BINDURA UNIVERSITY OF SCIENCE EDUCATION

FACULTY OF SCIENCE

DEPARTMENT OF SUSTAINABLE DEVELOPMENT

Mimosa Mining Company's community nutritional gardens on rural household livelihoods as a Corporate Social Responsibility initiative in Zvishavane

Submitted by Hazel Sibanda (B225629B)

A project report submitted in partial fulfilment of the requirements for the BSc Degree in Development Studies

Supervisor: Dr Manayangadze

APPROVAL FORM

The signatory attests that they reviewed this thesis and approved its presentation for marketing after confirming that it meets departmental requirements.

Signature.....

Date.....

Chairman of Department 

DECLARATION

I, Hazel Sibanda, declare that this dissertation is my original work and has not been submitted to any other university or institution for the award of any degree. All sources used in this study have been acknowledged through references and citations.

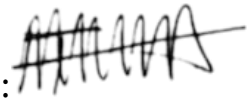
Student Signature: _____

Date : _____

Supervisors

I confirm that this dissertation has been submitted for examination with my approval as the university supervisor

Supervisor's Name: Dr Manayangadze

Signature : 

ACNOWLEDGMENTS

I want to express my profound gratitude to Almighty God for granting me life, strength, wisdom, courage, and perseverance throughout the entire period of this study. His guidance and grace enabled me to overcome numerous challenges encountered during the research process and complete this academic journey.

I sincerely extend my deepest appreciation to my supervisors and lecturers for their professional guidance, patience, constructive criticism, and continuous encouragement throughout the study. Their academic expertise, insightful comments, and unwavering support played a significant role in shaping this research and improving the quality of the final work. I remain truly indebted to them for their dedication and commitment to my academic development.

I would also like to express heartfelt appreciation to my family members for their endless love, prayers, emotional support, and encouragement during the course of my studies. Their sacrifices, understanding, and motivation provided me with the strength and determination needed to remain focused and committed to achieving this goal. Special thanks are also extended to my friends and colleagues for their encouragement, assistance, and moral support throughout this research journey.

Special appreciation goes to Mimosa Mining Company for granting me the opportunity to conduct this research and for providing the necessary cooperation and assistance during data collection. I am equally grateful to the community members of Zvishavane and all respondents who willingly participated in this study by sharing their experiences, views, and valuable information. Their contributions greatly enriched the quality and relevance of this research.

Furthermore, I would like to acknowledge all individuals and institutions who contributed directly or indirectly to the successful completion of this study. Although it may not be possible to mention everyone by name, your support and contributions are sincerely appreciated and will always be remembered.

ABSTRACT

This study assessed Mimosa Mining Company's community nutritional gardens on rural household livelihoods in Zvishavane as part of its Corporate Social Responsibility (CSR) initiatives. The research sought to examine the extent to which the nutritional gardens contributed to improving the socio-economic welfare of rural households and promoting sustainable community development.

The study adopted a convergent mixed-methods research design that integrated both qualitative and quantitative approaches in order to obtain comprehensive and reliable findings. Data were collected through questionnaires, interviews, and focus group discussions involving community members, beneficiaries, and key stakeholders associated with the project. The use of multiple data collection methods enhanced the validity and depth of the research findings.

The findings revealed that the nutritional gardens made a positive contribution towards improving household food security, increasing dietary diversity, and generating supplementary household income for participating families. Beneficiary households reported improved access to fresh vegetables and nutritious foods, which helped reduce food shortages and improve nutrition at the household level. In addition, some households were able to sell surplus produce, thereby contributing to income generation and livelihood enhancement.

Despite these positive outcomes, the study also established that several challenges limited the long-term transformative impact and sustainability of the initiative. Key challenges identified included limited market access for agricultural produce, weak governance and management structures, inadequate resources and technical support, water shortages, and unequal distribution of benefits among community members. These constraints affected productivity, participation, and the overall sustainability of the nutritional garden projects.

Based on the findings, the study recommends that Mimosa Mining Company strengthen community participation and inclusivity in project planning and management, improve market integration and value chain support for beneficiaries, and establish sustainable mechanisms for long-term project maintenance. The study further recommends enhanced stakeholder collaboration, continuous training of beneficiaries, and improved monitoring and evaluation

systems to ensure that the nutritional gardens achieve lasting socio-economic benefits for rural households in Zvishavane.

LIST OF ACRONYMS

Acronym	Meaning
AGRITEX	Agricultural Technical and Extension Services
CSR	Corporate Social Responsibility
CSOT	Community Share Ownership Trust
DRC	Democratic Republic of Congo
FAO	Food and Agriculture Organization
FPIC	Free Prior and Informed Consent
HDDS	Household Dietary Diversity Score
IBA	Impact and Benefit Agreement
SDGs	Sustainable Development Goals
TSM	Towards Sustainable Mining
UNDP	United Nations Development Programme

Table of Contents

Contents

DECLARATION 2

ACNOWLEDGMENTS 5

ABSTRACT 6

LIST OF ACRONYMS 8

Chapter 1 Introduction 12

1.1Background 12

1.2 Problem statement 13

1.3 Research objectives 14

1.31Main objective 14

1.3.2 Specific objectives 14

1.4 Research questions 14

1.4.1 Main research question 14

1.4.2 Specific Research Questions 15

1.5 Significance of the Study 15

1.6 Organization of the study 15

1.7 Definition of key terms 16

CHAPTER 2 Literature Review 17

2.1 Introduction 17

2.2 Global Perspective 17

2.3 African Perspective 20

2.4 Synthesis: The African Experience 21

2.5 Zimbabwean Perspective 22

2.6 Knowledge Gap Analysis 23

2.7 Summary 23

CHAPTER 3 Methodology 25

3.1 Introduction 25

3.2 Research Design 25

3.3 Study Area 26
3.4 Target Population 26
3.5 Sampling Procedure and Sample size: 27
3.6 Data Collection Methods 27
3.6 .1Primary Data 27
3.6.2 Secondary Data 28
3.7 Research Instruments 28
3.7.1 Questionnaire 28
3.7.2 Key Interview Guide 28
3.8 Data analysis 28
3.8.2 Quantitative data analysis 28
3.8.3 Qualitative data analysis 28
3.9 Validity and reliability 29
3.10 Ethical Considerations 29
3 .11: Limitations of the study 29
3.12: Summary 29
Chapter 4: Data presentation and discussions 30
4.1: Introduction 30
4.2 Socio-Demographic Characteristics of the Respondents. 30
Table 4.1: Socio-Demographic Characteristics of Respondent Households (n = 150) 30
4.3: The impact of community nutritional gardens on food security. 32
4.3.1 Dietary Diversity Score (HDDS) in the Household. 32
4.3.2 Interviewee Household Food Insecurity Scale (HFIAS) Results. 33
4.3.3 Stability of Meal Frequency and Seasonality. 34
Table 4.4: Change in Meal Frequency Per Day (n = 150) 34
4.4: Effectiveness of Community Nutritional Gardens on Household Income 34
4.4.1 Sources of Income and Changes Over Time 34
Table 4.6: Estimated Monthly Household Income from Garden Produce Sales (n = 150) 35
4.4.2 Effects on expenditures and savings/effects on economic multiplier. 35

Table 4.7: Reported Change in Monthly Food Expenditure and Use of Freed Income (n = 136 households with measurable change) 36
4.4.3 Qualitative Insights into Income Effects 36
4.5: Institutional Governance, Leadership and Long-Term Sustainability. 37
4.5.1 Governance and Management provisions. 37
Table 4.9: Household Awareness and Assessment of Garden Governance(n = 150) 37
4.5.2 Governance and Sustainability. 38
4.5.3 Thematic Analysis: Constricted/Enabling Factors of Sustainability. 39
4.5.4 Sustainability Index Assessment 41
Table 4.10: Composite Sustainability Index – Garden Programme Assessment by Key Informants (n = 10) 41
4.6: Discussion of findings 42
4.8 Chapter Summary 45
CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS 46
5.1 Introduction 46
5.2 Conclusions 46
5.2.1: Effectiveness of food security. 46
5.2.2 Effectiveness of household income. 47
5.2.3: Institutional Governance and Long-Term Sustainability. 47
5.3 Recommendations 48
5.3.1 Mimosa Mining Company recommendations. 48
5.3.2 Community Garden Governance Structures Recommendations. 49
5.3.3 Recommendations for AGRITEX 50
5.3.4 Recommendations for Zvishavane Rural District Council 50
5.4 Contribution of the study. 51
5.5 Future Research Recommendations. 51
5.6 Final Reflection 52
Research Tools 58

Chapter 1 Introduction

1.1Background

Multinational corporations are playing an ever more active role in the development of society throughout the world. Corporate Social Responsibility (CSR) was once regarded as a philanthropic, or at best a secondary, strategic element, but today it is an integral part of the strategic focus and positioning. This shift is emblematic of the increased awareness that companies need to behave in ways that benefit and promote their communities and their surroundings (Carroll, 2016). The extractive sector is facing increasing demands to remedy the environmental and social effects it has in many developing areas, particularly in Africa. CSR programs have become important vehicles that can seek to address these challenges, engender long-term development, and woo the local people over to trust and approval. Of the different strategies for CSR, those that aim for food security and nutrition improvements have been picked up as pragmatic solutions to basic human needs. These activities are also in very close line with the global development objectives, including SDG2 (Zero Hunger) and SDG3 (Good Health and Well-being) of the United Nations Sustainable Development Goals.

The mining sector is considered to be one of the key sources of foreign currency and economic development in Zimbabwe, making mining companies key players in the rural development agenda. Much of rural people's livelihoods face food and nutrition security challenges after years of economic instability, frequent droughts, which are associated with climate change, and reliance on rain-fed farming (Mkodzongi & Spiegel, 2020). There's an implied and an explicit expectation that big mining companies can fix the developmental gap, particularly when the state is not properly playing its role in providing strong social support systems. Corporate Social Responsibility (CSR) has gone beyond being a business strategy to become a socio-political responsibility for the continuing legitimacy and social acceptance of the mining industry (Mabhena, 2020).

The Zvishavane District is situated in the Midlands Province of Zimbabwe and has a semi-arid climatic condition with sandy soil conditions in the district much affecting subsistence farming. Although the region is rich with mineral resources, this has not led to wide-spread economic empowerment of the communities concerned. This is an example of the "resource curse" where poverty is high in the face of high mineral extraction activity (Shoko, 2022).

Many farmers' families struggle with precarious livelihoods, relying on harvests from particular periods, informal trade, and remittances. The gravity of malnutrition as a problem that needs to be acted upon is particularly apparent in the number of malnourished women and children, and the need for sustainable and nutrition-based interventions to improve community well-being is urgent.

In the midst of these complicated socio-economic conditions, the Mimosa Mining Company has developed a CSR programme in its community nutrition gardens in Zvishavane. It is part of the company's efforts to improve local food security and provide support to these gardens in the form of water, inputs, fencing, and technical advice. Promoting better nutrition for households, diversifying diets, and providing income opportunities from surplus produce is the aims of the project, which represents a sustainable, community-led response to seasonal availability of foodstuffs (Mimosa Mining Company, 2023).

The establishment of community nutrition gardens by Mimosa Mining Company is a good example of CSR, but limited attention has been paid to the potential impact of these gardens on rural household livelihoods. A lack of understanding of what the socio-economic and nutritional effects are from the participating family's perspective is evident. Studies on other agriculture-related initiatives indicate that the achievements of such initiatives are not guaranteed but depend on community participation, leadership, and market opportunities (Toriro & Mhlanga, 2021). There are critical questions to be asked: Do these gardens have an impact on the steady availability of healthy food? Do they make money and increase the resilience of households? What are the issues to address in terms of sustainability, management, and benefit sharing? In this study, the idea was to critically assess the impact that the garden programme is having on rural livelihoods in Zvishavane; in order to provide data-based answers on how effective this CSR programme is in a mineral-rich and economically vulnerable area.

1.2 Problem statement

Despite the wealth of mineral resources, the socio-economic situation of communities living in the vicinity of rural areas of Zvishavane District is still poor. Companies such as Mimosa

Mining have not yet produced increased prosperity for many of the local communities, despite the arrival of the mines: poverty, unemployment and food insecurity are commonplace, and this is referred to as the "resource curse" (Shoko, 2022). To tackle these challenges, Mimosa has initiated CSR initiatives such as community nutritional gardens to support enhanced intra-household food security, increased dietary diversity, and income generation.

But one can note that there is a lack of independent and data-based assessment of the real impact of these gardens on rural livelihoods. Though they are visible CSR projects, their ability to improve nutrition, increase nutrition security, increase household income, and enhance resilience is largely unrecorded. This absence of empirical testing makes it difficult to believe that such measures have an impact on sustainable development, as they are merely symbolic and fail to take account of systemic challenges (Mabhena, 2020).

1.3 Research objectives

1.31Main objective

1. To assess the effectiveness of community nutritional gardens on rural household livelihoods in Zvishavane

1.3.2 Specific objectives

1. To assess the effectiveness of community nutritional gardens in improving food security among rural residents.

2. To assess the effectiveness of community nutritional gardens on improving household income among rural residents.

3. To assess the effectiveness of institutional governance and leadership on the long-term sustainability of rural household livelihoods of the nutritional gardens in Zvishavane

1.4 Research questions

1.4.1 Main research question

1. What is the effectiveness of community nutritional gardens on rural household livelihoods in Zvishavane?

1.4.2 Specific Research Questions

1. How have community nutritional gardens influenced food security among rural residents?

2. How have community nutritional gardens influenced household income among rural residents?

3. How effective is institutional governance and leadership in the long-term sustainability of the nutritional gardens?

1.5 Significance of the Study

Given the objectives, the research has significant academic and practical implications in trying to create a data-based framework for designing, implementing, and evaluating Corporate Social Responsibility (CSR) initiatives in the extractive industry. It will reveal important managerial and institutional factors that either strengthen or weaken these practices, like inclusive community engagement and governance. These lessons will enable mining firms, policymakers, and development practitioners to recognize and correct unsuccessful practices, making mining more sustainable and effective. In the end, this will support the implementation of CSR strategies that address the needs of communities at the local level and make a significant impact on improving household livelihoods in mining communities.

1.6 Organization of the study

Chapter 1: covered the introduction, background, problem statement, research objectives, research questions, and the significance of the study.

Chapter 2: covered the literature review, which consisted of the introduction, global perspective, African perspective, knowledge gap analysis, and the summary.

Chapter 3: Covered methodology, research design, study area, which included the map and the data collection, as well as the tools used.

Chapter 4 : Covered data presentation and discussions, which were obtained using key informant guides and questionnaires, as well as tables.

Chapter 5 :Covered the summary of the results that were obtained in Chapter 4.

1.7 Definition of key terms

Community: refers to a group of people residing in a shared geographical area who are bound by common socio-economic characteristics, livelihood challenges, and collective engagement with external actors, though they are not homogeneous and are often differentiated by power dynamics and access to resources (Larmer & Laterza, 2017).

Nutritional Gardens: Kumari et al. (2025) define a nutritional garden as "a small-scale garden that grows a diverse range of vegetables and fruits to improve dietary diversity, nutritional security, and income, particularly for households in rural and peri-urban areas with limited market access."

Rural household: Based on the operational definitions used by the World Bank in contemporary reports (such as the *Thailand Rural Income Diagnostic*, 2022), a "rural household" is generally defined as a group of individuals living in a designated rural area (as classified by national census authorities) who share living arrangements and pool resources, primarily deriving their livelihood from agricultural activities, natural resources, or off-farm labour

Livelihoods: "A livelihood is defined as the combination of the capabilities, assets, and activities that people use to earn a living and meet their basic needs, including food, shelter, and social well-being. A sustainable livelihood can withstand and recover from shocks and stresses while maintaining or enhancing assets and capabilities for future generations."(United Nations Development Programme [UNDP], 2017, p. 24)

Social responsibility: "Corporate social responsibility encompasses the economic, legal, ethical, and discretionary (philanthropic) expectations that society has of organizations at a given point in time."(Carroll, 2016, p. 2)

CHAPTER 2 Literature Review

2.1 Introduction

Many mining areas around the world, like Zvishavane, are grappling with challenges such as the need for socio-economic development at the grassroots in the face of subsoil mineral wealth. Despite the mineral resources in the area, the livelihood security of the rural households is under serious threat here. Since then, Mimosa Mining Company has responded by creating community nutritional gardens as one of their most important Corporate Social Responsibility (CSR) programs that seeks to affirm the well-being of communities. But a critical gap lies between theory and empirical evidence of the impacts of such CSR projects on the ground. Although literature exists on mining CSR in Zimbabwe and agricultural interventions separately, there is a gap in the literature in terms of the direct impact of the CSR (Mimosa) nutrition gardens on food security, income, and overall livelihood sustainability of the participating households. This study aims to address this exact gap.

2.2 Global Perspective

Progressive Corporate Social Responsibility (CSR) practices in the Canadian mining industry have become a global frontrunner in both developing and implementing such practices. The country's approach is not to depend on a single piece of legislation, but is a combination of soft law, or voluntary industry standards, emerging legal frameworks, and an industry decision to seriously engage with Indigenous communities. In the last ten years, this has changed from risk avoidance to a model of reconciliation, mutual benefit, and measurable accountability.

The Towards Sustainable Mining (TSM) program developed by the Mining Association of Canada (MAC) is at the center of Canada's industry-led approach to CSR. TSM is mandatory for all MAC, and they are required to self-evaluate once a year and report on a variety of areas, including tailings management, the environment, and local and Indigenous communities' engagement. The periodic external verification processes every 3 years is one of the unique characteristics of TSM, helping to build and retain transparency and ensure companies are not making symbolic commitments but meaningful and verifiable actions (Mining Association of Canada, 2023).

The self-regulatory model is supported by a robust legal and ethical framework (constitutional obligation to consult and accommodate Aboriginal people). This duty, upheld by Canada's Supreme Court, requires that governments and – in many cases – project developers interact with Indigenous communities when their rights may be affected. As a result, mining companies have put in place effective, ongoing consultation processes. This is complemented by the principle of Free, Prior and Informed Consent (FPIC), which, although not yet fully formulated in the domestic legislation it has become a best-practice standard. It is important to note that scholars make the point that FPIC should be treated as an ongoing relationship-building process and not as a one-time consent, which is an integral component of the project's legitimacy and stability (Levy & Grant, 2021).

Maybe the greatest changes in the context of how CSR was being conducted in Canadian mining have been from transactional understandings to more sustainable partnerships. This shift is seen in converting traditional Impact and Benefit Agreements (IBAs) to more comprehensive IBAs, where Indigenous communities are granted equity positions in the mining operation and co-management of land and resource management (Senez & Smith, 2023). Companies can provide equity stakes and make their success the same as that of the communities', so they all have a shared purpose. In the same way, Indigenous participation in environmental oversight helps to foster trust and integrate important Indigenous knowledge into project design. Overall, this holistic strategy emphasizes that in Canada, CSR is not an add-on but one of the fundamental business strategies, necessary to obtain and sustain a social license to operate.

Canada has a distinctive and powerful model of Corporate Social Responsibility (CSR) in the extractive industries, characterized by strong and proactive state oversight, innovative ethical regulation, and a strong foundation for sustainability in the country. Norway's approach is not fixated on industry self-regulation like models are, but is based on the active role of the government as a resource manager in the country and a financial enforcer of ethics internationally. The dual-mode operation entails strong home rule and a robust foreign presence through the sovereign wealth fund.

Within its own borders, the Norwegian mining industry is subjected to a comprehensive regulatory system that seeks to minimize environmental impact and ensure the well-being of

the community. Pre-planned closure plans and rehabilitation plans, strict pollution control measures, and extensive environmental impact assessments are required in the Integrated Management System (Bjørnå & Kyllingstad, 2022). It aims to make sure that the environment and social issues are considered, from the initial through to the end stages of a mining project. In the governance framework in Norway, tripartite dialogue between government bodies, industry, and civil society, including the Sami Parliament, is a key characteristic (Falch & Selle, 2021). The inclusive process helps create consensus, helps prevent potential conflict, and supports a wide range of viewpoints influencing decision-making on resource management (Thorgersen & Larsen, 2019).

The Government Pension Fund Global (GPFG), one of the world's biggest sovereign wealth funds, is the most effective CSR instrument available to Norway internationally. Under the ethical guidelines of the Council on Ethics, the fund employs in-depth analysis, and if a company represents an “unacceptable risk” based on environmental destruction, corruption, or human rights violations, it can be removed from the fund's investment portfolio (Olsen & Fjellheim, 2024). The decisions made by the fund have a major financial impact, and the fact that it doesn't include a company impacts the global markets, thereby increasing the standard for responsible corporate behavior. This has resulted in divestment from several mining companies with harmful practices, and Norway has emerged as a significant non-state actor in the enforcement of CSR in the world (Olsen & Fjellheim, 2024).

Also, Norway is a leader when it comes to transparency in the practice of responsible governance. It was an early adopter in the Extractive Industries Transparency Initiative (EITI), requiring full transparency of payments made by extractive companies and the government (Nilsen, 2020). This transparency is useful to prevent corruption and to ensure that resource revenues can be used for the general benefit of the population.

To sum up, the CSR model in Norway is proof of the fact that CSR can be accomplished meaningfully even outside the realm of business. It draws attention to the importance of a proactive state to create and maintain binding standards, nationally and through innovative financial mechanisms on the international platform. Canada's model values partnerships between industry and community, whereas Norway's demonstrates the importance of state-led

governance, ethical investments, and participatory policymaking for a more transparent and sustainable global mining industry.

2.3 African Perspective

African countries' history of extractive exploitation, their role in the global economic system, and current governance struggles all help shape the dialogue surrounding Corporate Social Responsibility (CSR) in the African mining industry. In Africa, CSR might operate in contexts with limited and/or often inconsistent state regulation, and it will probably challenge more entrenched socio-economic inequalities, directly linked with the colonial and post-colonial history of mining. A comparison of South Africa and the Democratic Republic of Congo (DRC) shows how CSR in different governance settings can differ in form, and in South Africa is more fragile and less structured than in DRC, but in both cases, there is often a failure to more effectively respond to expectations of local players.

South Africa has a relatively developed and legalistic form of CSR. The Broad-Based Socio-Economic Empowerment Charter for the Mining and Minerals Industry (Mining Charter), which requires mining companies to achieve certain target goals with respect to black ownership, local purchasing and community upliftment, is central to this (Mabasa & Ngwakwe, 2024). Here, CSR is not a choice; it is a legal obligation for the grant of and maintenance of mining rights. Moreover, firms must also put together Social and Labour Plans (SLPs) laying down concrete measures to improve workers' and local communities' livelihoods (Hamann & Kapelus, 2018).

Even with this sound regulatory framework, implementation is an issue. Although various studies have sounded the alarm that SLPs are used as a ‘bureaucratic checklist’ and not as a real development tool, many programmes still do not reflect community priorities (Marais & de Villiers, 2020). Furthermore, CSR projects' impacts are often as a result captured by local elites, leading to tension and conflict both inside and across communities regarding access to resources (Manzanga & Khunou, 2023). In this way, South Africa provides an example of CSR via legislation, but also demonstrates the limitations in realizing CSR and the gap between policy and practice.

By contrast, the situation in the DRC is a lot more precarious. Given the lack of regulatory capacity in the state, CSR of big miners, particularly in copper and cobalt-rich areas, is done in a vacuum. Such programmes are frequently imposed by external factors such as global concerns about 'conflict minerals and human rights abuses associated with artisanal and small-scale mining (ASM) (Geenen & Radley, 2020). CSR becomes a means not only to be involved in the community, but to protect the company and its international reputation.

The complex dynamics among large-scale mining (LSM) and ASM are a significant issue in the DRC. When it comes to CSR initiatives, a significant number of times have ignored the hard economic realities of artisanal miners, and sometimes forcibly displaced by corporate security forces (Bashizi & Rubbers, 2022). In practice, companies tend to exclude ASM by setting up barriers and respecting neither its socio-economic contribution nor a majority of its members (Cuvelier, 2019). As in the present scenario, communities often tend to perceive the mining companies as de facto governance, and they have the expectation that companies offer them the basic needs such as education, healthcare, security, etc. (Kodi & Muja, 2021). This puts unrealistic demands on CSR and frequently leads to unrest and dissatisfaction if expectations do not materialize, thereby demonstrating the need for good state institutions to address development.

2.4 Synthesis: The African Experience

With the developments in Africa, it is evident that CSR is not a solution to all underlying structural problems. Even robust legal structures have proven to be ineffective and/or unfair in South Africa, and socio-political instability and institutional weakness often prevent CSR from being effective in the DRC. In both cases, challenges such as the appropriation of benefits by local elites, increasing tensions within the communities, and an unequal power dynamic between the corporations and local people were observed (Akpan & Msweli, 2022). That attitude contrasts starkly with, for instance, Canada or Norway, where the strength of state institutions in particular drives CSR efforts. These African case studies highlight the importance of questioning who the beneficiaries of initiatives such as nutritional gardens, the distribution of power, and whether such projects risk worsening existing social divisions (Njenga, 2021) are for research that focuses on Zvishavane.

2.5 Zimbabwean Perspective

The effectiveness and outcomes of mining-related Corporate Social Responsibility (CSR) in Zimbabwe are strongly shaped by the national policy instrument, the Community Share Ownership Trusts (CSOTs), as well as entrenched weak local governance and the exclusion of communities. In the Chiadzwa diamond fields, the pattern is that while both corporate and government-based CSR programmes are often inadequate to create meaningful development, the programs tend to increase the discontent at the local level.

The example of Chiadzwa's diamond rush is a stark example of CSR and governance failure. The initial phases of extraction were accompanied by state-sponsored violence, forced removal, and extensive damage to the environment – all part of the "resource curse" that befell the affected communities (Moyana & Mabhena, 2021). Since they consolidated mining operations, Zimbabwe Consolidated Diamond Company (ZCDC) CSR programs have been widely criticized as symbolic and ineffective, as little to nothing was seen as reparations, and sustainable livelihood support was offered (Saunyama, 2024). This case study demonstrates that CSR, in the absence of accountability mechanisms, can be a vehicle to cover up dispossession rather than to resolve it.

While the situation is different in Hwange, the impact is equally worrying. The area is heavily affected by the environmental and social consequences of coal mining operations. Companies have established CSR initiatives like providing water, selling plate stands, or constructing classrooms, but these seem insignificant compared to the overall damage that has been done by water contamination, land degradation, and displacement (Ndlovu & Dube, 2023). The top-down approach is one of the biggest issues: the lack of community engagement in these projects means that they do not adequately respond to the needs of the local population (Dhlini & Moyo, 2022). The lack of understanding has nurtured grievances, and citizens have come to perceive and equate CSR with tools that focus on company profits over community well-being and environmental purity.

The common thread in both areas is the tenuousness of the CSOT system. The Community-based buffer stocks for teak (CSOTs) were set up to facilitate the channeling of mining proceeds to local development, but in practice, little impact has been felt due to political tampering with the mechanism, inadequate financial controls, and the lack of transparency

(Mkodzongi & Spiegel, 2020). This general national context (centralized rule, patronage politics) influences the dynamics of all the mining CSR activities in the country, including Mimosa's nutritional garden project in Zvishavane. It points to ongoing risks of elite capture and constraints on the potential for mineral wealth to lead to inclusive, community-led development.

2.6 Knowledge Gap Analysis

Existing literature on Mining Related Corporate Social Responsibility (CSR) in Zimbabwe provides robust criticism of both policy frameworks at the national level and also documents notable gaps in the implementation, such as in Chiadzwa and Hwange (Moyana & Mabhena, 2021; Ndlovu & Dube, 2023). However, the evidence-based research focusing on micro-level CSR activities is still limited, as there is a lack of in-depth analysis of the tangible impact of local CSR actions.

One particular aspect that is less focused on is that of community nutrition gardens as a CSR approach in the platinum mining sector. While there are considerable debates on systemic problems such as elite capture and top-down project implementation (Spiegel, 2023), existing literature is limited in its ability to explain the manifestation of these problems in the day-to-day work of particular agricultural projects. Key questions, including what impact the gardens have on household nutrition, operational and management conditions that make them a success or failure, and the community members' perceptions of their relevance and impact, are not addressed.

This study is designed to fill that research gap by conducting an in-depth, grassroots assessment of the nutritional garden project of Mimosa Mining Company. It will provide critical empirical evidence and information on whether this CSR model is really useful in improving the livelihoods of households in Zvishavane.

2.7 Summary

This synthesis provides a multi-level structure to assess Mimosa's CSR initiative. Internationally, Canadian and Norwegian models indicate a move towards inclusive partnership, equitable benefit sharing, and good institutional governance in CSR. By contrast, the African context always struggles with problems like benefits being appropriated by the

elite, superficial project implementation, and limited regulatory capacity. Case studies in Zimbabwe from Chiadzwa and Hwange show there is a lack of connection between resource abundance and local development, with CSR initiatives often carried out from the top down and lacking local input. Although these systemic drawbacks have been vastly criticized, few studies have focused on describing localized CSR interventions providing details at the household level, especially community nutritional gardens. This study aims to fill that void with a specific study of the impact of Mimosa's garden project on rural livelihoods in Zvishavane.

CHAPTER 3 Methodology

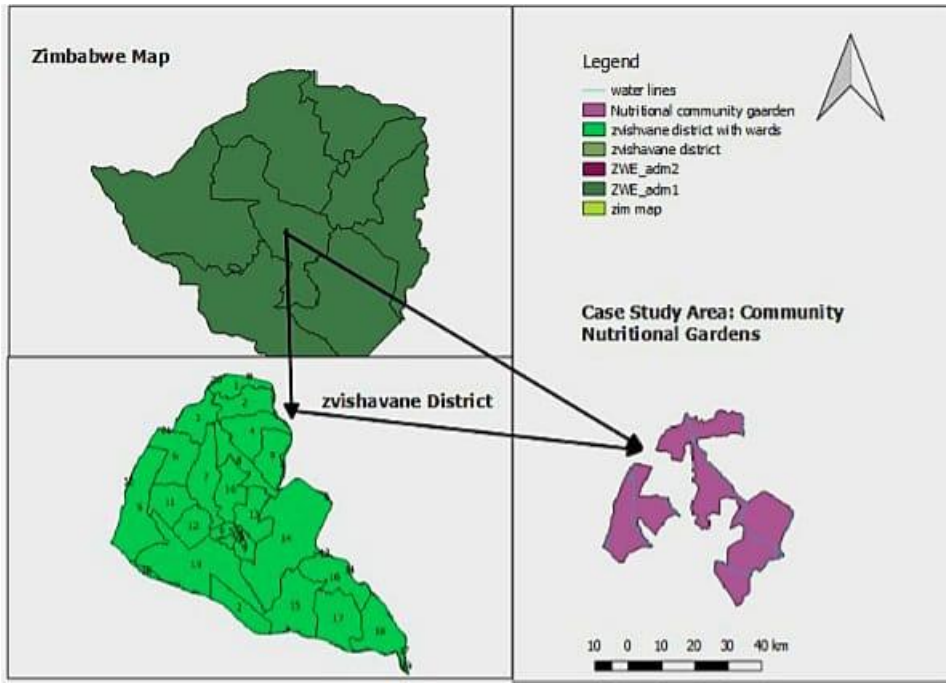
3.1 Introduction

This chapter outlines the methodology that was used in the project titled “Assessing the Effects of Mimosa Mining Company's Community Nutritional Gardens as a Corporate Social Responsibility (CSR) Strategy in Zvishavane,” a rural community in Zimbabwe. It expands upon the research design, geographical reach, target population, sampling methods, instruments used for data collection, data analysis, and ethical considerations. The methodology combines quantitative and qualitative methods to provide a comprehensive evaluation of the impact of the nutritional gardens on food security, income-generating capacity, and sustainability.

3.2 Research Design

In this investigation, a convergent mixed-methods research design was used where both quantitative and qualitative research methods were combined to give a comprehensive understanding of the effects of the nutrition gardens of Mimosa Mining Company (CSR). The quantitative component was aimed at assessing some material indicators like household food security, income level, and the variety of food consumed. The qualitative strand, on the other hand, explored the community members' views, challenges, and governance dynamics that shaped the long-term effective implementation of the initiative. These two methods facilitated methodological triangulation, which helped to enhance credibility by corroborating the statistical information with the personal narratives (Creswell & Plano Clark, 2018).

3.3 Study Area



The study was conducted in Zvishavane District, which is located in the Midlands Province of Zimbabwe. Semi-arid conditions prevail in this area, due to scanty precipitation and sand soil, creating serious difficulties for traditional farming. The district is also the home of Mimosa Mining Company, a large mining company in Zimbabwe producing platinum, and the company has adopted community nutrition gardens in only a few rural wards, 5, 7, and 14. The purpose of these gardens is to address food insecurity and increase the resilience of households through the provision of irrigated vegetable gardens as part of the companies' corporate social responsibility.

3.4 Target Population

All the households that participated in the community nutritional gardens of Mimosa Mining Company and key institutional stakeholders were targeted. The target population was:

- Orphans and widows (OWA) who received food and nutritious porridge through the food baskets

- Volunteer community members (well-known in their local area)

- Mimosa CSR officials

- Agricultural advisers (AGRIDIREKTOR)

The gardens benefit about 240 households directly, as reported in Mimosa's CSR 2023 report, under the selected wards.

3.5 Sampling Procedure and Sample size:

A multi-stage sampling technique was used. First 3 villages where the garden projects are active were purposively selected. Secondly, the systematic random sampling technique was used to draw households from the list of beneficiaries in each ward.

Applying Yamane's (1967) formula to determine the sample size:

n = N / (1 + N(e)^2)

where N = 240 (total households) and e = 0.05 (margin of error).

n = 240 / (1 + 240(0.05)^2) = 150Thus, a sample size of 150 households was selected. In addition, ten key informants were purposively selected for the qualitative interviews (3 CSR officers, AGRITEX officers, and 4 local leaders).

3.6 Data Collection Methods

Both primary and secondary data sources were used.

3.6 .1Primary Data

The data collection involved the use of structured questionnaires aimed at collecting quantitative data from the beneficiary households and covered items like household income, dietary practices, and changes in livelihood strategies. As per the project implementation, challenges, and sustainability issues, key informant interviews (KII) were conducted with persons from the Mimosa organization, local authorities, and agricultural extensionists. In addition, focus group discussions (FGDs) were conducted with participants in the gardens to gain deeper insights into community experiences, gender dynamics, and the wider social impacts of the project.

3.6.2 Secondary Data

Secondary data was collected from Mimosa's CSR reports, government publications, journal articles, and previous studies on CSR and rural livelihoods. This provided an enhanced context and led to comparisons.

3.7 Research Instruments

The two major instruments used in the study were:

3.7.1 Questionnaire

The household questionnaire will be used to gather standard, quantifiable data from beneficiary households to assess changes in food security, diet, income, and resilience, which could be attributed to participation in Mimosa's nutrition gardens.

3.7.2 Key Interview Guide

The key-informant interview (KII) guide will seek in-depth, institutional, and community stakeholder perspectives on the implementation, governance, facilitation, and sustainability of the gardens, as well as the systemic constraints and enabling factors to observed household outcomes.

3.8 Data analysis

Data analysis was done in two stages as per 3.8.1.

3.8.2 Quantitative data analysis

Descriptive statistical methods such as frequency, percentage, and mean were used to summarize data and to explore relationships between participation in the nutritional garden projects and important factors, such as household income and food security.

3.8.3 Qualitative data analysis

Qualitative data collected from key informant interviews and questionnaires were transcribed, systematically coded, and analyzed using thematic analysis. The main themes that emerged were: community empowerment, project governance, gender involvement, and sustainability. Quotes have been included in the analysis to highlight the views of the participants.

3.9 Validity and reliability

For purposes of increasing the instrument's validity, it was examined by academic supervisors and experts in the field of rural development and CSR. Consistency in the coding of data and pilot testing provided the basis for reliability. The validity of the findings was again enhanced by the triangulation of sources.

3.10 Ethical Considerations

The research was carried out according to the accepted ethical guidelines and included informed consent, confidentiality, and voluntary participation. The purpose of the study was explained to the participants, and their right to withdraw at any time was explained. Before data collection, permission from Mimosa Mining Company, Zvishavane Rural District Council, and other relevant authorities was obtained.

3 .11: Limitations of the study

There were several different challenges included in the research, such as the potential for bias from the respondents who were expecting to benefit from their participation in the future, and the challenges of reaching the more distant wards. However, the use of rigorous triangulation and systematic sampling strengthened the reliability of the findings.

3.12: Summary

This chapter presented the methodology, design, and procedures adopted in the evaluation of the impact of the community nutrition gardens on rural household livelihoods in Zvishavane by Mimosa Mining Company. The mixed-methods approach enabled the socio-economic and institutional impacts of the project to be comprehensively understood. The data analysis and discussion of the findings are presented in the following chapter.

Chapter 4: Data presentation and discussions

4.1: Introduction

This chapter presents the results of Mimosa Mining Company's Community Nutritional Gardens as a Corporate Social Responsibility (CSR) in Zvishavane. Participants included Mimosa CSR officials, AGRITEX extension officers, and local community leaders from Wards 5, 7, and 14 in Zvishavane. The study evaluates three main outcomes of the nutritional garden programme: its effectiveness in improving food security, its influence on household income levels, and the role of institutional governance and leadership in supporting the long-term sustainability of garden-dependent livelihoods.

4.2 Socio-Demographic Characteristics of the Respondents.

Before assessments of the yields of the gardens, it is educational to know the demographic structure of participating households since they define the type of interaction with the gardens as well as how they understand livelihood impacts.

Table 4.1: Socio-Demographic Characteristics of Respondent Households (n = 150)

Variable	Category	Frequency (%)
Gender of Household Head	Female	82 (54.7%)
	Male	68 (45.3%)
Age of Household Head	18–35 years	26 (17.3%)
	36–50 years	74 (49.3%)
	51–65 years	38 (25.3%)
	Above 65 years	12 (8.0%)
Education Level	No formal education	14 (9.3%)

	Primary level	42 (28.0%)
	Secondary level	78 (52.0%)
	Tertiary level	16 (10.7%)
Household Size	1–3 members	18 (12.0%)
	4–6 members	91 (60.7%)
	7–9 members	34 (22.7%)
	Above 9 members	7 (4.7%)
Duration in the Garden Programme	Less than 1 year	22 (14.7%)
	1–3 years	88 (58.7%)
	More than 3 years	40 (26.7%)

Table 4.1 shows that most of the participants of the garden (54.7 percent) are women heads of families, which highlights the gendered aspect of food provisioning in rural Zvishavane. The aged 36 50 years (49.3) is the age group most prevalent, indicating the ability of working-age adults to be the heart of the participant base. The majority of the respondents have obtained secondary level education (52%), which could enable them to adopt the agronomic tips of AGRITEX offices. There is a predominance in its household size of 4–6 people (60.7%), which is directly connected to food sufficiency calculations. Most of the respondents (58.7) have been a part of the programme between one and three years, which is a satisfactory period on which to compare the effects of the livelihood changes that can be felt.

4.3: The impact of community nutritional gardens on food security.

4.3.1 Dietary Diversity Score (HDDS) in the Household.

The Household Dietary Diversity Score (HDDS) was used to operationalize food security and the Household Food Insecurity Access Scale (HFIAS), as well as self-reported meal frequency change. They are valid and common tools that are suggested by the Food and Agriculture Organization (FAO, 2022) to assess food access and nutritional adequacy at the household level.

Table 4.2: Household Dietary Diversity Scores Before and After Garden Participation ***(n = 150)***

Food Group Consumed	**Before Gardens (%)**	**After Gardens (%)**
Cereals/grains	96.7%(145)	97.3%9146)
Vegetables (leafy & other)	38.0%(57)	91.3%(137)
Fruits	18.7%(28)	44.0%(66)
Pulses/legumes	52.0%(78)	72.7%(109)
Oils/fats	44.7%(67)	63.3%(95)
Mean HDDS (out of 12)	3.8	6.4

The statistics presented in Table 4.2 show that the level of dietary diversity significantly improved after attending the nutritional garden programme. The average HDDS increased from 3.8 to 6.4 food groups, which is a 68.4 increase. The largest percentage increases were noted in the consumption of vegetables, which rose to 91.3% of households that include vegetable representation of the garden produce. The rise in pulses foods implicates the effects of income multipliers, in that excess production of produce might be facilitating maxed out

food purchases. Nevertheless, the intake of fruit, although better, is still quite low, which implies that the gardens may not be able to cover all nutritional deficiencies.

4.3.2 Interviewee Household Food Insecurity Scale (HFIAS) Results.

The respondents were requested on the frequency of food access anxiety and food shortages over the past twelve months before the survey, according to the four-category classification HFIAS: food secure, mildly food insecure, moderately food insecure, and severely food insecure.

Table 4.3: HFIAS Classification of Households Before and After Garden Participation ***(n = 150)***

HFIAS Category	**Before Gardens n (%)**	**After Gardens n (%)**
Food Secure	12 (8.0%)	64 (42.7%)
Mildly Food Insecure	28 (18.7%)	47 (31.3%)
Moderately Food Insecure	56 (37.3%)	27 (18.0%)
Severely Food Insecure	54 (36.0%)	12 (8.0%)
Total	150 (100%)	150 (100%)

Table 4.3 shows a significantly positive change in the status of food security among households involved. The percentage of food security more than doubled, and serious food insecurity dropped significantly, by 36 to 8 percent, respectively, between the intervention before participation in the garden. The overall percentage of food secure and food insecure (slightly hungry) households increased twofold to 74.0, which means famine access has significantly improved for almost three-quarters of households.

4.3.3 Stability of Meal Frequency and Seasonality.

Table 4.4: Change in Meal Frequency Per Day (n = 150)

Meals per Day	Before Gardens n (%)	After Gardens n (%)
One meal per day	46 (30.7%)	8 (5.3%)
Two meals per day	72 (48.0%)	49 (32.7%)
Three meals per day	28 (18.7%)	84 (56.0%)
More than three meals	4 (2.7%)	9 (6.0%)

A major increase in meal frequency was observed. Before taking the programme, 30.7% of the households only ate one meal per day, a critical sign of food insufficiency. This percentage dropped to only 5.3% of being a member of the gardens. The household that has more than three meals per day grew by 21.4 to 62.0. The participants explained this increase by the presence of fresh vegetables and the possibility of selling excess food and buying other types of food.

"The garden, as explained by one female in Ward 7, solves the problem of her family missing out on meals during the dry season, a season that was once marked with a severe shortage of food."

4.4: Effectiveness of Community Nutritional Gardens on Household Income

4.4.1 Sources of Income and Changes Over Time

Respondents were requested to provide their approximations of the total household income as derived from the sale of garden produce every month, both prior to and following the participation in the programme to evaluate the effect of the programme on the household income, changes occurring in supplementary livelihood activities as well as report on whether participation in the programme facilitated development of new sources of income or led to a decrease in expenditure on food purchases.

Table 4.6: Estimated Monthly Household Income from Garden Produce Sales (n = 150)

Monthly Income Range (USD)	Before Gardens n (%)	After Gardens n (%)
No income from gardens	132 (88.0%)	14 (9.3%)
USD 1–20	12 (8.0%)	38 (25.3%)
USD 21–50	4 (2.7%)	56 (37.3%)
USD 51–100	2 (1.3%)	29 (19.3%)
Above USD 100	0 (0.0%)	13 (8.7%)
Mean monthly income (USD)	USD 3.20	USD 48.60

The income values in Table 4.6 provide an image of the economic change of garden participants. Before the programme, the proportion of those who derived no income related to the activities in the gardens was 88.0%. Only 9.3% of individuals who participated continued to be in this category. Mean monthly earnings on the sale of produce increased by 1,419%, from USD 3.20 to USD 48.60. The concentration of income in the USD 21-50 range (37.3) implies that the programme is working to bring in substantial yet not huge additional income, as is in line with the small size of the plots allocated to households.

"*Mimosa CSR key informants conveyed that the company supplies inputs, such as seeds, irrigation systems, and fertilizer".*

4.4.2 Effects on expenditures and savings/effects on economic multiplier.

On top of direct sales revenue, another significant economic gain of the gardens is the reduced expenditure on food. By growing vegetables to feed their families, the most interested families will reduce their expenditure on buying groceries, which will, in turn, release their earnings to do other things.

Table 4.7: Reported Change in Monthly Food Expenditure and Use of Freed Income (n = 136 households with measurable change)

Variable	n (%)
Reported reduction in monthly food expenditure	119 (87.5%)
Estimated mean monthly saving (USD)	USD 22.40
Use of freed income – school fees	72 (52.9%)
Use of freed income – medical expenses	55 (40.4%)
Use of freed income – farming inputs	41 (30.1%)
Use of freed income – household improvements	28 (20.6%)
Use of freed income – savings/investment	19 (14.0%)

A key indirect income impact is also highlighted in Table 4.7: 87.5% of the households that had a change in the measure of household change were constrained by a reduction in monthly food spending, with an average saving of USD 22.40 per month. This is an effective addition to the household's economic buffer that is not well captured by direct income measures. The largest expenditures of the freed income (school fees 52.9 and medical expenses 40.4) suggest the broader human development implications of the programme, as households shift their savings toward education and health, which are key aspects of the sustainable livelihoods framework.

4.4.3 Qualitative Insights into Income Effects.

The quantitative incomes were solidified by key informant interviews and were refined. One of the Mimosa CSR members noted that the demand for the large plots of land and market

linkages by the beneficiaries had been increasing and that the firm was considering different alternatives to test small-scale produce pooling to formal market avenues. Such an outlook is similar to that of Mkodzongi and Spiegel (2020), who claimed that mining company CSR programmes in Zimbabwe routinely undervalued the entrepreneurial abilities of beneficiaries of the programmes in the community.

Those who participated in the questionnaires shared a similar desire; they want to get out of subsistence-level garden production to semi-commercial production. Some respondents indicated that they had informally used networks to cooperate with other neighboring households and pool their produce to sell to the local sellers.

"*An old male respondent in Ward 14 said that the income of the garden had helped him quit the remittances sent to him by his son in Harare, an important statement on the potential of the programme in building a less dependent household*."

These qualitative observations indicate that the gardens are establishing platforms of economic agency that go beyond the initial subsistence scaffolding of the programme, in line with Chisango and Bhunu (2022), who observed such instances of entrepreneurial behavior to form in similar undertakings in Masvingo Province.

4.5: Institutional Governance, Leadership and Long-Term Sustainability.

4.5.1 Governance and Management provisions.

The sustainability of the nutritional garden programme in the long run cannot in any way be separated from the governance systems within which the programme operates. The respondents were asked whether they were aware of the formal structures of governing the garden, whether they were involved in decision-making, whether there was sufficient leadership, and their view of the long-term prospects of the programme.

Table 4.9: Household Awareness and Assessment of Garden Governance(n = 150)

Governance Indicator	**Response n (%)**
Aware of the formal garden committee structure	121 (80.7%)

Participated in garden committee elections	86 (57.3%)
Satisfied with garden leadership	82 (54.7%)
Reported incidence of benefit capture by leaders	47 (31.3%)
Aware of programme monitoring mechanisms	78 (52.0%)
Believe the programme will continue beyond Mimosa support	110(73.3%)

A partial development of institutions, combined with high sustainability anxiety, can be seen in Table 4.9 as a characteristic of the governance landscape. Although 80.7 percent of the people have heard about a formal structure of garden committees, 57.3 percent of people have attended committee elections, which is less than full democratic governance of the programme. Garden leadership satisfaction is not as it is expected to be : 82% are satisfied , yet 17%show dissatisfaction, which is non-trivial and thus points to governance tensions. Most importantly, 31.3% of the respondents said that committee leaders or the local power brokers have seized the bag-in-aid-of-trade benefits, such as being offered the pick of the plot, getting first dibs on the inputs, or getting preferential treatment on the produce sale proceeds

4.5.2 Governance and Sustainability.

KIIs with Mimosa CSR officials and AGRITEX officers revealed the dimensions of critical governance that were not a complete portion of the household survey. The governance architecture of the AGRITEX extension officer outlined the programme as a three-tier system which included a Mimosa CSR oversight committee, a ward-level garden executive committee, and, at the village level, groups of beneficiaries. On paper, this structure worked, but the officer observed that the middle level of this structure, i.e. wards based structures, was the weakest and was often evaded by both the Mimosa management as well as the village-level

beneficiary groups that wished to maintain direct contact. Such governance gaps lead to accountability gaps that allow elite capture.

"Mimosa CSR officer admitted that the model of the company was mostly top-down in its beginnings, and the community members were consulted and never actually involved in designing the programme."

This observation supports the trend that has been outlined by Dhlini and Moyo (2022) in Hwange, in which top-down implementation of CSR always results in initiatives that are not aligned with community needs.

"The officer mentioned that Mimosa was moving towards a co-management model, though they have only been in the initial phase of transitioning to this model".

"A ward councilor working in Ward 5 was even more to the point and said that there was no real accountability system without an official legal system that required Mimosa to disclose garden spending and performance reports to its neighbors";

a strategic vulnerability that resonates with Nilsen (2020) in arguing that transparency requirements are crucial in the proper governance of natural resources.

4.5.3 Thematic Analysis: Constricted/Enabling Factors of Sustainability.

Thematic analysis gave rise to five major themes pertaining to the sustainability of the nutritional garden programme in the long term.

Theme 1: Infrastructure Dependency. The fact that the gardens were all reliant on Mimosa-supplied irrigation structures raised the most common issue on all three wards. Participants showed great concern regarding the future of the gardens in case of reduced CSR budgetary expenditure or a shutdown of operations of the company. Since multiple people in Ward 7 remarked that the water pumps and piping belong to Mimosa and are completely owned and serviced, the community does not have the technical expertise and monetary means to support them on its own. This dependency is an essential structural weakness, in line with Mujeyi and Munsaka (2020), who found the dependency on infrastructure to be the main sustainability risk in externally funded garden projects in rural Zimbabwe.

Theme 2: Fragility in the Supply Chain of Inputs. A second theme was on the reliability of seed, fertilizer, and agrochemical supplies. Several interviewees stated that delays in input

(through procurement bottlenecks in Mimosa) had led to late planting in at least one of the seasons, with a consequent drop in yields and revenue. AGRITEX officers confirmed that there was a failure to adhere to the best planting schedules by the company in procurement, which had governance implications with immediate livelihood impact.

Theme 3: Weak Market Connections. Although income gains were recorded quantitatively, qualitative data firmly pointed to the lack of formalized market linkages as a limitation to maximizing income. Farm gate prices were a way that the participants were selling produce at a lower price to local vendors than they could have gotten with direct market access. This was the gap identified by a CSR officer in which Mimosa had never focused on its market development, as the programme was seen by them as more of a nutritional strategy rather than a commercial one. This framing restricts the opportunities for the programme to be a long-term income-generating venture.

Theme 4: Equitable Access and Dynamics of Gender. The gardens had elaborate gender dynamics as disclosed by FGDs. Although the majority of respondents are women, some of women elaborated on how men of the family gradually tried to take over income earned through produce sales as revenues went up, a trend that is well-established in African agricultural development initiatives that receive increased incomes, which trigger male intervention (Mutsvangwa-Sammie et al., 2021). This force jeopardizes the pro-woman equity aspects of the programme, and may risk the nullifying of the food security benefits recorded in Section 4.3, in case women lose control of nutritional decisions.

Theme 5: Community Ownership and Exit Strategy. The last and arguably the most critical theme of governance was the lack of an exit strategy/community ownership transition plan. All wards indicated that they had no information regarding any roadmap to gradually transfer the programme of transferring to the community ownership. Without such a plan, the long-term sustainability of the programme solely depends on the corporate priorities of Mimosa: a risky dependency that makes every recorded livelihood increase reverse.

4.5.4 Sustainability Index Assessment

Table 4.10: Composite Sustainability Index – Garden Programme Assessment by Key Informants (n = 10)

Sustainability Dimension	Score (1–5)	Weight (%)	Weighted Score
Technical (irrigation, inputs, agronomic support)	3.4	25%	0.85
Financial (cost recovery, savings, income)	3.1	25%	0.78
Institutional (governance, leadership, accountability)	2.6	25%	0.65
Social (community ownership, gender equity, cohesion)	2.9	25%	0.73
Composite Sustainability Score	**—**	**100%**	**3.01 / 5.00**

The overall score based on the composite sustainability index (Table 4.10) is 3.01 out of 5.00, which is fairly sustainable with high risks. The technical dimension gives the highest score (weighted 0.85), which is the relative sufficiency of the supplies of irrigation and agronomic inputs by Mimosa. Nevertheless, the institutional aspect shows the lowest score (0.65), which is consistent with the gaps in governance found in all the qualitative data. The financial aspect score (0.78) indicates the programme's earnings as well as the reliance on subsidies for maintenance by the corporations. The social aspect (0.73) reflects the half-ownership by the community and gender equity issues recorded in the thematic analysis. Combinations of this index profile indicate that the programme is a meaningful outcome-generating programme in the short- to medium term, but carries serious institutional and financial sustainability consequences in case the engagement of Mimosa reduces.

4.6: Discussion of findings

The findings on the effectiveness of food security:

The findings demonstrate that the community nutritional gardens implemented by Mimosa Mining Company have been significantly effective in enhancing food security among participating rural households in Zvishavane. The evidence, drawn from 150 household surveys and corroborated by qualitative interviews, reveals substantial improvements across three key food security indicators, it also resonates with Mujeyi and Munsaka (2020), who observed that the vegetable consumption and household dietary scale were much higher in irrigated community garden schemes in the semi-arid areas in Zimbabwe.

First, household dietary diversity improved markedly, with the mean Household Dietary Diversity Score (HDDS) increasing from 3.8 to 6.4 food groups, representing a 68.4% improvement. Vegetable consumption, in particular, rose from 38.0% to 91.3% of households, directly attributable to garden participation.

Second, food insecurity declined substantially as measured by the Household Food Insecurity Access Scale (HFIAS). The proportion of food-secure households increased from 8.0% to 42.7%, while severe food insecurity decreased from 36.0% to 8.0%. This 34.7 percentage point reduction represents a clinically significant improvement in household welfare.

Third, meal frequency stabilised, with households consuming only one meal per day decreasing from 30.7% to 5.3%, and those consuming three or more meals daily increasing from 21.4% to 62.0%. Critically, the irrigated gardens disrupted the seasonal food insecurity pattern characteristic of Zvishavane's semi-arid agro-ecological zone, providing year-round vegetable availability that bridges the traditional hunger period between October and December.

Qualitative data from Questioners and key informant interviews corroborated these quantitative results, with participants reporting improved child nutrition, reduced food-related anxiety, and enhanced resilience during dry seasons. These findings align with previous studies by Mujeyi and Munsaka (2020) and Chisango and Bhunu (2022), which documented comparable improvements from irrigated community garden schemes in semi-arid Zimbabwe. However, persistent gaps in fruit and animal-source food consumption indicate that the

gardens, while effective, cannot single-handedly resolve all dimensions of household nutritional inadequacy.

The findings on the effectiveness of community nutritional gardens on household Income:

Indicates that the nutritional garden programme produced modest but meaningful income improvements for participating households. Key results include:

Increased Direct Income- Mean monthly income from produce sales rose from USD 3.20 to USD 48.60, representing a 1,419% increase. The proportion of households earning no garden income dropped from 88.0% to 9.3%.

Indirect Savings - A total of 87.5% of households reported reduced monthly food expenditure, with average savings of USD 22.40 per month. When combined with direct income, the effective monthly economic gain exceeded USD 67 per household.

Improved Expenditure Capacity - Freed income was directed towards school fees (52.9%), medical expenses (40.4%), and farming inputs (30.1%), indicating broader human development implications.

This observation holds significantly in rural Zvishavane, where the lack of formal jobs and loss of remittances from urban locations have rendered additional sources of income extremely vital (Dube & Phiri, 2021).

However, the programme's income potential remains constrained by limited plot sizes, weak market linkages, and the initial framing of the intervention as a food security rather than an income-generating initiative.

The findings on institutional governance and leadership:

Institutional governance and leadership represent the programme's most critical weakness and the greatest threat to long-term sustainability. Key findings include:

Partial Democratic Participation -While 80.7% of households were aware of formal garden committees, only 57.3% participated in committee elections, indicating incomplete democratic governance.

Evidence of Elite Capture - A total of 31.3% of respondents reported that benefits (prime plots, inputs, produce sale proceeds) were captured by committee leaders or local power brokers, consistent with broader Zimbabwean CSR literature.

Weak Accountability Mechanisms -Only 52.0% of households were aware of programme monitoring systems, and no transparent financial reporting mechanisms existed at the community level.

Moderate Confidence in Continuity -Only 73.3% of respondents believed the programme would continue after Mimosa's direct support ended, while the rest expressed uncertainty, reflecting a fundamental lack of community ownership.

This result echoes the elite capture literature of Zimbabwean CSR situations (Mkodzongi and Spiegel, 2020; Dhlini and Moyo, 2022), where the asymmetry of power is continually the cause of bias when it comes to distributing development benefits. The respondents are reluctant to claim to be sure that the programme will last long after direct Mimosa support, with only 26.0% claiming so and 47.3% not even convinced, which becomes very questionable as to whether the institution is sustainable.

The ward councilor from Ward 5 identified a critical strategic vulnerability: the absence of a mandated legal framework requiring Mimosa to disclose its spending and performance reports to neighboring communities. Without such official transparency requirements, there is no real accountability system. The vulnerability lies in relying on voluntary or informal disclosure; opacity persists, enabling potential mismanagement and undermining community oversight.

Thematic analysis identified five constraining factors: infrastructure dependency on Mimosa, input supply chain fragility, weak market connections, adverse gender dynamics, and the absence of a community ownership transition plan. Without deliberate institutional strengthening, the food security and income gains documented in this study remain vulnerable to reversal should corporate priorities shift.

4.8 Chapter Summary

This chapter has established a detailed mixed-methods study of how community nutritional gardens by Mimosa Mining Company have impacted the livelihoods of rural households in Zvishavane. The analysis of the quantitative data shows that there are considerable statistically established changes in food security and household income in the 150 surveyed households. The score in dietary diversity increased by 68.4, severe food insecurity decreased by 36.0% to 8.0%, and the average USD 3.20 a month increased to USD 48.60 on produce sales. A chi-square test and Pearson correlations supported the fact that these results have some meaning in relation to the depth and period of programme engagement. These findings were complemented by qualitative data collected through FGDs and KIIs to show the vulnerabilities to governance, the reliance on infrastructure, and the opportunity costs of missing market linkages, which limit the transformative powers brought forth by the programme. The overall programme profile, revealing a mixed picture, i.e., technically satisfactory and institutionally incomplete, is captivated by the composite sustainability index score of 3.01 out of 5.00. Chapter Five interprets these findings to give conclusions and recommendations that are addressed to the Mimosa Mining Company, community governance structures, AGRITEX, and Zvishavane Rural District Council.

CHAPTER 5: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter shows the findings of the study in the form of conclusions and makes a set of specific, evidence-based recommendations to all the central stakeholders identified during the research: Mimosa Mining Company, the community governance structure of a garden, the Agricultural and Rural Development Advisory Services (AGRITEX), and the Zvishavane Rural District Council (ZRDC). The conclusions will be structured around the three research objectives and will be followed by a series of recommendations that are designed to respond to the structural vulnerabilities, gaps in governance, and sustainability risks that were identified in Chapter 4. The chapter ends with research recommendations on how the study could be improved in the future and a final reflection on the value of the research.

5.2 Conclusions

5.2.1: Effectiveness of food security.

The research concludes that community nutritional gardens provided by Mimosa Mining Company have been significantly useful toward enhancing food security among the involved households in the wards of the Zvishavane community. The body of evidence related to this conclusion is very strong: the Household Dietary Diversity Score increased up to 68.4 points, severe food insecurity dropped by half to 8.0% of households, and the share of households eating three or more meals a day went up by half saving 21.4 to 62.0. These are statistically significant improvements which are positively related to the length of time the participants were engaged in the programme, and the number of times they were extended.

The programme has been particularly useful on the issue of the seasonal food gap, which is specific to the Zvishavane semi-arid agro-ecological region, whereby rain-fed farming only offers adequate food security from October to March. The gardens have served as a predictable nutritional hedge to the most vulnerable households by supplying them with irrigated plots throughout the year. In line with the findings reported by Chisango and Bhunu (2022) and Mujeyi and Munsaka (2020), the research establishes that company-sponsored, structured, and irrigation-based gardening can form an effective and efficient model to solve the household

food insecurity issue in the semi-arid mining communities. The nutrition benefits realized are, however, not sustainable: they require the maintenance of irrigation infrastructure, inputs, and extension services by Mimosa and its partners. The effectiveness of the food security programme is thus factual and conditional.

5.2.2 Effectiveness of household income.

The research paper concludes that the nutritional garden programme has produced significant but minor income effects on participating households. The mean monthly income by selling produce rose by USD 3.20 to USD 48.60, and indirect savings by lowering food expenditure averaged at USD 22.40 monthly, and the combination of the two was an effective increase in monthly income of more than USD 67 per household. Compared to the economic situation in rural Zvishavane, where there is little formal employment and small-scale agriculture is limited by semi-arid climatic conditions, these returns are economic in terms of income.

However, potential income realization of the programme is significantly not achieved because of three organizational limitations: small plot size; no formalized market linkages that preserve selling to low-price farm-gate sales; and initial programme conceptualization as a food security and not an income-generating intervention. The research therefore suggests that the programme is an income-effective one, but it is functioning far less than what its economic potential could be.

5.2.3: Institutional Governance and Long-Term Sustainability.

The paper arrives at the conclusion that institutional governance and leadership is the most critical weaknesses of the programme and its major risk factor that threatens the sustainability of the programme in the long-term. Among the major governance shortcomings are: those who participate in garden committee structures are partly democratic (57.3 out of 100 citizens); involving elite benefit capture (31.3%); weak ward-level committee functioning; lack of transparent financial reporting systems; and worst of all, a lack of a community ownership transition plan.

In the whole dataset, 73.3% of the participants think that the programme is to be sustained even after Mimosa withdraws its direct support. It demonstrates a community belief, which is based on the evidence, that the programme is a corporate offering, but not a community

resource. This conclusion is in line with the general Zimbabwean literature on CSR (Mkodzongi & Spiegel, 2020; Dhlini and Moyo, 2022), which consistently finds that CSR projects in extractive sectors in Zimbabwe are marked by top-down delivery, a lack of sufficient community ownership mechanisms, and fragility in their behavior when corporations change their priorities. The authors conclude that unless conscious and immediate institutional reinforcement is exercised, even the large-scale increases in food security and income recorded in this paper will be rolled back anytime the Mimosa programme investment is reduced.

5.3 Recommendations

5.3.1 Mimosa Mining Company recommendations.

Recommendation 1: Design and enforce an Ownership Transition Plan-Community. Mimosa Mining Company can create a systematic transitioning schedule that is time-bound, which will quietly pass operational ownership and governmental duty of the nutritional gardens to community-based organizations. This strategy must be jointly designed with the community representatives and aligned with the internationally accepted standards, like the Free, Prior, and Informed Consent (FPIC) principle used in the mining industry in Canada (Levy and Grant, 2021). The transition plan ought to involve capacity building of community garden committees, gradual loss of organization by direct corporate management, and developing a community-owned trust fund funded with a share of the CSR allocation of the business to maintain the infrastructure even when the business is no longer directly involved.

Recommendation 2: Increase Plot Sizes and Market Interconnections. Mimosa should consider increasing the average household plot. At the same time, the company ought to seek to form some form of formal market linkage arrangements, which could be an aggregation center, a bulk buying arrangement with local retailers or supermarkets, or an interface with a commodity exchange to allow the participants to access a higher-value market than is currently accessible under the farm-gate selling model. Such interventions would significantly enhance the generation of income for the programme without necessarily changing the structure of the programme.

Recommendation 3 - Institute Transparent Financial Reporting and Community Accountability Mechanisms. In order to curb the governance weaknesses and minimize the elite capture, Mimosa ought to provide financial expenditures on the programmes, lists of beneficiaries, and performance indicators to be tabled during the Ward Development Committee meetings on an annual basis. This is a transparency vehicle, which, in line with EITI-aligned governance principles in Norway (Nilsen, 2020), would establish a system of accountability that prevents benefit manipulation and establishes community confidence in the programme administration.

Recommendation 4 -Integrate Gender-Responsive Governance Mechanizing. With the risks of male usurpation of post-trends garden incomes recorded, Mimosa ought to embark on the implementation of gender equity statements in garden governance systems. They should also contain demands for women's dominant representation on garden executive committees, female-assigned produce sales accounts, and gender-sensitive training on financial literacy. In line with Mutsvangwa-Sammie et al. (2021), such mechanisms are necessary to make sure that an increase in income gains is converted into long-term trends in the provisioning of food that is controlled by females.

5.3.2 Community Garden Governance Structures Recommendations.

Recommendation 5 - Institutionalize and, in a way, democratize the Garden Committee. Constitutionally, garden committees ought to have written documents on how they are governed, including the manner of elections, terms of office, how they manage their finances, and what CWRS are. Participation in governance elections should be ensured to all the ward beneficiaries, and rotation of committee positions should be done to ensure that there is no entrenchment of single individuals or households. The bottom-up accountability would be enhanced through the adoption of participatory monitoring systems, like community scorecards or beneficiary-led review meetings (Akpan & Msweli, 2022).

Recommendation 6 -Form a Community Savings and Investment Group. In a bid to lessen reliance on Mimosa inputs and to develop the financial base to enable the eventual self-management of an eventual independent programme, garden beneficiaries will have to be encouraged to form Village Savings and Loan Associations (VSLAs) tied to garden earnings. Communal savings would be used to fund input purchases, minor infrastructure fixes, and

eventually the maintenance of irrigation equipment in the event of supply chain disruptions, thereby gradually creating financial independence to support programme maintenance even in the absence of corporate funding.

5.3.3 Recommendations for AGRITEX

Recommendation 7 - Extend the frequency of Extension Visits and Diversify with Technicals.

The strong positive relationship between extension officer visits and dietary diversity (r = 0.489) has a solid evidence base that AGRITEX can leverage to enhance the frequency of technical support to participants of the garden. The extension services are to be extended beyond the vegetable cultivation guidance to value addition and post-harvesting handling skills, which will minimize the wastage of crops and enhance the marketability of the produce. Training on soil health management should also be provided by AGRITEX to cope with the soil fertility risks posed by multi-year intensive irrigated cultivation.

Recommendation 8 - Horizontal Exchange of Knowledge. The AGRITEX organization must promote formal peer networks of learning between garden societies across varied wards and districts to share best practices in terms of high-yield crops, irrigation methods cutting on water, and community development forms of governance. This type of horizontal learning network has been observed to be very cost-effective in supplementing formal extension services in similar rural development settings in Zimbabwe (Dube & Phiri, 2021).

5.3.4 Recommendations for Zvishavane Rural District Council

Recommendation 9 - Have Garden Programme formally integrated into District Development Planning. The district nutrition garden programme operated by the ZRDC needs to be formally based on the strategic development plans and operational annual budgets of the district and should be regarded as an integral part of the food security and livelihood approach of the district, and not just a social responsibility programme by the private sector. Through this integration, complementary public investment (access roads to garden sites, rural water supply, and community health services) would open that benefits the programme. It would also establish a pattern of district-level governance that would make the programme less reliant on the unilateral governance choices of Mimosa.

Recommendation 10 - Have a Framework CSR Coordination and Monitoring Framework. The ZRDC, together with Mimosa and civil society organizations, ought to create a multi-stakeholder CSR coordination platform patterned along the tripartite dialogue approach in Norway (Falch and Selle, 2021). It would be used to hold bi-annual review boards of all the CSR-funded development programmes in the district to allow cross-programme learning, the identification of resource efficiencies, and a valid accountability platform that is lacking at present. This would directly respond to the gaps in transparency and accountability that were found during the research.

5.4 Contribution of the study.

The research is also an original, empirical contribution to the literature on mining-related CSR in Zimbabwe by being the first household-based mixed-method evaluation of a community nutritional garden programme in the platinum mining industry. It fills the knowledge gap outlined in Chapter 2 by bringing into existence tangible, statistically confirmed evidence on the food security, income, and governance impacts of the programme. It is shown that, when sufficiently backed, nutritional garden CSR programmes can lead to a process of significant and quantifiable livelihood change in semi-arid rural settings, a result which has implications for the setup of programmes in similar mining maintenance in sub-Saharan Africa. At the same time, the research also adds its value to the literature concerning governance and sustainability by quantifying the rates of the issue of elite capture (31.3%), as well as recording the risk of structural sustainability posed by dependency on infrastructure and the lack of community ownership transition planning.

5.5 Future Research Recommendations.

There are several directions in which this study could be further researched. To start with, a longitudinal investigation following the same households over five or more years would seek more certain data on whether the food security and income gains observed here are long-lasting, enhanced, or diminished over time. Second, a comparative analysis of the nutritional garden programmes of various mining companies in Zimbabwe (such as platinum, gold, and diamond) would have allowed for generalizing the results of the governance and sustainability of the Mimosa case. Third, a gendered impact analysis that directly monitors female versus

male domination over income generated through gardens would help produce more accurate evidence on the gender equity implications of the programme. Lastly, a study that explores the generalizability of the Canadian co-management and equity ownership model (Senez and Smith, 2023) to the Zimbabwean platinum mining environment would be useful in formulating a policy outline that can be implemented in the national CSOT framework.

5.6 Final Reflection

The community nutrition gardens being initiated by Mimosa Mining Company in Zvishavane can be seen as a real and positive contribution of CSR to the lives of hundreds of rural families who are suffering as a result of food insecurity in a semi-arid environment. The programme has a real impact on food security and income that is statistically significant and widely aligned with the greatest results reported on similar programs in the region. But the findings of the study all highlight an underlying reality about the role of CSR-led development in the mining context: the community cannot be sustained dependent on corporate programmes; it must own and govern and ultimately become self-sustainable. There is a danger of institutional development, community ownership transition, and transparency in governance slipping beyond the grasp of a corporation and requiring emergency action without which the reported benefits of this programme can at best be held as a ransom to the increasingly variable priorities of a corporation--a structural dependence which the findings of this paper have argued is neither only dispensable but repairable. The road between delivering benefits and community ownership is not a straight and fast process, but the proof produced by this study not only offers the reason that makes it the right thing to do, but also the empirical basis to take the action.

REFERENCES :

1. Akpan, W., & Msweli, P. (2022). Corporate-community conflicts in Africa's extractive sector: The limits of CSR. Journal of Contemporary African Studies, 40(3), 345–362.

2. Bashizi, J., & Rubbers, B. (2022). The politics of exclusion: Large-scale mining and artisanal miners in the DRC. The Extractive Industries and Society, 11, 101123.

3 .Bjørnå, H., & Kyllingstad, N. (2022). Environmental governance in the Norwegian minerals sector: A study of policy integration. Resources Policy, 77, 102689.

4. Carroll, A. B. (2016). Carroll's pyramid of CSR: Taking another look. International Journal of Corporate Social Responsibility, 1(1), 3. https://doi.org/10.1186/s40991-016-0004-6

5. Creswell, J. W., & Plano Clark, V. L. (2018). Designing and Conducting Mixed Methods Research (3rd ed.). Sage Publications.

6. Cuvelier, J. (2019). Digging for survival: The economics of artisanal mining in the DRC. Resources Policy, 63, 101434.

7. Dhlini, T., & Moyo, T. (2022). Top-down development and community resentment in Hwange's coal fields. Journal of Southern African Studies, 48(5), 891–908.

8. Falch, T., & Selle, P. (2021). The Sami Parliament and resource governance in Norway: The role of indigenous representation. Arctic Review on Law and Politics, 12, 56–78.

9. Food and Agriculture Organization. (2025). France, FAO, and World Vision boost nutrition and food security in Masvingo and Mwenezi districts. FAO Africa News. https://www.fao.org/africa/news-stories/news-detail/france--fao-and-world-vision-boost-nutrition-and-food-security-in-masvingo-and-mwenezi-districts/

10. Geenen, S., & Radley, B. (2020). In the face of reform: What future for artisanal mining in the DRC? Futures, 122, 102588.

11. Hamann, R., & Kapelus, P. (2018). Corporate social responsibility in South Africa: From compliance to innovation. In The Routledge Handbook of CSR in Africa (pp. 115–130). Routledge.

12. Kambamura, P. (2024). How Zimbabwe's mining sector is empowering communities through agriculture. Mining Zimbabwe. https://miningzimbabwe.com/how-zimbabwes-mining-sector-is-empowering-communities-through-agriculture/

13. Keenan, K., & Mahdi, S. (2022). Beyond compliance: The performance of Canada's Towards Sustainable Mining program in Indigenous contexts. The Extractive Industries and Society, 10, 101081.

14. Kodi, M., & Muja, A. (2021). Mining companies as surrogate states: Community expectations and conflict in the DRC. Third World Quarterly, 42(6), 1245–1263.

15. Levy, B., & Grant, J. (2021). Implementing FPIC in the Canadian mining sector: From principle to practice. Resources Policy, 74, 102278.

16. Mabasa, K., & Ngwakwe, C. C. (2024). Evaluating the impact of the Mining Charter on sustainable development in South Africa. The Extractive Industries and Society, 17, 101385.

17. Mabhena, C. (2020). Mining with a "Human Face"? Examining the Role of Corporate Social Responsibility in the Extractive Industries in Zimbabwe. Journal of Southern African Studies, 46(5), 875–892. https://doi.org/10.1080/03057070.2020.1813946

18.Makonese, O. (2025). Sabi Star boosts Buhera farmers. Daily News. https://dailynews.co.zw/sabi-star-boosts-buhera-farmers/

19. Manyani, A. T. (2026). Zimbabwe: Reviving Ward 19 through community-led action. Gender Links - For Equality and Justice. https://www.genderlinks.org.za/change/drivers-of-change/zimbabwe-reviving-ward-19-through-community-led

20. Manzanga, P., & Khunou, S. (2023). Elite capture and beneficiary conflicts in South Africa's mining communities. Review of African Political Economy, 50(177), 456–474.

21. Mapuranga, R. (2024). Mimosa invests over US$2 million in community development. Mining Zimbabwe. https://miningzimbabwe.com/mimosa-invests-over-us2-million-in-community-development/

22. Mapuranga, R. (2025). Mimosa ESG Strategy hailed for strong governance, community engagement. Mining Zimbabwe. https://miningzimbabwe.com/mimosa-esg-strategy-hailed-for-strong-governance-community-engagement/

23. Marais, L., & de Villiers, D. (2020). The implementation gap in South Africa's Social and Labour Plans. Resources Policy, 69, 101819.

24. Masuku, C. (2022). Strategic communication, enhanced sustainability, and embedded communities: assessing approaches by a platinum mine in Zimbabwe. Communitas, 27, 21–33. https://doi.org/10.18820/24150525/Comm.v27.2

25. Mimosa Mining Company. (2023). Sustainable Development Report 2022. Mimosa Mining Company.

26. Mining Association of Canada (MAC). (2023). Towards Sustainable Mining (TSM) Guide: 2023 Progress Report. Ottawa: MAC.

27. Mkodzongi, G. (2020). Land and agrarian transformation in Zimbabwe: Rethinking rural livelihoods in the aftermath of the land reforms. Anthem Press.

28. Mkodzongi, G., & Spiegel, S. (2020). Artisanal gold mining and food security: A structural equation modeling approach. The Extractive Industries and Society, 7(4), 1453–1462. https://doi.org/10.1016/j.exis.2020.10.001

29. Mkodzongi, G., & Spiegel, S. (2020). Artisanal gold mining and rural livelihoods in Zimbabwe: A critical overview. The Extractive Industries and Society, 7(3), 1144–1152.

30. Moyana, T., & Mabhena, C. (2021). The securitization of diamond mining in Marange and its impact on local communities. Review of African Political Economy, 48(169), 458–476.

31. Ndlovu, L., & Dube, A. (2023). Environmental liabilities and corporate neglect in Zimbabwe's coal mining sector. The Extractive Industries and Society, 24, 101335.

32. Nilsen, T. (2020). The implementation of EITI in Norway: Strengthening the chain of transparency. The Extractive Industries and Society, 7(3), 1037–1046.

33. Njenga, C. (2021). Beyond the resource curse: New models for community development in African mining. African Development Review, 33(2), 287–299.

35. Olsen, T., & Fjellheim, E. M. (2024). The ethical investor: Norway's sovereign wealth fund as a regulator of global mining conduct. Journal of World Business, 59(1), 101476.

36. Saunyama, J. (2024). Legitimizing extraction: An analysis of post-consolidation CSR in Marange's diamond fields. Resources Policy, 88, 104501.

37. Senez, P., & Smith, L. (2023). From revenue to ownership: The rise of Indigenous equity in Canadian resource development. Journal of Business Ethics, 185, 723–740.

38. Shoko, M. (2022). The ‘resource curse’ and rural livelihoods: A case study of mining communities in Zvishavane, Zimbabwe. Journal of Developing Societies, 38(2), 196–217. https://doi.org/10.1177/0169796X221091782

39. Spiegel, S. J. (2023). Decolonizing CSR in the Zimbabwean extractive sector. Business Ethics Quarterly, 33(1), 178–210.

40. Thorgersen, A., & Larsen, R. K. (2019). The Nordic model for sustainable mining: Tripartite collaboration and conflict resolution. Environmental Management, 64(2), 145–158.

41. Tjibenda, M. (2026). Bulawayo's suburban community gardens drive urban farming. NewsDay Zimbabwe. https://www.newsday.co.zw/southerneye/local/article/200050530/bulawayos-suburban-community-gardens-drive-urban-farming

42. Toriro, P., & Mhlanga, K. (2021). Urban Agriculture as a Food Security Strategy for Urban Dwellers: A Case Study of Mkoba, Zimbabwe. African Journal of Food, Agriculture, Nutrition and Development, 21(5), 18313–18332. https://doi.org/10.18697/ajfand.101.19570

43. Yamane, T. (1967). Statistics: An Introductory Analysis (2nd ed.). Harper & Row.

44. Zhou, T., & Ncube, P. (2025). Community agency and resistance in Zimbabwe's extractive landscape. Geoforum, 151, 103001.

44. Carroll, A. B. (2016). Carroll's pyramid of CSR: Taking another look. *International Journal of Corporate Social Responsibility*, 1(1), 1–8.

45. United Nations Development Programme (UNDP). (2017). *Guidance notes: Sustainable livelihoods approach*. UNDP.

46. World Bank. (2022). *Thailand Rural Income Diagnostic: Challenges and Opportunities for Rural Farmers*. Washington, D.C.: World Bank Group.

47. Kumari, C., Saha, N., Divakar, S., Christopher, K., & Priyanka. (2025). A strategic initiative for enhancing nutritional security through Nutri-garden. *International Journal of Agriculture Extension and Social Development*, 8(4), 79–81.

48. Larmer, M., & Laterza, V. (2017). Contested wealth: Social and political mobilisation in extractive communities in Africa. *The Extractive Industries and Society*, 4(4), 701–706.

Appendices

Research Tools

1 Questionnaire

Good day, my name is Hazel Sibanda. I am a student at Bindura University, and I am conducting a study on the Mimosa community nutritional gardens in Zvishavane. I am talking to households that participated in the gardens to learn about how the gardens affect food, income, and household well-being. The information will be used only for academic research and to help improve the program. Your participation is voluntary. You may refuse to answer any question or stop the interview at any time without giving a reason. Do you agree to take part in this interview?

Respondent information

Respondent name :

Date :

ID :

Ward village :

Household size :

Age :

Sex :

Time frame in the area :

Time frame in the programme :

Section A: Food security and nutrition

In a typical year before joining the garden, for how many months did your household experience food shortages?

_____ months

2. In a typical year since joining the garden, for how many months does your household experience food shortages?

_____ months

3. In the past 7 days, on how many days did any household member consume vegetables or produce from the Mimosa garden?

_____ days

4. In the past 24 hours, did any household member consume the following foods? (Mark Yes/No)

a. Cereals (maize, sorghum, rice) □ Yes □ No

b. Roots and tubers (cassava, sweet potato) □ Yes □ No

c. Vegetables (leafy and other) □ Yes □ No

d. Fruits □ Yes □ No

e. Legumes/pulses (beans, groundnuts) □ Yes □ No

f. Fats and oils □ Yes □ No

(Dietary Diversity Score = count of 'Yes' responses)

5. Since joining the garden, has your household had to skip or reduce meal portions: yes □ □no

If they did, how often was it?

□ Less often □ More often □ About the same

Section B: household income and livelihoods

6Which are your household's main sources of cash income? (tick all that apply)

□ Farming □ Garden sales □ Wage employment □ Informal trade

□ Remittances □ Artisan mining □ Pension □ Other: _____

7. Does your household sell produce from the garden?

□ Yes □ No — If Yes: how often? □ Daily □ Weekly □ Monthly □ Occasionally

8. Estimate monthly cash income from garden sales (choose range)

□ None □ < USD 10 □ USD 10–30 □ USD 31–60 □ > USD 60

9. Since joining the garden, has your household's total cash income increased? Yes □ no □. If yes, how much has it increased?

□ Decreased □ No change □ Slightly increased □ Greatly increased

10. How is income from garden sales primarily used? (tick one)

□ Food purchases □ School fees □ Medical costs □ Agricultural inputs

□ Savings □ Other: _____

Section C: Institutional governance, leadership, and sustainability

16. Who manages the garden plots?

□ Household individually □ Community committee □ Mimosa staff □ AGRITEX □ Other: ____

17. How were beneficiaries selected for garden participation?

(Possible: community vote/household application/targeting by Mimosa / local leader selection)

18. Are there written or agreed-upon rules for garden use and management?

□ Yes □ No — If yes, are they generally followed? □ Always □ Mostly □ Sometimes □ Rarely

19. How reliable is the water supply for the garden?

□ Very reliable □ Somewhat reliable □ Unreliable □ No water

If unreliable, how often is water unavailable? _____

20. If Mimosa reduced or stopped support (water, inputs, technical help), would the garden continue to function? Yes □ no□. How likely is it that the garden would continue to function ?□ Very likely □ Somewhat likely □ Unlikely □ Very unlikely

Thank you very much for your time and for sharing this information.

2 Key Interview Guide

Good day, my name is Hazel Sibanda, a student from Bindura University. Thank you for agreeing to meet with me. I am conducting a study on Mimosa's community nutritional gardens and would value your perspectives in your various positions. The interview will focus on the design, implementation, governance, and impacts of the nutritional gardens. Your insights will help me to understand program strengths, challenges, and opportunities for sustainability. Your participation is voluntary. You can decline to answer any question or stop the interview at any time. Do you agree to take part?

I would like to audio-record this interview to ensure accuracy. I may also ask to see any documents you can share (monitoring reports, beneficiary lists). Do I have permission to record and to request documents? The interview should take about 30 –45 minutes. Do you have any questions? May I begin?

Informant Information

Informant name :

Date :

ID :

Sex :

Organization/agency :

Position Title :

Years in organization :

Section A: Food security and nutrition

1 Has the availability and diversity of food changed for beneficiary households since the gardens began? Yes □ no □. If it changed, how much has it changed? How much did it change?

2. Do nutrition education or behavior-change activities, such as training content, attendance, and outcomes, accompany garden participation? Yes □ no □ and if they do, how effective are they?

3. How do seasonal factors and the local climate, such as irrigation challenges and drought, affect garden production and household food availability?

4. Do you have monitoring data or examples showing changes in dietary diversity or reduced food shortages? Please describe or provide documents.

5. What are the main constraints to using garden produce to improve nutrition at the household level?

Section B: Household income and livelihoods

6. To what extent do gardens generate cash income for households, and do you have typical income ranges and numbers of households selling evidence that supports this?

7. Do strategies exist to help buyers, cooperatives, transport support, and market linkages or commercialization, as they exist, to help beneficiaries sell surplus produce?

8. Are there any barriers, such as transport, storage, price, quality, and demand, preventing beneficiaries from attaining income from gardens, and do you have any suggestions to overcome these barriers?

9. Are there documented examples of households improving incomes through the gardens? Please describe.

10. Does income from gardens affect household expenditure decisions and resilience to shocks? For example, school fees, medical expenses, savings, and asset purchases.

Section C: Institutional governance, leadership, and sustainability

11. What is the governance and management arrangement for the gardens (the selection of committee members, gender balance, terms)?

12. How were beneficiaries selected, and how is transparency and fairness ensured?

13. What forms of support does Mimosa provide (water infrastructure, inputs, fencing, training), and for how long is this support planned?

14. What capacity-building, monitoring, and handover strategies are in place to promote long-term community ownership and sustainability?

15. Have there been governance challenges (elite capture, conflicts, misuse of resources)? If so, how were they addressed, and what lessons were learned?

Closing

Do you have any recommendations for improving the gardens' contribution to household livelihoods and sustainability?

Thank you for your time and your helpful insights. If I need to clarify any points later, may I contact you? (If yes:) What is the best way to reach you? If you are willing to share any documents you mentioned, please let me know how I can collect them or where I can access them. Your responses will be treated confidentially. Quotes will be used anonymously unless you ask to be named