinces of Zimbabwe, farmland invasions spearheaded by violent machete-wielding gangs disturbed the peace and heavily impacted farming activities in these regions (Marume, 2023). Violently taking away land from rural farmers under these cascades up the agricultural chain to affect food production in the country (Servin, 2023). In Shurugwi,

communal people lost up to 100 cattle that got trapped in muddy waters of abandoned artisanal mining pits (Chitumba, 2020). Similarly in Gwanda, a farmer lost up to 80 cattle which fell in abandoned pits (Mrehwa, 2018). All these issues create serious conflicts between farmers and artisanal miners.

The central question that an individual asks is the amount of money that he/she gets from either mining or farming (Nunoo et al., 2023). In most cases, the former has been shown to be highly beneficial in terms of finances (Marume, 2023). In Ghana, a farmer indicated that he earns US$300/month from artisanal mining as compared to US$340/year generated from cocoa farm harvests (Yeboah, 2016). The farmer potentially earns US$3 600/year from artisanal mining compared to the $340 he gets from cocoa. Mining revenues are however, not regular as they depend on several factors among them, the price of gold on the international market (Yeboah, 2016). Nonetheless, it is obvious that farming is less profitable than artisanal mining (Marume, 2023; Nunoo et al., 2023).

2.7 Legislations that Govern Land in Zimbabwe

The land in Zimbabwe is governed by a number legislations regarding land rights which according to the Constitution of Zimbabwe, 1979 (as amended) include: Communal Land Act 20 of 1982; Land Acquisition Act of 1992; Agricultural Land Settlement Act; Agricultural Corporations (Commercialization) Act 13 of 1997; Land Survey Act; Regional Town and Country Planning Act; Commercial Premises (lease control) Act 27 of 1983; Deeds Registry Act; Immovable Property (prevention of discrimination) Act 19 of 1982; and Protected Places and Areas Act 27 of 1959 (USAID, n.d). This section will

focus more on the Communal Land Act 20 of 1982 defines communal land as land that is set aside under an Act of Parliament (Section 332 of the Constitution) and held in accordance with customary law by community members under the leadership of a Chief.

The Communal Lands Act (20:04) makes the President of Zimbabwe the sole custodian of and with authority over communal lands (Muringa & Zvaita, 2022). People who live in these communal lands have recognisable rights over the land as they are members of a traditional community in accordance with customary law. Their rights over the land are fully recognised by the Constitution. The right of the communal people are not subject to redistribution or expropriation by the State as communal land is not agricultural land according to Chapter 16 or section 72 of the Constitution. Section 71 of The Constitution further protects everyone, except those who occupy agricultural land that is liable to expropriation under section 72, against being compulsorily deprived of their property. Communities in Matobo District are therefore protected by The Constitution.

2.8 Legislations that Govern Mining in Zimbabwe

The mining industry in Zimbabwe is governed by the Mines and Minerals Act of 1996 which was first crafted in 1961 and last amended in 1996 (Kativu & Oskarsson, 2021). There are clashes between miners and farmers which are deeply rooted in the Mines and Minerals Act. The Constitution according section 179 states that the farmer's rights are inferior to the miner's rights. The farmer can only exercise his/her rights if such exercise does not interfere with mining activities. In terms of section 38 of the Mines and Minerals Act, miners are allowed to prospect on communal lands and homesteads without the farmers being notified. This law puts farmers at a disadvantage of their land

being taken for mining purposes. This however applies to licensed mining companies and not artisanal miners without claims or formal licences from relevant authorities. The current mining law regime does not expressly recognise artisanal miners whose sector has rather been criminalised despite them contributing largely contribute to gold production and economic development of the country as shown in Figure 2.2.

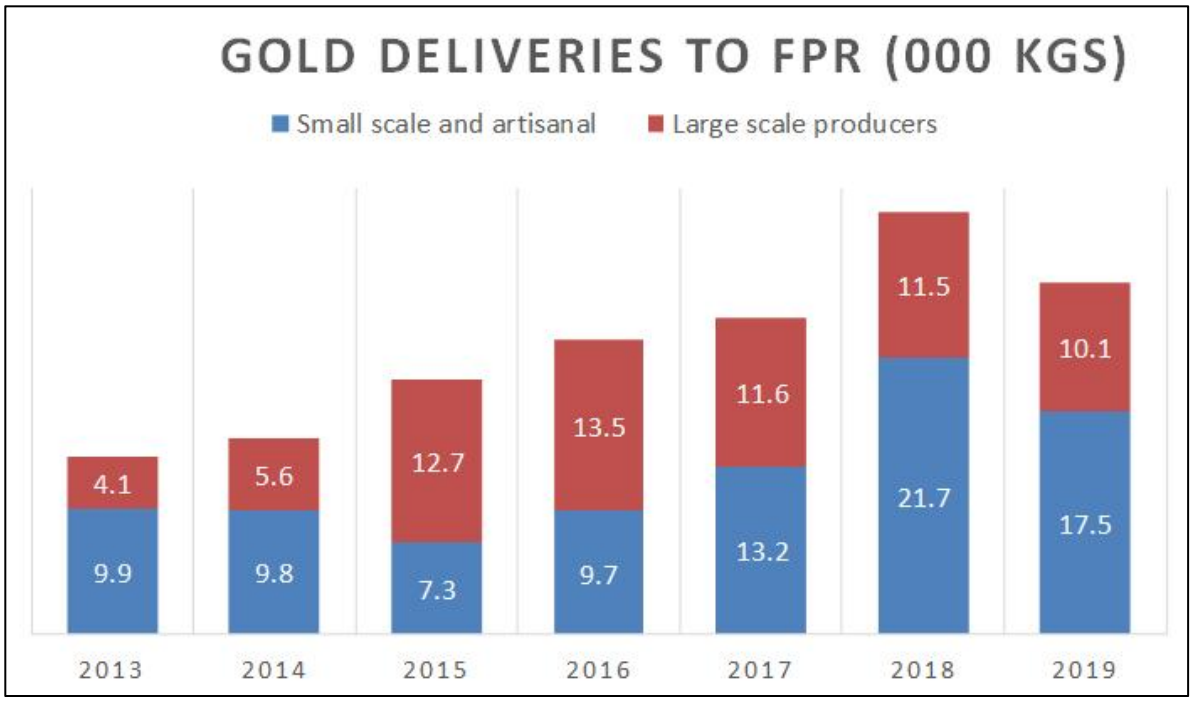

Figure 2.2: Gold deliveries to the Fidelity Gold Refinery. Source: Reserve Bank of Zimbabwe Annual Report

The new Bill in Zimbabwe seeks to rectify these conflicts between farmers and artisanal miners to allow the latter to carry out prospecting only where communal landowner gives consent. This is a commendable solution to the conflicts as the farmer who is directly affected by the mining activities is given the international right to reject or consent prospecting on the farming or communal land. This however has to be

formalised by the Rural District Council (RDC) and the Provincial Mining Director. The next section presents the theories that underpinned this study.

2.9 Theoretical Framework

This section discusses the two theories that support this study, namely: the theory of relative deprivation; and the theory of conflict. The subsections below discuss these theories and how they apply to this particular study.

2.9.1 Theory of Relative Deprivation

To understand the underlying causes of conflict in communal areas, the study applies the theory of relative deprivation by Gurr (1970). This theory provides a possible explanation for the reason why individuals and groups are motivated to commit violent attacks against common enemies, in this case, the artisanal miners. Relative deprivation according to Gurr (1970) occurs when perceived gaps between community needs and their value expectation is which creates a tension. When the community perceives an unfair distribution of resources that are supposed to be theirs, they get frustrated and often resort to protests which at times lead to violence (Saleh, 2013). In the case of Matobo District, this theory is applicable as the emergence of artisanal miners could deprive the local communities of the land resources that they previously benefited from. This creates conflicts between the miners and the local communities.

2.9.2 Karl Marx's Theory of Conflict

This theory was propagated by Karl Marx in 1867 and assumes that the behaviour of humans can best be understood by analysing tensions between individuals and groups in

a community, thus suggesting that “a community is an arena where struggles over scarce resources and commodities occur” (Hayes, 2024).

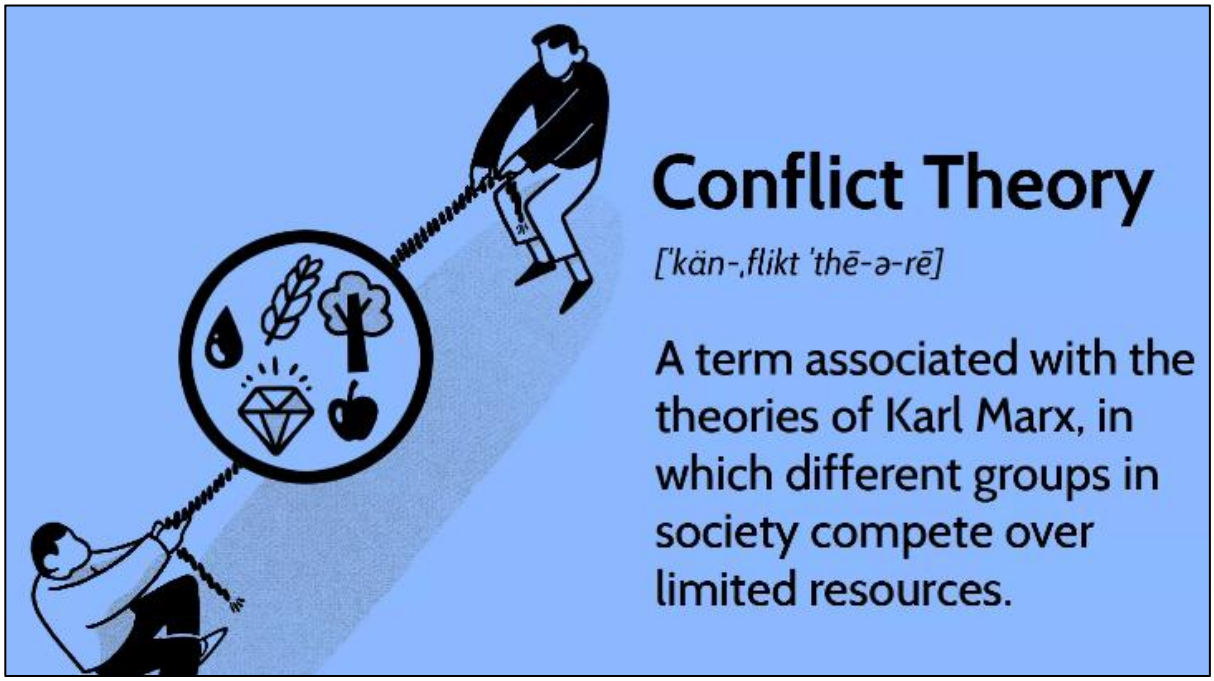

Figure 2.3: Karl Marx’s Theory of Conflict. Source: Hayes (2024)

Sociologists and philosophers have long sought to use conflict theories to explain poverty, revolutions, wars, domestic violence and discrimination among other range of phenomena (Crossman, 2019). Karl Marx’s theory of conflict version focused on conflicts between two primary classes, each consisting of a group of individuals that are bound by mutual interests as well as a certain degree of property ownership (Hayes, 2024). In the case of Matobo District, there are artisanal miners who potentially compete with resources with the local communities as illustrated in Figure 2.3. A conflict then arises between these two classes.

2.10 Research Gap

Disputes between farmers and miners have been widely reported on various media platforms not only in Zimbabwe, but in several African countries. This is of concern as both sectors significantly contribute to the economy of Zimbabwe and when they conflict, economic progress is derailed. Conflicts arise when farmers and miners have prospects for the same piece of land as mining requires vast land. These conflicts extend from competition for the land itself, to competition for natural resources, including water and minerals. Mining activities that cause destruction of crops, soil erosion and water pollution leading to livelihood losses for the affected communities. There is need to continuously study and research on land policies in relation to land utilisation and national development. This can be supported by constant revision in the way environmental impact assessments are carried out so as to get maximum benefits from the land, with minimal negative impacts. Literature reviewed in this chapter showed a number of conflicts in Zimbabwe as well as the African region. No studies have been conducted in Matobo and yet farmers and miners are involved in conflicts. Owing to this literature gap, this study will focus on the disputes between miners and the host community at local level focusing on Matobo District in Matabeleland South of Zimbabwe.

2.11 Summary

This chapter presented the literature review to discuss the root cause of the conflicts between artisanal miners and local communities. The chapter also presented similar conflicts around the African continent. The benefits of artisanal were presented as well as the socio-economic and environmental impacts. The legislation that governs mining

and communal lands were discussed and from the literature and constitution of Zimbabwe, mining takes precedence over farming. This however applies to established and licensed mining companies and does not apply to unlicensed artisanal mining. Two theories namely the Theory of Relative Deprivation and Karl Max's Theory of Conflict were presented to describe the theories underpinning the research problem. The next chapter presents the research methodology for this study.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The previous chapter covered literature on conflicts between farmers and artisanal miners which was important to identify the research gap where the current research fits in. This chapter comprehensively describes the research methodology in line with the research objectives that were presented in Chapter 1. Research methodology is a systematic method of solving research problems comprising of theoretical analyses of bodies of methods as well as principles associated with a branch of knowledge (Creswell & Creswell, 2018; Saunders et al., 2019). This chapter therefore presents information on the research design, population and sampling, research instrument, data collection method and data analysis. The chapter further discusses the ethical protocols that were followed during the study to protect the participants.

3.2 Research Design

Research design is the procedure of data collection and analysis to be conducted (Creswell & Creswell, 2018). Research design is categorised into quantitative, qualitative and mixed methods research designs according to Creswell and Creswell (2018) and Saunders et al. (2019). A quantitative research design makes use of quantities, figures, graphs, pie charts and frequency tables; and thereafter, the data is analysed using statistical approaches (Saunders et al., 2019). Qualitative research design on the other

hand generates non-numerical data and explores the experiences, beliefs, behaviours, attitudes and interactions of human beings (Saunders et al., 2019). The mixed methods approach combines both the qualitative and quantitative designs (Creswell & Creswell, 2018). The three research designs are summarised in Table 3.1 below.

Table 3.1: A comparison of qualitative, quantitative and mixed methods research designs. Source: Creswell and Creswell (2018).

Qualitative design	Quantitative design	Mixed methods design
Emerging methods	Pre-determined	Both emerging and pre-determined
Open-ended questions	Instrument based questions	Both open-ended and close-ended questions
Interview data, observational data, document data and audio-visual data	Performance data, attribute data, observational data, and census data	Multiple forms of data drawing on all possibilities
Text and image analysis	Statistical analysis	Statistical and text analysis
Themes, patterns interpretation	Statistical interpretation	Across databases interpretation

To comprehensively address the research objectives presented in Chapter 1, this study used the mixed methods approach and combines qualitative and quantitative research designs. Mixed methods research design was helpful in this study because it addresses corresponding questions that were not possible to address when using single method. The researcher aimed to provide a better and deeper understanding of the conflicts between farmers and artisanal miners in Matobo District by providing a fuller picture that enhances a description and understanding of the problem under investigation. This

type of research therefore requires a design that allows for a systematic investigation of a phenomenon by using various data collection and analysis methods.

3.3 Population and Sampling

3.3.1 Study Area

The study area is Matobo District (20.9818° S, 28.4864° E) of the Matabeleland South Province located in South-Western Zimbabwe (Figure 3.1).

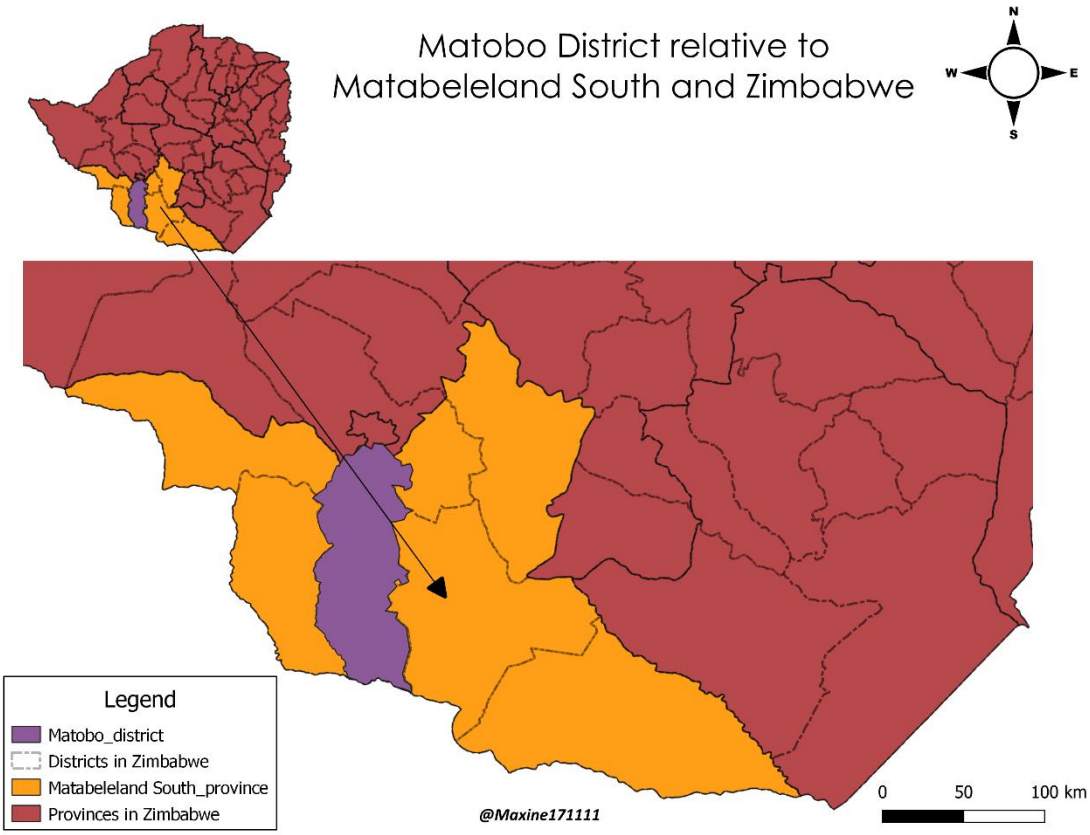

Figure 3.1: Map showing the location of Matobo District. Map Credit: M.K. Tadyanehondo (2024)

Matobo District is made up of 25 wards which are a mixture of resettlements (51%) and communal areas 49% who practice subsistence agriculture (Sibanda & Mapuva, 2020).

The area is semi-arid and classified under Agro-ecological Region IV with very erratic rainfall patterns between November and March (Sibanda & Mapuva, 2020). Most areas in Matobo District have wetlands, which sustain community gardens during the dry season (Ndiweni & Manik, 2018). Lack of economic opportunities and droughts have resulted in the widespread of poverty in Matobo District (Sibanda & Mapuva, 2020). Owing to the occurrence of minerals particularly gold, some people have shifted to artisanal mining in the area (Sibanda & Mapuva, 2020).

3.3.2 Target Population

The target population comprised of the artisanal miners and the general community in Matobo District. The sampling and sample sizes are described in the next sub-section.

3.3.3 Sampling and Sample Size

The target population described above was broken down into two categories, that is: (1) community members (also including land owners, farmers, authorities/ law enforcers and health workers), (2) small-scale miners. For the community members, a simple random sampling method was used so as to collect a sample that represents the entire community of Matobo District.

The sampling method for the artisanal miners was a non-probability sampling method called snowball sampling. Snowball sampling is a non-probability sampling method where new units are recruited by other units to form part of the sample (Saunders et al., 2019). Snowball sampling is used in conducting research about people with specific traits (in this case, the artisanal miners) who might otherwise be difficult to identify

where participants self-select themselves to become part of a study (Saunders et al., 2019). The study administered the questionnaire to 30 community members and 30 artisanal miners.

3.4 Research Instruments

According to Taherdoost (2021), before selecting a method of data collection, the type of data required for a particular study should be determined. Data sources are either primary or secondary (Taherdoost, 2021). First hand data that is collected by a researcher and is not yet published is known as primary data, whilst data that has been published is known as secondary data. This study utilised both data sources. Secondary data was used in Chapter 2 to provide baseline information on conflicts between farmers and artisanal miners. These secondary sources were also then used by the researcher in Chapter 4 to provide arguments on the research findings. The primary data was collected by the researcher from the respondents following the methodological approaches described in this Chapter. To collect primary data, questionnaires with both open- and close-ended questions were used. The questionnaires for the community members and artisanal miners are shown in Appendix 1 and 2, respectively.

3.5 Pilot Study

This study did a pilot study to ensure that the questionnaire was reliable and valid. The researcher carried out a pilot test on 10 random colleagues before administering the questionnaires to measure if the participants could understand the questions. The pilot study helped to reveal areas that needed improvements in certain questions that came across as vague or ambiguous (Masunga, 2019). Fortunately, participants in the pilot

study, understood the questions and could respond to the researcher. The data from the pilot study was not included in the final analyses of data for this research.

3.6 Data Collection Procedure

The researcher communicated in the language that was comfortable and understandable to both the interviewee and interviewer i.e., English, Ndebele and Shona. The researcher randomly selected households where the researcher self-administered the questionnaire to one individual per household. Questionnaires were also administered to communal people at the local shops and bus terminuses. With regards to artisanal miners who were difficult to initially identify, the researcher made inquiries and once an individual was identified as an artisanal miner, the researcher kindly asked him/her to administer the questionnaire. The researcher further kindly asked the respondent to identify other artisanal miners in line with the snowball sampling method discussed in the sampling section (Sub-Section 3.3.3).

3.7 Analysis and Organisation of Data

Data from questionnaires were coded and entered into Microsoft Excel. Responses from the qualitative data were summarised and excerpts were presented. For the quantitative data, descriptive statistics were used to generate frequencies, tables, charts and graphs. Further to this, the SPSS was used to analyse the data. After data analysis, the researcher presented the data and interpreted the findings in light of the research questions.

3.8 Ethical Considerations

Creswell and Creswell (2018) states that ethical considerations within research entail that the rights and welfare of respondents are protected throughout the research process. Ethical behaviour was maintained in all stages of the study. Permission to conduct the research were given by Matobo District Council, Africa University and the Zimbabwe Republic Police to conduct the study. Before participating in any research, the respondents must consent to participate. The researcher, being guided by the University's ethics committee consent template form, informed the respondents on the research purpose of the study and how the data was managed to protect the respondents. The researcher emphasised that the research was for academic purposes only although the research findings may be used to improve relationships between miners and farmers in Matobo District. The purpose and nature of the research was disclosed to all the respondents and the research was not conducted without consent of the respondents. Participants were asked to voluntarily participate in the study and remained anonymous for confidentiality purposes and no names and any identifying particulars were recorded by the researcher on the questionnaire. The respondents were also informed that they were free to withdraw from participating in this research at any stage without any reparations. Data collected was secured by the researcher to be published in a thesis and potentially a manuscript with data aggregated so that it does not reflect back to the individual participants.

3.9 Summary

This chapter provided a detailed discussion of the research methodology. The mixed methods approach was introduced as this study's research design. The target population

are community members and artisanal miners in Matobo District who were randomly and snow ball sampled, respectively. Questionnaires were administered by the researcher. Completed questionnaires were coded and analysed in MS Excel and SPSS. Word clouds were used to analyse qualitative data to present the most frequent responses. Selected qualitative responses were extracted and directly presented. In statistical analysis, means and standard deviations were used to compare income from community members and small-scale miners. Further to this, a non-parametric Mann-Whitney U test was used to compare annual incomes between the two sampled groups. Ethical protocols were followed. The next chapter presents the findings from this study.

CHAPTER 4

DATA PRESENTATION, ANALYSIS AND INTERPRETATION OF FINDINGS

4.1 Introduction

The previous chapter presented the research methodology that was utilised to collect primary data. This study utilised the mixed methods approach to collect data from community members as well as small-scale miners from Matobo District. A total of 60 questionnaires (30 for each group) were administered to the community members and small-scale miners. The data was both qualitatively and quantitatively analysed. This chapter presents the research findings and provides a discussion in each section using secondary sources. The response rate is first presented and then the chapter follows a logical sequence following the structure of the questionnaire which first presents the demographic details section and then the research findings. The chapter then ends with a summary.

4.2 Response rate

The researcher planned to sample 30 community members and 30 small-scale miners. The researcher managed to get responses from all the respondents and thus, the response rates were 100% for both the sampled groups.

4.3 Demographic Details

4.3.1 Gender

For the community members, the gender ratio was well balanced as 15 males and 15 females were interviewed in this study whereas all the small-scale miners interviewed were males (Table 4.1).

Table 4.1: Gender of community members and small-scale miners

Group	Males	Females	TOTAL
Community members	15	15	30
Small-scale miners	30	0	30

Both results were expected as in a normal community, one expects the number of males and females to at least be balanced. In the small-scale mining operations, it was also expected that males dominated. The mining industry according to Makaza and Chimuzinga (2020), Mafongoya et al. (2021) is often portrayed as hostile environments particularly for the women. The culture of mining has generally been presented hyper-masculine emerging through initiation of miners into gangs and counter-cultures of marginalised youth (Ngwenya et al., 2024). The hyper-masculine behaviours associated with small-scale mining pride themselves on rejecting the regulations and norms of society such as scandalising the existing gender balances which encourage violence against women, particularly sexual violence (Makaza & Chimuzinga, 2020; Ngwenya et al., 2024). Women find it difficult to manoeuvre in this male dominated sector as women are not physically fit to handle the strenuous mining activities and have less ownership over financial assets (Ngwenya et al., 2024). Further to this, women have minor

authority in decision-making and are exposed to fewer economic and educational opportunities in mining as compared to their male counterparts (Mafongoya et al., 2021). Generally, women in Zimbabwe comprise about 11% of the people in artisanal mining and their roles are more inclined in the processing of the mining products which is less laborious (Makaza & Chimuzinga, 2020). Women are actively involved in grinding, crushing, washing, sieving and transporting minerals (Gwande, 2023). In some mining centres, women undertake these activities at home thereby exposing their entire family and community at large, to high risks from mercury poisoning and silicosis (Gwande, 2023). Women are poorly paid for these jobs and only a few are able to exercise their rights (Makaza & Chimuzinga, 2020). All these issues collectively repel women from participating in small-scale mining as miners and results from this study corroborate these findings.

4.3.2 Age

The most frequent age groups for the sampled groups were between the ages of 20 and 39 (Figure 4.1) which contributed 80% and 97% for the community members and small-scale miners, respectively. There were no participants that were recorded that were below the age of 20 and that were more than 60 years old (Figure 4.1).

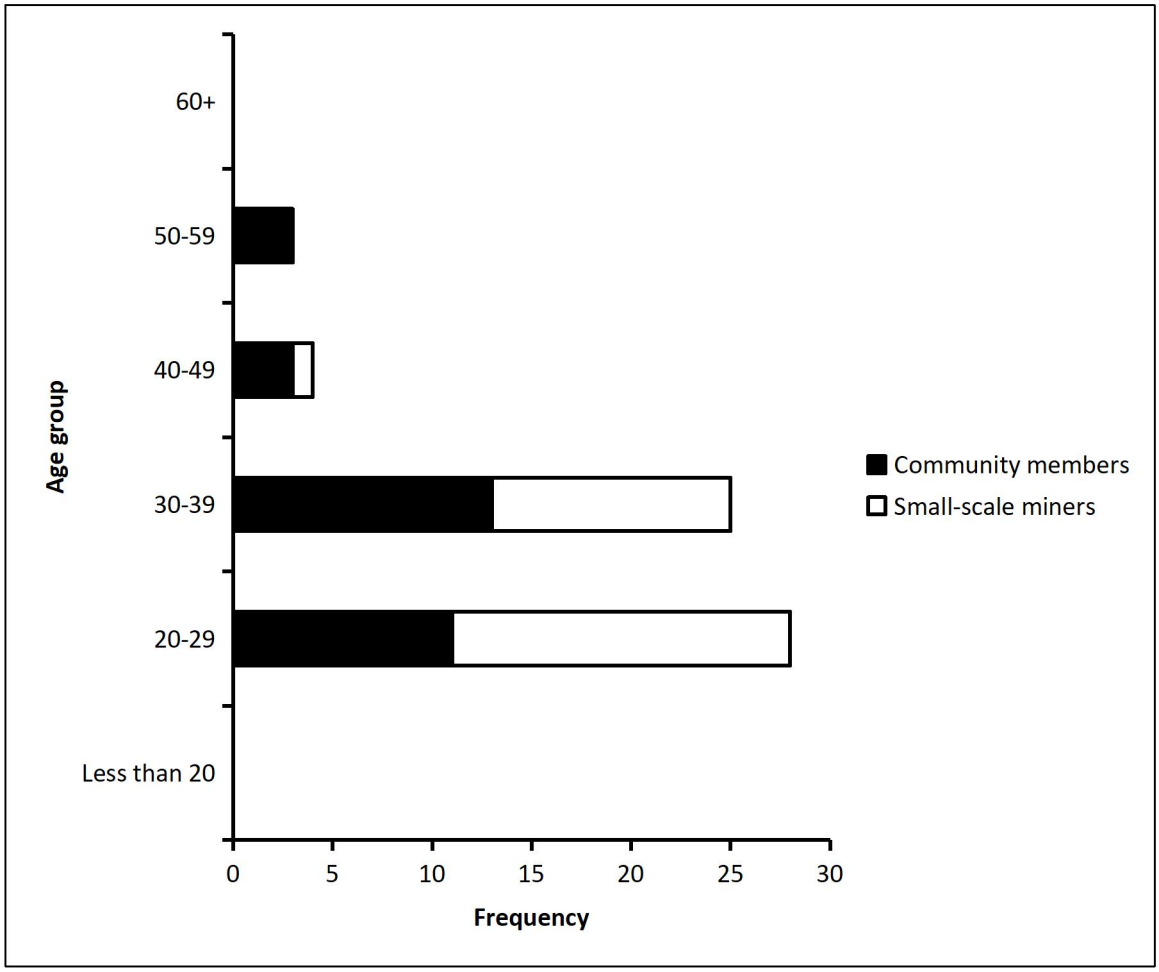

Figure 4.1: Age group of community members and small-scale miners

It was interesting to note that there were no small-scale respondents that were below the age of 20 as recorded in other findings (for example Ncube et al., 2019) who discovered that the most frequent age group of small-scale miners were between 15-35 years. The mining sector has attracted many young Zimbabweans who are now resorting to this informal livelihood so as to cope with the harsh economic environment which has been steadily deteriorating for decades (Gwande, 2023). Results from this study corroborates with findings from the National Action Plan of Zimbabwe (2019) which reported that the dominant age group of small-scale miners was between 20-39 years. Results from

this study show that the small-scale miners and communities could be complying with the Children's Act [Chapter 5:06] which provides for the protection, welfare and supervision of juveniles and children in face of hazardous labour. The Children's Act Chapter 5:06 complements the Labour Relations Act [Chapter 28:01] which stipulates that no guardian or parent of a young person or child shall permit such young person or child or to engage in hazardous labour (National Action Plan of Zimbabwe, 2019). It is also possible that during the sampling, the researcher might have not encountered young children involved in mining as reported in other studies. The situation of child labour in other countries is even serious for example in the DRC where small-scale involves all age groups, including children (Lawson, 2021). More than 15% of the 255 000 Congolese in cobalt mining are children, who are as young as 6 years old working under harsh conditions and earning less than $2 per day (Lawson, 2021).

4.3.3 Years living in the area

Respondents that have been living in the sampled district for 5 to 9 years and 10 to 14 years dominated the sampled community members (Figure 4.2). Most of the small-scale miners sampled on the other hand have been living in the sampled district for 1 to 4 years and 5 to 9 years according to the findings.

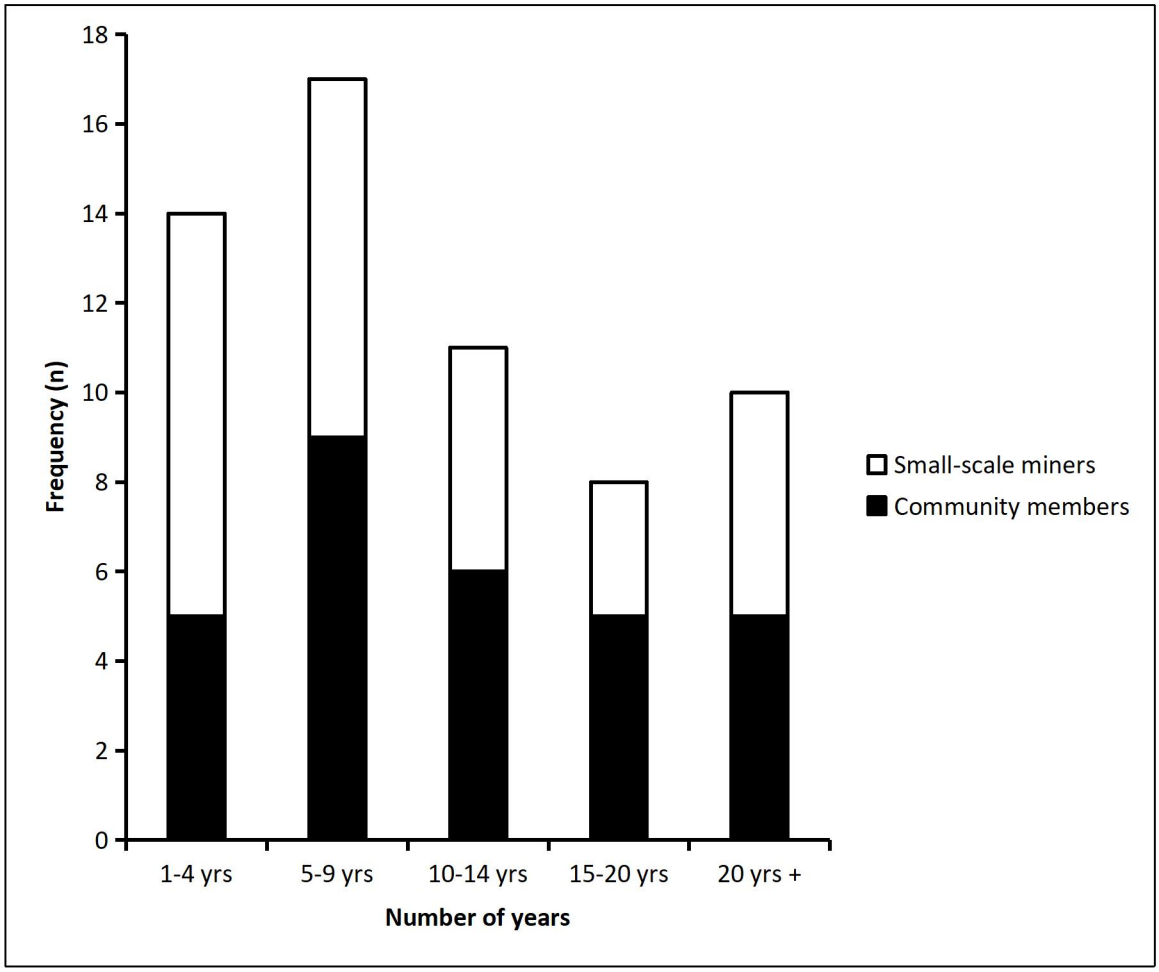

Figure 4.2: Years living in the area for community members and small-scale miners

It was expected that the community members would have selected the number of years living in the sampled district that corresponded to their ages as in most cases, community members are born and live in the area for their lifetime. Cases of individuals being born in the area, leaving for educational or other opportunities and coming back to settle in the district, could explain this discrepancy. Under such circumstances, the respondents would only consider the number of years they have actually been in the district which would be less than their age. Most small-scale miners have been living in the sampled area for less than 10 years. This corresponds to the recent surge in small-

scale mining activities in Zimbabwe and many areas are being invaded by illegal miners (Mkodzongi & Spiegel, 2019; Chikuni, 2023). These invasions are causing a wide range of socio-economic impacts which are also unpacked in this study. The data showed that the small-scale miners that mentioned living in the area for more than 20 years, may also be community members that both live in the area as farmers and occasionally do small-scale mining.

4.3.4 Main sources of income and the contribution to conflict

Small-scale miners revealed that their main source of income was the mining operations that they do in Matobo District. This is shown in the word cloud that was generated to show the most frequent responses for the small-scale miners (Figure 4.3). Community members have different sources of income that include salary (n = 15); farming (n = 11); and selling of goods (n = 4) (Figure 4.3). There were however some members of the community who are involved in both mining and farming but however, only the main source of income was recorded from the respondents.

Figure 4.3: Word cloud of frequent sources of income

In estimating the income generated from both small-scale mining and other income sources stated by the community members (salary, farming, selling of goods), the mean annual income generated by small-scale miners was US$12571.43±14430.62 whilst that of community members was US$1364.71±971.43 (Figure 4.4). In statistically comparing these two annual incomes using the Mann-Whitney U test, the difference was significant ($p < 0.05$).

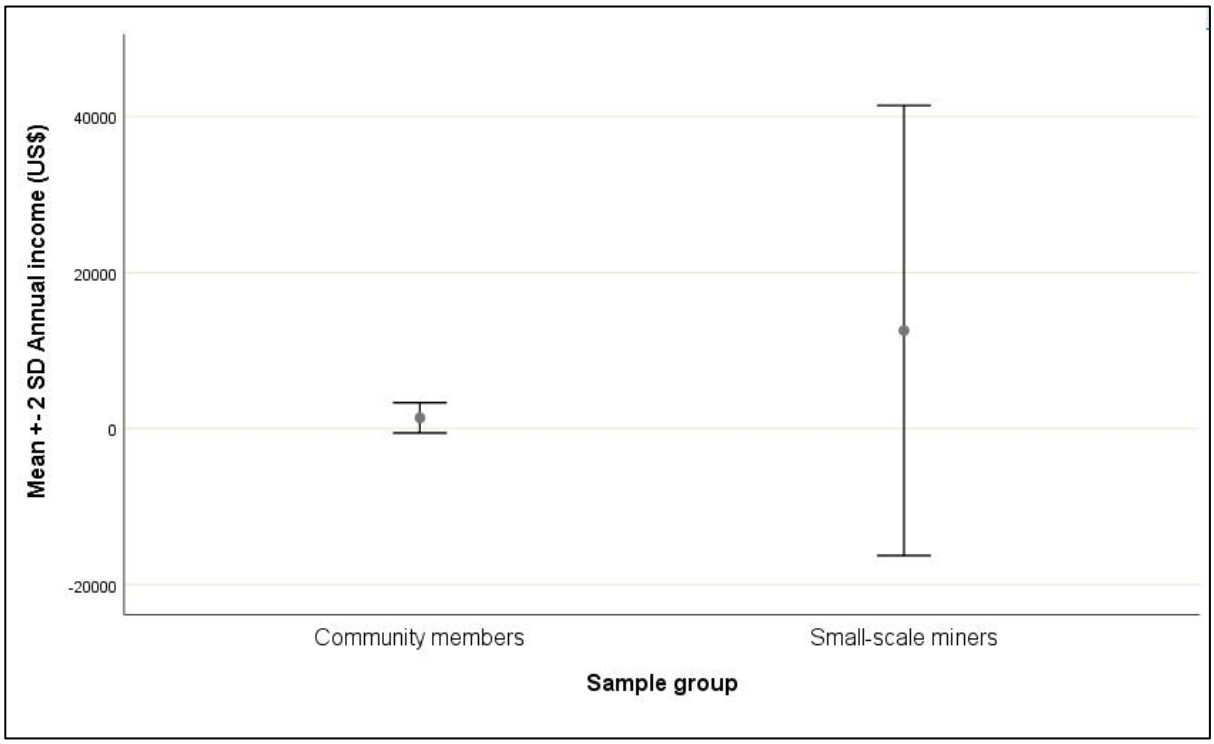

Figure 4.4: Mean (±SD) incomes of community members and small-scale miners

It is an obvious result that small-scale miners generate significantly more income than farming. This is due to the seasonal nature of farming which only occurs during the rainy season. A few other farmers do small holder farming of horticultural crops all year

round where they irrigate their crops. This all do not generate income comparable to that of small-scale mining. Other community members rely on monthly salaries which are too low as compared to the small-scale mining incomes. Small-scale mining on the other hand is in all year-round activity and that is why the average income as reported from this study is significantly higher than income from salary, farming and selling of goods which are activities of the community members.

The differences between incomes from both sampled groups are a motivating factor for able bodied young males to venture into small-scale mining (Geenen et al., 2020; Schwartz et al., 2021; Laing et al., 2023). Artisanal mining drives development in local communities where there are often few opportunities available to generate income (Geenen et al., 2020). Farming has in the recent years been affected by several factors such as poor soil fertility, climate change causing unreliable rainfall, improper farming methods, lack of irrigation systems, low market prices, bad roads to markets, low government support, which collectively, have threatened the agriculture sector thereby threatening food security (Bansah, et al., 2023). The low performance of agriculture as well as the high income from small-scale mining over a small period of time drives the people to venture into small-scale mining.

The annual income recorded from this study should however be treated with caution as in some cases, the small-scale miners stated these figures without accounting for the expenses they incur. This was raised by some respondents that when they sell their gold, they will deduct the money for the raw materials and machinery they use and hire. Some of the figures that the miners mentioned might even be divided amongst the miners

themselves and a figure like US$60000.00 might be the total for 15 miners. This unclearness of the data could have been addressed by further asking the small-scale miners what their net income was per individual. Nonetheless, if these factors were considered, the amount of income from mining would still be significantly higher than incomes from community members.

4.4 Conflicts between Community Members and Small-Scale Miners

Findings from this study revealed the root causes of the conflicts between the two sampled groups. The main concern as raised by most community members were that of the illegal mining activities on farming and grazing lands. When mining encroaches onto these lands, areas for farming and grazing reduce and this affects subsistence agriculture which under normal circumstances, provides food for the family with surplus being sold. The artisanal miners abandon their pits when they are done with a particular area where cattle fall in and die. Figure 4.5 shows the abandoned pits by the small-scale miners which are a potential danger to both humans and animals.

Figure 4.5: Abandoned small-scale mining pits. Photo credit: M.K. Tadyanehondo (2024)

Despite the dangers to humans and animals, the abandoned pits are an environmental catastrophe. Vegetation is destroyed as well as water sources which are also polluted (Figure 4.6). Similar environmental issues have been recorded by other researchers across the continent (Gandiwa & Gandiwa, 2012; Isung et al., 2021; Chakuya et al., 2023; Dzoro et al., 2023; Dzoro et al., 2023), where small-scale miners have caused acute environmental troubles. Gullies and erosions affect the soil profile, structure and fertility (Chakuya et al., 2023).

Figure 4.6: Possible environmental chemical hazard by small-scale miners. Photo credit: M.K. Tadyanehondo (2024)

The general beauty of the environment is lost (Figure 4.7 - 4.9) which under normal circumstances provides aesthetic values (Chakuya et al., 2023). The other concerning issue is the presence of Matopos National Park in Matobo District which is a UNESCO World Heritage Cultural Site of international importance. These small-scale mining activities are seriously impacting biodiversity, cultural heritage as well as livelihoods.

Figure 4.7: Environment destruction by small-scale miners. Photo credit: M.K. Tadyanehondo (2024)

Figure 4.8: Environment destruction by small-scale miners. Photo credit: M.K. Tadyanehondo (2024)

Figure 4.9: Environment destruction by small-scale miners. Photo credit: M.K. Tadyanehondo (2024)

Besides the environmental hazards, small-scale miners cause a wide range of socio-economic impacts in Matobo area. Most respondents highlighted that the rise in small-scale mining correlates with increased crime rates in the area where small-scale miners have been stealing cattle from the community for consumption. Other crimes mentioned were rape, murder, child abuse and attempted murder. Empirical data gathered from Shurugwi, Chegutu, Norton, Makonde, Kadoma, Zvishavane, Hurungwe and Battlefields demonstrates the emergence of machete bearing gangs generally termed '*mashurugwi*' who commit violent robberies and thefts across mining areas (Mkodzongi,

2020). *Mashurugwi* violence started with the ongoing struggle between politically connected individuals and artisanal miners over finite mineral resources (Mkodzongi, 2020). The violence however extended to innocent resident communities who at the present moment fear for their lives when a mineral resource is discovered in their area (Schwartz et al., 2021). Instead of them benefiting, artisanal miners from other areas invade local communities and as reported by most respondents in this study that majority of artisanal miners come from outside the area.

The extracts below present some of the responses from the sampled groups on the conflicts between small-scale miners (SSM) and community members (CM).

CM 9: *There are security issues, cattle rustling, loss of grazing lands, animal loss, due to open pits, animal health problems and ecological problems.*

CM 10: *Fighting with the police when they fail to comply with the regulations resulting in the loss of human and animal life. Also, crimes committed by the illegal miners include theft, attempted murder, violence, rape and murder.*

CM 15: *Destruction of the environment, dilution of culture and tradition as the illegal miners have no respect and teach the young people not to respect their elders. The illegal miners demotivate the young ones from going to school as they see no reason to go to school as one can make a lot of money from mining.*

CM 21: *Miners degrade the land and leave open pits where animals fall and die. The miners abuse alcohol and drugs which sets a bad picture for the youth. Illegal mining activities in the area are associated with crimes that include theft and murder.*

CM 29: *The miners steal cattle. The cattle also fall in abandoned pits and they degrade the environment.*

SSM 1: *Conflicts arises when miners dig up areas reserved for grazing and the cattle then fall into the pits. Some miners also slaughter cattle and eat them.*

SSM 14: *Gold digging is done in farming areas in water holes thereby affecting water resources. Grazing areas are degraded and cattle fall into the pits. Trees, land and paddocks are also destroyed.*

SSM 19: *We operate in the same area where people graze their cattle and the cattle end up falling into the dug pits. The cattle also drink water from polluted rivers and die. Further, some miners are violent and commit crime and hide in these pits.*

SSM 20: *Free roaming cattle falling into pits and some miners steal cattle and slaughter them for their own consumption and selling to other miners.*

Mining is destroying grazing lands and taking over previously farmed land.

SSM 30: *Community members refuse for us to mine in certain areas as well as ZimParks and the conflict then arises.*

From these extracts above, both parties agree that there is indeed a conflict which arises due to the emergence of artisanal mining. All the respondents confirmed that small-scale mining has always been there but in recent years, the operations increased. The conflicts as confirmed by Alade (2019), Mkodzongi and Spiegel (2019) and Chikuni (2023) arises from the land use overlaps. Land used by the community is the same that miners excavate. These conflicts are of concern as in most cases, given a choice between and mining, the youth are most likely to choose mining as it generates more income per year than agriculture (Marume, 2023; Nunoo et al., 2023). These conflicts need to be holistically addressed as they emanate from policy issues that need to be straightened at national level.

The respondents were asked to rates certain constructs based on the level of agreement/disagreement. The Likert scale had the following ratings:

Strongly Agree (1); Agree (2); Not Sure (3); Disagree (4); Strongly Disagree (5).

The data for strongly (1) and (2) were aggregated to be represented by “agree” and that of (4) and (5) were aggregated to be represented by “disagree”. The results are presented in Table 4.2 below.

Table 4.2: Likert scale presentation. Values red represent the responses that had the highest frequency per construct.

Construct	Group	Agree	Not sure	Disagree
Artisanal mining brings economic development	CM	**70.00**	10.00	20.00
	SSM	**93.33**	3.33	3.33
Artisanal mining damage the environment	CM	**100.00**	0.00	0.00
	SSM	**90.00**	6.67	3.33
Artisanal mining is affecting agriculture	CM	**93.33**	3.33	3.33
	SSM	**60.00**	10.00	30.00
Artisanal mining is causing health problems	CM	**86.67**	10.00	3.33
	SSM	**50.00**	16.67	33.33

Artisanal mining is causing health problems	CM	**100.00**	0.00	0.00
	SSM	**83.33**	0.00	16.67

Both sampled groups confirmed that small-scale mining is causing crime to escalate in Matobo District as discussed in the previous sections (Figure 4.10). Both sampled groups also agreed that small-scale mining is causing health problems in the area. This could be due to pollution of water resources that are used for domestic uses. Potential diseases from pollution and contamination include typhoid and cholera which are diseases that the country has been battling with for decades (Helliker & Murisa, 2020). Other potential diseases that surge as result of mining are sexually transmitted infections. Mining areas in Zimbabwe are generally regarded as hotspots for STI and HIV transmissions (Mattew et al., 2021). What drives these STIs in mining areas is substance abuse, poor sexual health knowledge, resistance to sticking to protective sexual activities, lack of entertainment, prolonged stay away from family, cultural status and stigma (Martin et al., 2021; Mattew et al., 2021; Murewanhema et al., 2022).

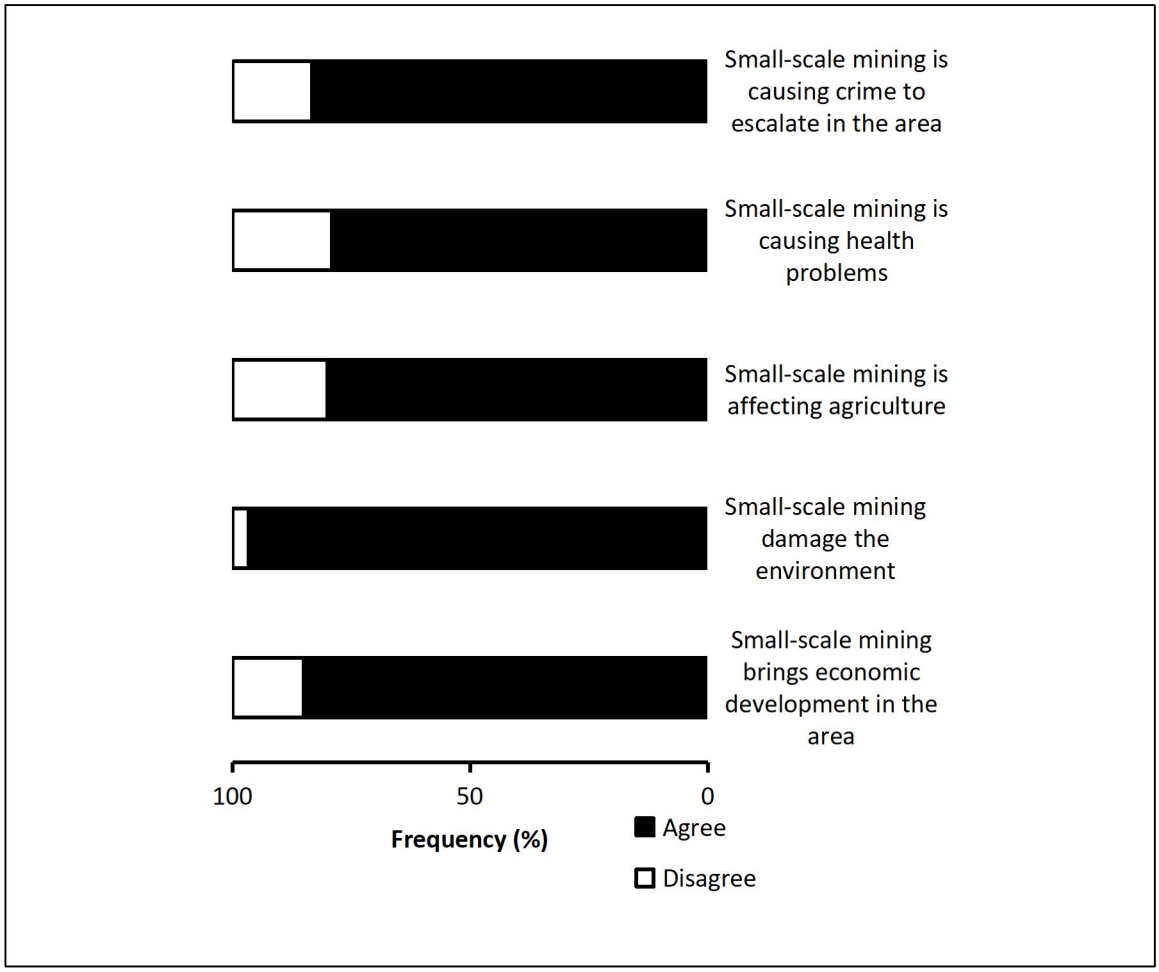

Figure 4.10: Aggregated Likert scale data

Both sampled groups also agreed that small-scale mining is affecting agriculture. This is because, small-scale mining overlaps with farming operations as they both use the same land as also described in the previous sections which cause conflicts. Most respondents from both groups confirmed that small-scale mining causes environmental damage and this evidence was also presented in the previous sections. Although small-scale mining cause serious environmental and social problems, the economic benefits are significant as confirmed by both sampled groups. The economic contributions of small-scale mining are not only limited to the local economies only, but at national and global level

(World Bank, 2019; Delve 2020; Geenen et al., 2020; Schwartz et al., 2021; Omotehinse & Ogunlade, 2022; Laing et al., 2023; Villegas, 2023). The economic contribution of small-scale mining makes it receive favourable legislation in Zimbabwe as formal mining generally takes precedence over other economic sectors, and this might be wrongly interpreted to apply even to illegal mining activities in communities.

4.5 Governmental Efforts to Resolve the Conflicts

The governmental departments: ZRP and ZimParks seems to be active in Matobo Area but these departments seem to be mainly active in enforcing the law rather than resolving the resulting conflicts between farmers and miners. The ZRP according to most respondents often patrols the areas arresting illegal miners and individuals who commit crime-related activities. The ZimParks on the other hand patrols the areas to reprimand individuals who are illegally mining in restricted protected areas reserved for conservation of biodiversity. The small-scale miners seem to be also in conflict with these governmental departments as they work to prevent the illegal activities. The excerpts below present some of the responses from the sampled small-scale miners (SSM) and community members (CM) on how the ZRP and ZimParks operate in the area.

CM 1: *Initiating joint operations between ZRP and ZimParks to enforce law. The government also supports awareness campaigns in the area.*

CM 2: *The government conducts awareness campaigns to protect the environment. The presence of ZRP and ZimParks also shows governmental support.*

CM 11: *The government through its agencies enforces the law that governs the protection of the people and the environment. The government also raises awareness for both miners and farmers about what is expected of them. The government also facilitates dialogue between all the affected parties.*

CM 16: *The government is trying to formalise mining in allocated areas that do not affect the welfare of the community members. The presence of the police ensures that crime is prevented and miners do not contaminate water resources.*

CM 19: *ZRP has a police base in the area and they manage crime. ZimParks often conducts patrols.*

SSM 1: *Government supports committees in mining, land use and agriculture so that these conflicts are resolved. Through various department for example, ZRP and ZimParks, the conflicts are to some extent resolved.*

SSM 10: *The ZRP, ZimParks, Ministry of mines officials and community leaders all enforce the law to maintain peace in the area.*

SSM 17: *The government provides rescue excavators, ZRP and the chief enforces the law. Health workers also help in health management.*

Besides these two governmental departments, other respondents mentioned that the Environmental Management Agency (EMA) also visits the area to teach local communities about the dangers of degrading the environment. Some also mentioned that the Ministry of Mines also carries out awareness and educational talks on mine safety and health issues. In terms of dialogue, some respondents mentioned church groups and health organisations. The church groups are mainly concerned with harmonising mining and community activities so that crime and conflicts do not escalate to loss of lives. The health organisations likely focus on sexual health as the surge in mining correlates with a surge in STIs as discussed in the previous sections. Local leaders according to the sampled groups also try to resolve these conflicts by traditionally creating dialogues between affected parties. Local leaders are the custodians of the land and are generally respected in Zimbabwe. These have a crucial role to play in managing lands under their jurisdiction so that a balance is at least reached where miners and farmers work in harmony.

4.6 Summary

This chapter presented the research findings of primary data and provided discussions in each section using secondary sources. Demographic details were first presented to show the biological data of the sampled individuals. While the data for community members was balanced with regards to gender, small-scale miners were biased towards males. This chapter revealed the differences between what is earned by community members

and what is earned by small-scale miners with the latter significantly earning more from mining activities. The income from mining operations acts as a motivating factor for the youth to choose mining over other economic activities in Matobo District for example, farming. The causes of conflicts were reported by both sampled groups which according to them occur as a result of the overlap in land uses. These overlaps are causing serious environmental and socio-economic impacts. The government through its department tries to enforce the law to protect the environment as well as livelihoods but the issues of solving the conflicts seem to be far from being resolved. The final chapter of this thesis presents the conclusion and recommendations of this study.

CHAPTER 5

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The previous chapter presented the research findings and provided a discussion. In this concluding chapter, key findings and insights from this study are presented. The chapter begins by summarising the study with a recap of the objectives and what was covered in each chapter. The chapter conclusions are presented under each research question with a reflection of each hypothesis. The hypotheses are useful at this stage as the researcher analyses the research findings to determine whether a stated hypothesis either accepted of rejected. This chapter further furnishes the recommendations for the sampled groups, policy and future researches.

5.2 Summary

The aim of this research was to investigate the issue of conflicts between miners and the indigenous host community in Matobo District. The answer to this aim, the researcher derived three objectives which are listed below:

- To compare the socio-economic benefits between community economic activities and small-scale mining activities in Matobo District as a contribution to conflict.
- To determine the causes of miner-host community conflicts in Matobo District.

- To determine the role of government and other organisations in the miner-host community conflict resolution in Matobo District.
- To investigate solutions from the host community and miners to tackle the problems emanating from the conflicts.

The study was organised into five chapters that were logically organised to make the dissertation simple and clear for readers. The structure of the chapters is illustrated in Figure 5.1 below.

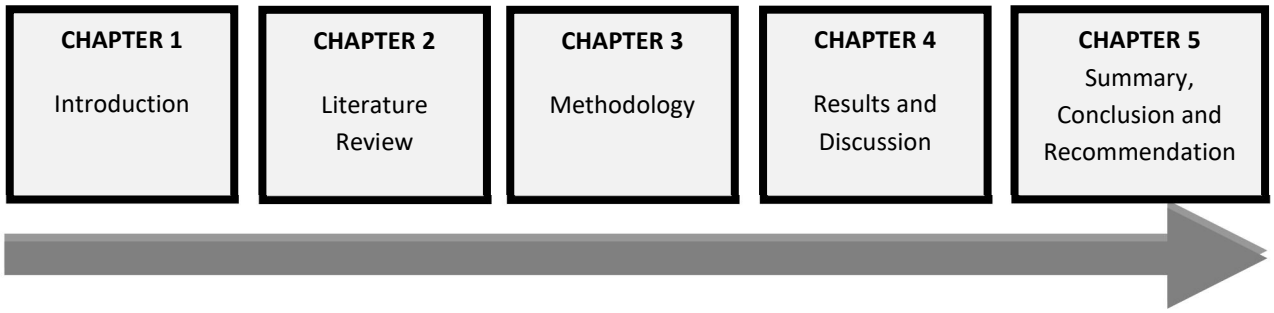

Figure 5.1: Outline of the dissertation

Interviews were conducted as a data collection method using questionnaires that had close- and open-ended questions. The questionnaires were administered to a sample of 30 community members from Matobo District who were randomly selected as well as 30 small-scale miners from the same area who were sampled using the snow-ball non-probability sampling method. The data from the questionnaires were both qualitatively and quantitatively analysed as this study utilised a mixed methods approach. The next section presents the conclusions of this study.

5.3 Conclusions

5.3.1 Socio-economic Benefits between Community Economic Activities and Small-scale Mining Activities In Matobo District as a Contribution to Conflict

Small-scale mining activities generate income that is significantly more than other economic activities in Matobo District. The fact that small-scale mining brings more returns acts as a motivating factor for able-bodied members of the community to engage in mining with less effort directed towards other economic activities for example agriculture. This is of concern as agriculture is equally important for food security at local level. While agriculture traditionally anchors rural economies, there have been great shifts in Zimbabwe towards small-scale mining sector and the number of individuals who both directly and indirectly benefit from these small-scale operations continue to rise especially in response to the harsh economic conditions in the country. Findings from this study corroborates with other findings particularly in developing countries in Africa where the rapid expansion in mining negatively impacts food security. Different scholars and practitioners have presented different arguments on this and such arguments include rising prices of minerals, agricultural poverty as a result of climate change, and economic decline, among others. In this regard, the null hypothesis is accepted which stated that "*The income from small-scale mining in Matobo District outweighs income from community economic activities*" and thereby rejecting the alternate hypothesis.

5.3.2 Root Causes of Conflicts between Miners and the Host Communities of Matobo District

This was the main objective centred at establishing the root causes of the small-scale miners- community conflicts in Matobo District. The history of these conflicts dates back to the pre-colonial era where long-standing disputes over land use, water resources, timber, grazing rights on farms on the Gold Belt in colonial Zimbabwe. These conflicts have continued up to the present date especially in areas where activities of small-scale mining are taking place in the country. Findings from this study revealed that the root cause of conflicts is when small-scale mining encroaches into farming and grazing lands. The most raised issue was the issue of cattle falling into pits excavated by the small-scale miners resulting in loss of livestock. This is of concern as these livestock are a source of wealth for the communities which secures their economic statuses. Apart from the livestock loss issues, a wide range of environmental impacts were revealed in this study to cause conflicts. These include loss of vegetation, contamination and pollution of water resources. The degraded land loses its aesthetic value and this is particularly worrying as Matobo District is home to the Matobo Hills, and Matopos National Park which is internationally recognised as a UNESCO World Heritage Cultural Site. This study also reported a wide range of socio-economic problems that creates conflicts in Matobo District. The emergence of small-scale mining causes crimes such theft, robberies, murder, rape to escalate due to an increase in socio-economic activities in the area. The illegal activities also create conflicts with authorities for example, the ZRP and ZimParks as revealed in this study. In this regard, the alternate hypothesis is accepted which stated that "*The root cause of conflicts in Matobo District is the emergence of mining*" and thereby rejecting the null hypothesis.

5.3.3 Support in Resolving the Conflicts in Matobo District

Communities rely on the government for protection when conflicts surge. It is no doubt that both mining and farming provide pathways to fight poverty in Zimbabwe and that includes creating opportunities for development. Farming provides direct benefits to those who engage in it as well as other food security benefits for others. Mining in Zimbabwe also significantly contributes to the economic status of the country as it brings the much-needed foreign currency. These two sectors should therefore work in harmony so that they complement each other. As illegal activities have been reported from this study, governmental support has been through law enforcement authorities that include the ZRP, EMA, Ministry of Mines and Mining Development and ZimParks. These often patrol, or visit the areas in Matobo to ensure that crime is not being committed and that environmental or mining statutes are followed. Although these departments seem to be facing challenges with combating illegal activities in Matobo District, their presence means that the government, to some extent recognises the potential conflicts in these areas. The government also empowers the traditional leaders to handle these matters at local level. The next section presents the recommendations based on the conclusions.

5.4 Suggested Solutions from the Respondents

Findings from this study revealed that the income from small-scale mining outweighs other community economic activities in Matobo District. Small-scale mining is important for the livelihoods in Matobo District providing economic activities for involved individuals. If small-scale mining is not regulated properly the adverse environmental and socio-economic impacts will escalate in a country which is already facing other economic pressures. The relationship between small-scale miners,

regulatory authorities and the community at large should be strengthened through dialogues and awareness campaigns so as to ensure sustainable development as well as good environmental governance. This study recommends the following to ensure effective environmental governance.

5.4.1 Legalisation and Formalisation of Small-scale Mining Activities

The current legislation does not recognise artisanal gold mining which the law regards as an illegal and a criminal activity. The law neither recognise it as a livelihood and an income source for most people. It is high time that the government recognises artisanal small-scale mining as it seems that communities will forever rely on this source of livelihood. Formalising it in Zimbabwe allows authorities to obtain accurate figures of individuals or groups involved in the sector so that gold production can be tracked from the mines to the export stage. Formalisation of small-scale mining provides the government of Zimbabwe with revenue that can be earned from royalties and taxes. The small-scale miners will also be protected from arrests and raids by the ZRP and ZimParks, thereby minimising conflicts that occur between the law enforcers and the small-scale miners.

5.4.2 Educating the Small-Scale Miners on the Importance of Sustainable Mining Operations

The research showed that most of the small-scale miners acknowledged how their mining operations degrade both the terrestrial and aquatic environments. There is need to continue making attempts to educate these small-scale miners on the deleterious

impacts of mining especially with regards to underground water contamination and pollution as well as soil contamination. Small-scale miners are usually under the impression that the disposal of the chemicals they use for example, mercury, cyanide and effluent into dug pits is the proper disposal of these chemicals which does not harm the environment. Organisations that advocate for the protection of the environment could assist in teaching small-scale miners on the best ways of disposing chemicals which does not harm ecosystems and human health. Other alternatives can be recommended to the small-scale miners so that they avoid using mercury. Incentives can be given by gold companies for example Fidelity for gold that would have been processed using sustainable methods. Mining in general is destructive. The local leadership can allocate certain areas for planting of trees so that they compensate or trade-off for areas that are being excavated. There is an unavoidable need to continue educating artisanal miners.

5.4.3 Capacitation of Authorities, Institutions and Leaders

Institutions and departments for example the ZRP, ZimParks and EMA which generally clash with illegal mining activities should be capacitated so that they are able to smoothly execute their mandates. These authorities often lack both financial and human resources which also causes corruption. Funding these organisations eliminates or reduces incidences of corruption and raises the morale of the departments who will effectively carry out their duties. Some small-scale miners are violent and the ZRP and ZimParks personnel needs to be fully armed in order to approach them and make arrests.

Empowering local leadership to govern mining also helps to manage local resources. This potentially will improve the way in which the environment is protected as local leadership is deeply rooted in protection of natural resources through the cultural beliefs.

5.4.4 Review of the Legislation to Protect Areas From Mining Invasions

As presented in Chapter 1 and 2, there seems to be legislations that run parallel to each other. Communal lands in Zimbabwe have traditional and ancestral values to resident communities. Once minerals have been discovered in particular communal areas, the government should make efforts to protect the resident communities from foreign illegal miners who in most cases do not consider the socio-economic and environmental impacts of illegal mining. This requires legislation that supports both farming and mining operations.

5.4.5 Government and NGO Support of Other Livelihoods

The government and other NGOs, (including Civil Society Organisation [CSOs]), should embark on programmes that promote other socio-economic livelihoods in areas where small-scale mining activities occur. These livelihoods could be in the form of fish farming, broiler production, piggery, wildlife marketing, curio shops and crafts work e.g., basket weaving. These activities may potentially benefits vulnerable groups who might not be able to perfectly fit in to participate in small-scale mining activities. This can significantly reduce the number small-scale miners in Matobo District which will minimize pressure on the environment. Start-up capitals and loans may be provided to these groups so that they establish markets that are easily accessible to the local communities in the Matobo District to promote the alternative livelihoods. Since Matobo

District attracts tourists due to the presence of Matopos National Park, projects such as basket weaving and beads making could be supported.

5.4.6 Recommendations for Further Research

This study was conducted in Matobo District. Whilst data from this single district presents an important issue of conflicts between communities and small-scale miners, this is biased towards one district in Matabeleland South. There is need to conduct a wide range of surveys in Zimbabwe to document the variations between regions in Zimbabwe and how these conflicts are being addressed. Future studies should also aim to document the actual economic benefits of small-scale mining as findings from this study gave absolute figures which did not account for expenses incurred by the miners as well as the unclearness of whether the stated figures were shared amongst the small-scale miners.

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APPENDICES

APPENDIX 1: Questionnaire for Host Community Members

TITLE OF RESEARCH: EXPLORING CONFLICT BETWEEN ARTISANAL MINERS AND HOST COMMUNITIES IN MATABELELAND SOUTH

DATE:
Instructions:

- Please tick in the appropriate box
- Fill in the space given
- The questionnaire is made up of Section A and B

Section A: DEMOGRAPHIC DETAILS

1. Please indicate your gender

Male	Female	Other

2. Please indicate your age

Less than 20	20-39	40-49	50-59	60+

3. Years living in the area

1-4 yrs	5-9 yrs	10-14 yrs	15-20 yrs	20 yrs +

4. What are your main sources of income?

_____
_____
_____
_____
_____

Section B: Conflicts in farming and mining

5. Describe your source of income in the community area and estimate the income that you get from your work in the community per year in USD.

_____

6. Has mining always been there in your area or it recently emerged?

_____
_____
_____
_____
_____

7. **Is the figure that you gave above comparable with the figure that miners get per year? Explain whether you get more than miners per year.**

8. **Who are the small-scale miners?** *Tick the appropriate boxes*

Local people	
Outsiders: People from outside Matobo District	
Both local and outsiders	
Companies	

9. **Describe the conflicts and issues surrounding your relationship with miners.**

10. **State the level of agreeing or disagreeing to the statements in the following table**

Construct	**Strongly agree**	**Agree**	**Not sure**	**Disagree**	**Strongly disagree**
Mining brings economic development in the area					
Mining damages the environment					
Mining is affecting agriculture					
Mining is causing health problems					
Mining is causing crime to escalate in the area					

11. **Does the government offer support in resolving the miner-community conflicts in Matobo District?** ***Yes/No.***

_____
_____

12. **If answered Yes in Question 11, elaborate on how the government attempts to resolve miner-farmer-community conflicts in Matobo District.**

_____
_____
_____
_____
_____
_____

13. **Besides the government, are there other organisations that offer support in resolving the miner-farmer-community conflicts in Matobo District?** ***Yes/No.***

_____

14. **If answered Yes in Question 13, elaborate on how the other organisations attempt to resolve miner-farmer-community conflicts in Matobo District.**

_____
_____
_____
_____
_____
_____

15. **Any other issues?**

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

THANK YOU FOR PARTICIPATING

APPENDIX 2: Questionnaire for Small-scale Miners

TITLE OF RESEARCH: EXPLORING CONFLICT BETWEEN ARTISANAL MINERS AND HOST COMMUNITIES IN MATABELELAND SOUTH

DATE:
Instructions:

- Please tick in the appropriate box
- Fill in the space given
- The questionnaire is made up of Section A and B

Section A: DEMOGRAPHIC DETAILS

1. Please indicate your gender

Male	Female	Other

2. Please indicate your age

Less than 20	20-39	40-49	50-59	60+

3. Years living in the area

1-4 yrs	5-9 yrs	10-14 yrs	15-20 yrs	20 yrs +

4. What are your main sources of income?

_____
_____
_____
_____
_____

Section B: Conflicts in farming and mining

5. Estimate the income that you get from mining per year in USD.

_____

6. Has mining always been there in your area or it recently emerged?

_____
_____
_____
_____
_____
_____

7. Is the figure that you gave above comparable with the figure that farmers get per year? Explain whether you get more than farmers per year.

_____
_____
_____
_____
_____

8. Who are the small-scale miners? *Tick the appropriate boxes*

Local people	
Outsiders: People from outside Matobo District	
Both local and outsiders	
Companies	

9. Describe the conflicts and issues surrounding your relationship with farmers and/or the host community.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

10. State the level of agreeing or disagreeing to the statements in the following table

Construct	**Strongly agree**	**Agree**	**Not sure**	**Disagree**	**Strongly disagree**
Mining brings economic development in the area					
Mining damage the environment					
Mining is affecting agriculture					
Mining is causing health problems					
Mining is causing crime to escalate in the area					

11. **Does the government offer support in resolving the miner-community conflicts in Matobo District?** ***Yes/No.***

12. **If answered Yes in Question 11, elaborate on how the government attempts to resolve miner-farmer-community conflicts in Matobo District.**

13. **Besides the government, are there other organisations that offer support in resolving the miner-farmer-community conflicts in Matobo District?** ***Yes/No.***

14. **If answered Yes in Question 13, elaborate on how the other organisations attempt to resolve miner-farmer-community conflicts in Matobo District.**

15. **Any other issues?**

THANK YOU FOR PARTICIPATING

APPENDIX 3: Ethics Clearance Letter

AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE (AUREC)

P.O. Box 1320 Mutare, Zimbabwe, Off Nyanga Road, Old Mutare-Tel (+263-20) 60075/60026/61611 Fax: (+263 20) 61785 Website: www.africau.edu

Ref: AU 3375/24

3 May, 2024

MAXINE K TADYANEHONDO
C/O Africa University
Box 1320
MUTARE

RE: **EXPLORING CONFLICT BETWEEN MINERS AND HOST COMMUNITIES IN MATABELELAND SOUTH**

Thank you for the above-titled proposal that you submitted to the Africa University Research Ethics Committee for review. Please be advised that AUREC has reviewed and approved your application to conduct the above research.

The approval is based on the following.

a) Research proposal

- **APPROVAL NUMBER** AUREC 3375/24
  This number should be used on all correspondences, consent forms, and appropriate documents.
- **AUREC MEETING DATE** NA
- **APPROVAL DATE** May 3, 2024
- **EXPIRATION DATE** May 3, 2025
- **TYPE OF MEETING**: Expedited
  After the expiration date, this research may only continue upon renewal. A progress report on a standard AUREC form should be submitted a month before the expiration date for renewal purposes.
- **SERIOUS ADVERSE EVENTS** All serious problems concerning subject safety must be reported to AUREC within 3 working days on the standard AUREC form.
- **MODIFICATIONS** Prior AUREC approval is required before implementing any changes in the proposal (including changes in the consent documents)
- **TERMINATION OF STUDY** Upon termination of the study a report has to be submitted to AUREC.

Yours Faithfully

MARY CHINZOU
ASSISTANT RESEARCH OFFICER: FOR CHAIRPERSON
AFRICA UNIVERSITY RESEARCH ETHICS COMMITTEE

APPENDIX 4: Letter to Matobo Rural Distrist Council

K5142 Matopos National Park
Bulawayo
Matopo

25 March 2024

The CEO
Matobo Rural District Council
Matobo District

REF: APPLICATION FOR APPROVAL TO CARRY OUT DATA COLLECTION IN RHODES MATOPOS ESTATE

Dear Mr Sibanda

My name is Maxine K Tadyanehondo, Ecologist Matopos National Park. I am currently enrolled with Africa University studying towards a Masters Degree in Public Policy and Governance. I am kindly requesting for your approval to carry out my data collection within the Rhodes Matopos Estate focusing on the research topic **EXPLORING CONFLICT BETWEEN MINERS AND HOST COMMUNITIES IN MATABELELAND SOUTH.**

My data collection is mainly targeting Rhodes Estate mining area which is under the management of Matopos National Park, although, I would be interested in expanding the research given the opportunity even after school deadlines.

Attached are the consent forms that I have completed using a template from the ethics department at Africa University. Attached also are the questionnaires that I intend on requesting the participants to fill in with respect of them being a miner, farmer or host community.

I look forward to a favourable response.

Thank you.
Yours Faithfully

Maxine K Tadyanehondo

APPENDIX 5: Authorities Informed Consent

0775474242 (WhatApp and calls)

Mktadya2@gmail.com

Ktadyanehondo@zimparks.org.zw

AUTHORITIES INFORMED CONSENT GUIDE

My name is MAXINE KUNDAI TADYANEHONDO **a final year** MASTER IN PUBLIC POLICY AND GOVERNANCE **student from** AFRICA UNIVERSITY. **I am carrying out a study on** EXPLORING CONFLICT BETWEEN MINERS AND HOST COMMUNITIES IN MATABELELAND SOUTH, ZIMBABWE. **I am kindly asking you to participate in this study by answering** THE QUESTIONS /**filling in** THE QUESTIONNARE PROVIDED.

What you should know about the study: THIS STUDY IS FOR RESEARCH PURPOSES AND SHALL NOT BE USED BY ANY PERSONS OUTSIDE OF THE ACADEMIC SUPERVISORS AND RESEARCHER.

Purpose of the study:

The purpose of the study is TO INVESTIGATE THE ISSUE OF CONFLICTS BETWEEN MINERS AND THE INDIGENOUS HOST COMMUNITY IN MATOBO DISTRICT. Host communities appear to be helpless, since efforts to curb illegal mining activities seem to be non-existent and they continue to lose their lands. The parallel policies from the Ministry of Mines and Mining development, and the Ministry of Lands and Rural Resettlement respectively exacerbates the conflicts. The study aims to harmonise the land tenure system such that the two ministries can have complimenting policies that enable progression and development rather than stagnation, antagonism and regression within the economy. It aims to reduce negative impacts on the socio-economy, particularly severe negative impacts on the livelihoods of the affected communities. The study can also serve as a baseline study on the land use policies in Matobo District, Matabeleland South and for the whole of Zimbabwe.

You were selected for the study because YOU ARE A STAKEHOLDER AND CAN INFLUENCE THE HARMONISATION OF THE POLICIES THROUGH YOUR INPUT. THERE ARE PARTICIPANTS FROM THE HOST COMMUNITY, FARMERS AND MINERS. EACH ONE WILL CONTRIBUTE INFORMATION THAT WILL BE ANALYSED TO INFORM THE RESEARCH AND GIVE A BETTER UNDERSTANDING OF THE MATOBO DISTRICT FARMERS-MINERS CONFLICT, IF ANY.

Procedures and duration

If you decide to participate you will BE REQUIRED TO FILL IN THE QUESTIONNARE AND CONSENT FORMS ONLY. It is expected that this will take about 5 MINUTES TO EXPLAIN WHAT IS NEEDED AND FOR YOU TO FILL IN THE QUESTIONNARE.

Risks and discomforts

THE DISCOMFORTS MAY COME IN STATING YOUR ESTIMATED INCOME FROM FARMING, MINING, OR WORK IN THE COMMUNITY DEPENDING ON YOUR PROFESSION/WORK. BE ASSURED THIS INFORMATION IS FOR RESEARCH AND SHALL NOT BE USED OUTSIDE OF THE RESEARCH CONSTRAINTS. **NO NAMES SHALL BE USED FOR THE RESEARCH.**

Benefits and/or compensation

THE BENEFITS ARE THAT IF THE RESEARCH IS FRUITFULL, IT MAY CONTRIBUTE TO THE BASELINE INFORMATION GATHERING FOR THE CONSULTATIVE DECISION MAKING IN POLICY FORMULATIONS.

Confidentiality
ANY INFORMATION THAT IS OBTAINED IN THE STUDY THAT CAN BE IDENTIFIED WITH THE PARTICIPANT WILL NOT BE DISCLOSED WITHOUT THEIR PERMISSION. NAMES AND ANY OTHER IDENTIFICATION WILL NOT BE ASKED FOR IN THE QUESTIONNAIRES.

Voluntary participation
PARTICIPATION IN THIS STUDY IS VOLUNTARY. IF PARTICIPANT DECIDES NOT TO PARTICIPATE IN THIS STUDY, THEIR DECISION WILL NOT AFFECT THEIR FUTURE RELATIONSHIP WITH THE RELATIVE AUTHORITIES FOR THE LAND INCLUDING ZIMPARKS. IF YOU CHOSE TO PARTICIPATE, YOU ARE FREE TO WITHDRAW YOUR CONSENT AND TO DISCONTINUE PARTICIPATION WITHOUT PENALTY.

Offer to answer questions
BEFORE YOU SIGN THIS FORM, PLEASE ASK ANY QUESTIONS ON ANY ASPECT OF THIS STUDY THAT IS UNCLEAR TO YOU. YOU MAY TAKE AS MUCH TIME AS NECESSARY TO THINK IT OVER.

Authorisation
IF YOU HAVE DECIDED TO **APPROVE FOR THE HOST COMMUNITY, OR MINERS AND/OR FARMERS** TO PARTICIPATE **WILLINGLY** IN THIS STUDY, PLEASE SIGN THIS FORM IN THE SPACE PROVIDE BELOW AS AN INDICATION THAT YOU HAVE READ AND UNDERSTOOD THE INFORMATION PROVIDED ABOVE AND HAVE AGREED FOR THEM TO PARTICIPATE.

---------- ----------
Name of AUTHORISER (please print) Date

Signature of AUTHORISER

If you have any questions concerning this study or consent form beyond those answered by the researcher including questions about the research, your rights as a research participant, or if you feel that you have been treated unfairly and would like to talk to someone other than the researcher, please feel free to contact the Africa University Research Ethics Committee on telephone (020) 60075 or 60026 extension 2156 email aurec@africau.edu

Name of Researcher: MAXINE KUNDAI TADYANEHONDO

APPENDIX 6: Participants Informed Consent

PARTICIPANT INFORMED CONSENT GUIDE

My name is MAXINE KUNDAI TADYANEHONDO **a final year** MASTER IN PUBLIC POLICY AND GOVERNANCE **student from** AFRICA UNIVERSITY. **I am carrying out a study on** EXPLORING CONFLICT BETWEEN MINERS AND HOST COMMUNITIES IN MATABELELAND SOUTH, ZIMBABWE. **I am kindly asking you to participate in this study by answering** THE QUESTIONS /**filling in** THE QUESTIONNARE PROVIDED.

What you should know about the study: THIS STUDY IS FOR RESEARCH PURPOSES AND SHALL NOT BE USED BY ANY PERSONS OUTSIDE OF THE ACADEMIC SUPERVISORS AND RESEARCHER.

Purpose of the study:

The purpose of the study is TO INVESTIGATE THE ISSUE OF CONFLICTS BETWEEN MINERS AND THE INDIGENOUS HOST COMMUNITY IN MATOBO DISTRICT. Host communities appear to be helpless, since efforts to curb illegal mining activities seem to be non-existent and they continue to lose their lands. The parallel policies from the Ministry of Mines and Mining development, and the Ministry of Lands and Rural Resettlement respectively exacerbates the conflicts. The study aims to harmonise the land tenure system such that the two ministries can have complimenting policies that enable progression and development rather than stagnation, antagonism and regression within the economy. It aims to reduce negative impacts on the socio-economy, particularly severe negative impacts on the livelihoods of the affected communities. The study can also serve as a baseline study on the land use policies in Matobo District, Matabeleland South and for the whole of Zimbabwe.

You were selected for the study because YOU ARE A STAKEHOLDER AND CAN INFLUENCE THE HARMONISATION OF THE POLICIES THROUGH YOUR INPUT. THERE ARE PARTICIPANTS FROM THE HOST COMMUNITY, FARMERS AND MINERS. EACH ONE WILL CONTRIBUTE INFORMATION THAT WILL BE ANALYSED TO INFORM THE RESEARCH AND GIVE A BETTER UNDERSTANDING OF THE MATOBO DISTRICT FARMERS-MINERS CONFLICT, IF ANY.

Procedures and duration
If you decide to participate you will BE REQUIRED TO FILL IN THE QUESTIONNARE AND CONSENT FORMS ONLY. It is expected that this will take about 5 MINUTES TO EXPLAIN WHAT IS NEEDED AND FOR YOU TO FILL IN THE QUESTIONNARE.

Risks and discomforts
THE DISCOMFORTS MAY COME IN STATING YOUR ESTIMATED INCOME FROM FARMING, MINING, OR WORK IN THE COMMUNITY DEPENDING ON YOUR PROFESSION/WORK. BE ASSURED THIS INFORMATION IS FOR RESEARCH AND SHALL NOT BE USED OUTSIDE OF THE RESEARCH CONSTRAINTS. **NO NAMES SHALL BE USED FOR THE RESEARCH.**

Benefits and/or compensation
THE BENEFITS ARE THAT IF THE RESEARCH IS FRUITFULL, IT MAY CONTRIBUTE TO THE BASELINE INFORMATION GATHERING FOR THE CONSULTATIVE DECISION MAKING IN POLICY FORMULATIONS.

Confidentiality
ANY INFORMATION THAT IS OBTAINED IN THE STUDY THAT CAN BE IDENTIFIED WITH THE PARTICIPANT WILL NOT BE DISCLOSED WITHOUT THEIR PERMISSION.

NAMES AND ANY OTHER IDENTIFICATION WILL NOT BE ASKED FOR IN THE QUESTIONNAIRES.

Voluntary participation

PARTICIPATION IN THIS STUDY IS VOLUNTARY. IF PARTICIPANT DECIDES NOT TO PARTICIPATE IN THIS STUDY, THEIR DECISION WILL NOT AFFECT THEIR FUTURE RELATIONSHIP WITH THE RELATIVE AUTHORITIES FOR THE LAND INCLUDING ZIMPARKS. IF YOU CHOSE TO PARTICIPATE, YOU ARE FREE TO WITHDRAW YOUR CONSENT AND TO DISCONTINUE PARTICIPATION WITHOUT PENALTY.

Offer to answer questions

BEFORE YOU SIGN THIS FORM, PLEASE ASK ANY QUESTIONS ON ANY ASPECT OF THIS STUDY THAT IS UNCLEAR TO YOU. YOU MAY TAKE AS MUCH TIME AS NECESSARY TO THINK IT OVER.

Authorisation

IF YOU HAVE DECIDED TO PARTICIPATE IN THIS STUDY, PLEASE SIGN THIS FORM IN THE SPACE PROVIDE BELOW AS AN INDICATION THAT YOU HAVE READ AND UNDERSTOOD THE INFORMATION PROVIDED ABOVE AND HAVE AGREED TO PARTICIPATE.

---------- ----------

Name of Research Participant (please print) Date

Signature of Research Participant or legally authorised representative

If you have any questions concerning this study or consent form beyond those answered by the researcher including questions about the research, your rights as a research participant, or if you feel that you have been treated unfairly and would like to talk to someone other than the researcher, please feel free to contact the Africa University Research Ethics Committee on telephone (020) 60075 or 60026 extension 2156 email aurec@africau.edu

Name of Researcher: MAXINE KUNDAI TADYANEHONDO