THE EFFECTS OF MINING OPERATIONS IN COMMUNITY DEVELOPMENT: A CASE STUDY OF MOGALAKWENA MINE IN THE LIMPOPO PROVINCE, SOUTH AFRICA

by

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DECLARATIONS

I, Rosalia Given Hlungwane, declare that the dissertation hereby summited to the University of Limpopo, for the degree of Master Development (Planning and Management), has not previously been submitted by me to any other University for a degree, this is all my work and other materials used have been acknowledged.

Ms RG Hlungwane	08 October 2024
Tittle, Initial & Surname	Date

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ACRONYMS

BEE:	Black Economic Empowerment
IDP:	Integrated Development Plan
NWA:	National Water Act
MPRDA:	Mineral & Petroleum Resource Development Act
BBBEE:	Broad Based Black Economic Empowerment
IRMA:	Initiative for Responsible Mining Assurance
CDA:	Community Development Act
MMA:	Mines Mineral Act
CSI:	Corporate Social Investment
GDP:	Gross Domestic Product
NEMA:	National Environmental Management Act
MELAA:	Mineral & Energy Laws Amendment Act
DRA:	Deed Registrations Act
EMA:	Environmental Management Act
MACUA:	Mining Affected Communities United in Action
NACD:	National Association of Community Development
EMP:	Environmental Management Programme
DMRA:	Department of Mineral Resources and Energy
IDP:	Integrated Development Plan
DME:	Department of Mineral Resources & Technology
AIA:	Atmospheric Impact Assessment
EIA:	Environmental Impact Assessment
DEA:	Department of Economic affairs
SPLUMA:	Spatial Planning & Land Use Management Act
SLP:	Social & Labour Plan
DACDF:	Diamond Area Community Development Funds
CSO:	Civil Society Organizations
ARM:	Alliance for Responsible Mining
GIS:	Geographic Information System
YES:	Youth Employment Services

SPSS: Statistical Package for the Social Sciences

ABSTRACT

Mining operations are a necessity to the economic growth of the country as they bring about changes and deal with the triple challenges of poverty, unemployment, and inequality. Host communities and the country get employment opportunities, infrastructure development, contribution towards the GDP of the country, better education, investment, and better life for host communities. However, mining operations takes place in areas inhibited by the people and in the process, even though there's policies and legislations for mining operations, people tend to suffer from resettlement and the negative effects that the mine has on local people. The negative effects include house damages caused by mine blasting, health issues caused by pollution, inadequate infrastructure development, underground water pollution etc. Thus, the study argues that mining operations affects the resettled and host communities more negatively than they do positively, and mining operations prioritises profit more than the protection of community development of the host communities and other benefits. The study thus has the findings that mining operations have more negative effects than positive, and the development of host communities is not prioritised. The study therefore recommend that there must be meaningful and extensive public participation of the host communities in the development of Social and Labour Plans (SLPs) and the entire mining process, including their basic needs and problems be prioritised. This study adopted the interpretivist paradigm as it is based on exploring social reality, understanding of human behaviour and will contribute to finding solutions to a social problem through reasoning and observation. This study also adopted mixed method research using a descriptive enquiry in order to produce better results and obtain a deeper understanding of the effects of mining operations on the development of host communities

Key search words: Community development, Mining operations, Rural livelihoods, Social & Labour Plans, South Africa

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1. INTRODUCTION

Daily mining operations affect community development in both negative and positive ways. Thus, this study aims to investigate the effects that Mogalakwena mine has on the development of host communities in the Limpopo Province. According to Jackar (2018:52) there is strong evidence that a large amount of carbon dioxide is emitted during mining operations from start to finish. It was empirically proven that the rise of carbon emissions on the environment affecting the community health increases as the number of mining businesses rise (Fekete, 2015:25). Although mining businesses contribute towards community development and the economy by providing job opportunities, the Corporate Social Investment (CSI) projects and contributing towards the Gross Domestic Product (GDP), mining also has detrimental effects on communities and their development.

Globally, out of forty mining companies which were surveyed, it was found that mining operations generated a revenue of 683 billion US dollars in 2018, thereby contributing to the local economic development of their respective countries (Garside, 2022:44). However, despite these positive effects on community development, it was found that these mining companies leave a large area of mining dump which negatively poses health risks to employees (Garside, 2022:44). According to Priyadarshi (2018:2), Jharkhand State is a state in India that is rich in minerals and known for its mining and high GDP, however numbers of forests are cleared for dumping which leads to deforestation and displacement. In the process of making mining possible, vegetation is cleared to build roads and mining facilities. This leads to the community livestock's and organisms living in those areas unable to survive, thus dying, while some lose their natural habitat. Nearest communities lose their livelihoods in the process.

However, in South Africa, there are environmental legislations that are protecting communities and their development against activities performed by mining agencies. The Mineral and Petroleum Resource Development Act (MPRDA) 28 of 2002 is one of the environmental legislations that promotes transformation of the mining sector and prioritizes socio-economic development. The MPRDA intends to create the provision of

sustainable development and equitable access to petroleum and mineral resources. Therefore, the extraction or the execution of mining businesses must be in a way that promotes sustainable development.

The National Environmental Management Act (NEMA) was also established with the purpose of providing general coordination and supervision over issues that are related to the environment to achieve sustainable development (NEMA, 1978); consequentially, led to the environment and sustainable development. The Mineral and Energy Laws Amendment Act 11 of 2005 (MELAA) aims to correct changes made by the Mining Titles Registration Amendment Act 2003 (MTRAA) regarding Deed Registries Act 1937 (DRA). For that reason, several mines were causing environmental problems thus, the Act had to be reviewed to facilitate increased protection of the environment and communities.

The Environmental Management Act (EMA) 107 of 1998 states that people have the right to an environment that is safe and not harmful to their health thereby allowing them to use the environment to satisfy their needs not forgetting the needs of the future generation. Thus, mining business must abide or follow these acts throughout their practices as a contribution towards sustainable development.

It is argued that provinces such as Limpopo in South Africa are experiencing failures in achieving the development of host communities as a result of major environmental problems that mining practices has on the host communities environment (Coetzee & Chevrel, 2016:12). These environmental problems include soil and water pollution, especially when dams are used for chemical disposals which leads to ground water contamination which, in turn, has a negative impact on human and animal (livestock) health (Coetzee & Chevrel, 2016:12). Despite the reported environmental downside and associated detrimental impact on human health of mining activities, mining does contribute significantly to the South African economy in multiple ways. For example, mining creates local jobs; increases the level of technology and contributes towards development within the country (Jakar, 2018:12).

A study undertaken by Chipa & Marais (2022:3) about “Mining, corporate social responsibility and communities, a case of Mogalakwena municipality”, shows that even though Ga-Mapela is experiencing negative effects such as, noise and cracking of houses from the mining activities, the community is significantly provided with infrastructure from the Anglo-American Platinum Mine. Thus, it can be argued that mining is a double-edged sword which brings both negative and positive impacts at both the national and community level.

Within this context, the study will focus on perceptions of host communities on the effects of mining operations; the understanding of mining operations about their role in contributing towards host communities’ development protection and recommend measures that could improve the effects of mining operations towards community development.

1.2. STATEMENT OF THE PROBLEM

Mining operations contribute to the GDP through employment creation and wealth generation. However, mining operations affects community development in both negative and positive ways. When mining operations are introduced, a large amount of land is cleared for mining activities, which leads to land degradation, resettlement, and displacements of affected communities.

In the process of displacement, people lose their ancestral land. Livelihoods such as farming are affected, which leads to food insecurity, increased conflicts, social vices, and people finding it hard to adjust and starting all over. Animals lose their grazing lands, finding it difficult to adjust, which leads to death. This then affects their socio-economic development of the people, both individually and collectively.

Mining causes pollution (water, air, soil, and land) as there is a number of gases emitted during the practice, using rivers as waste disposals (Goswami, 2015:30). Pollution leads to the issue of climate change and diseases (such as lung cancer) to the citizens, reducing their life expectancy. When climate change occurs, people tend to lose their crops due to

lack of rain and too much heat as well as polluted underground water and soil. According to Mitula *et al* (2015:16), people who inhale the air polluted by mining business die within 2-3 years.

The major activity in mining is extracting minerals, this therefore leads to natural disasters and underground water pollution. Mining businesses cause soil erosion, loss of biodiversity, ecological disruption, soil degradation and contamination of soil, ground water and surface water (Khobragate, 2020:11). These effects lead to water tasting different to community members due to pollution, causing diseases such as Cholera, and their livestock dying from drinking the water.

Soil erosion becomes a challenge to farmers and community members that makes a livelihood form crop, leading to communities unable to overcome poverty and hunger. Furthermore, it affects the eco-system and causes migration. People migrate from their homes to the area where mining operations will be undertaken to get employment opportunities. Consequently, this leads to over population and pressure to the government in provision of goods and services, furthermore, affecting local employment.

Among all businesses in the industry, mining is the number one operation that causes problems and complications to communities (Coetzee & Chevrel, 2016:3). Furthermore, it becomes a problem when the natural environment is negatively affected, thus affecting the development of the community. Due to the effects of mining operations on community development, Mapela Mining Affected Communities United in Action (MACUA) was established. According to the MACUA, South African mines symbolize expropriation, exploitation, migrant labour, discrimination, and environmental degradation. Therefore, the MACUA serve as a voice of the affected communities, the marginalized and the excluded, while ensuring that the environment, economy, and social line is not degraded.

The MACUA further protects the interest and integrity of the affected communities, aiming at ensuring that mining operations contributes towards the socio-economic development of the communities they operate in, and from the communities which their employees are sourced (Khobragate, 2020:11). However, Anglo Mogalakwena Platinum states that the alchemy is developed to help their daily operations prioritize sustainable development in

their host communities. The alchemy is the integrated socio-economic development vehicle through which Anglo American Platinum established four community development trusts and one non-profit company as vehicles for meaningful community development in the host and labor sending communities, namely, Mogalakwena, Rustenburg, Lesotho, Mozambique and Eastern Cape (Khobragate, 2020:11. The alchemy further promotes opportunities for sustainable development and upliftment to the communities with solutions. Therefore, the study aims at investigating the effects of Mogalakwena mining operation on community development.

1.3. THE RATIONALE OF THE STUDY

Mining operations are known to grow the economy and improve the standard of living of the people in which it operates in. However, there are a lot of negative effects that the mine has on the host communities development. Therefore, the study is undertaken to provide an insight and add to the empirical evidence on the effects of mining operations on community development. Living in the host communities of Mapela and Mokopane makes one realise the challenges faced by resettled and host communities and the effects that the mine has on their development. It is stated in the mining policies that the mines have certain procedures they follow in order to protect community development and mitigate effects they have on communities, failure to do so will lead to fines and the license revoked. Therefore, this study is also undertaken to prove if the mining operations follow the policies and legislations in protecting community development, if the host communities are considered in the process, and if the government does proper monitoring and evaluation to protect the community development.

1.4. LIMITATIONS OF THE STUDY

Study limitations includes time constraint, where the time available for the researcher to study the research problem and measure overtime changes is limited. However, if time impacts the study, the researcher will consider future study to provide answers to the research problem. Conflicts that might occur because of personal issues and cultural bias, where the researcher holds biased views due to the background of culture leading to the legitimacy of the study affected. To avoid this limitation, the researcher will examine

whether the process of data gathering and stating the research problem was conducted appropriately.

1.5. AIM OF THE STUDY

The study seeks to investigate the effects that Mogalakwena mine have on the development of host communities in the Limpopo Province.

1.6. OBJECTIVES OF THE STUDY

The study, specifically, focuses on the following objectives:

To determine perceptions of mining host communities on the effects of mining operations towards community development.

To determine the understanding of mining operations' role in protecting the mining host community development against negative effects.

To recommend measures that could reduce the adverse effects of mining operations towards community development.

1.7. RESEARCH QUESTIONS

The general research question is formulated as follows:

How does Mogalakwena mining operation affect host communities' development?

From the general research question, specific research questions are formulated as follows:

What are perceptions of mining host communities on the effects of mining operations on community development?

What is the understanding of mining operations about their role in protecting the mining host community development against negative effects?

What are measures that could reduce the adverse effects of mining operations towards community development?

1.8. SIGNIFICANCE OF THE STUDY

The study will contribute to the existing knowledge in Mogalakwena municipality about the effects that mining operations have on community development. The study has potential to further contribute towards community development approaches in daily mining practices, to protect the development of the host communities. This study might also contribute to community development practices, influence policy making together with development of new ways of policy thinking.

It is proven that the mine industry contributes about 70% to the country's development as it provides employment, extracts minerals, and contributes towards the GDP, however posing severe threats and effects on the environments and development of host communities more than any other industry. Therefore, shutting down of mines is not a solution as it will lead to the economy collapsing. Thus, the study will provide recommendations on how to reduce these effects to protect communities' development. For the researcher, other academics, community members, leaders, and mine stakeholders, this study will uncover issues and factors that were unknown about the effects of mining operations on community development.

1.9. DEFINITION OF TERMS

1.9.1. Mining Operations

"Mining operations refer to the development of mines, blasting, drilling, milling, extraction, screening, crushing, and sizing of minerals at a mine, maintaining and repairing mining equipment and the haulage of materials within the mine from these activities" (Wolkersdorfer, Nordstrom, Beckie, Cicerone, Elliot, Edraki, Valente, França, Kumar, Lucer, Soler, & Gil, 2020:1).

1.9.2. Natural environment

Natural environment refers to the surrounding that is non-human made where all non-living and living organisms exists on planet earth (Brown, Thompson, et al., 2016:45).

1.9.3. Community development

According to the National Association of Community Development (NACD) (2018:8), “Community development is a practice-based profession and an academic discipline that promotes participative democracy, sustainable development, rights, equality, economic opportunity and social justice, through the organization, education and empowerment of people within their communities, whether these be of locality, identity or interest, in urban and rural settings”.

1.9.4. Mining Effects

Mining effects refer to negative and positive changes caused by mining operations on the environment and the community in which they operate (Mason-Jones, Schmücker & Kuzyakov, 2018:4).

1.10. CONCLUSION

This chapter introduced the topic of the study together with its background. It also provided the research problem, questions, and objectives. Overall, this chapter introduced the effects of mining operations on community development. It further indicated effects faced by global mining host communities. Therefore, this chapter indicated that the researcher aims at investigating the effects of Mogalakwena mining operation on the development of its host communities. The investigation will cover the perspectives of the mining operations, host communities, and government officials. Mining operations affect host communities in both negative and positive ways, therefore there are legislatives and frameworks that the government initiated to protect communities from mining operations effects. Mining operations are bound to abide and operate according to the frameworks on constant monitoring. The following chapter clearly unfolds the literature review of the effects of mining operations on host community development.

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

The previous chapter discussed the introduction and background of the study; therefore, this chapter will discuss the various perspectives which highlight the extent to which mining operations differently affects community development. It is therefore important that through literature review these effects are clearly identified and the extent to which they adversely and positively affect the communities are established**.** This chapter aims to unfold the global perspective of mining operations and their effects on community development in order to see if it responds to the problem identified by the study. Therefore, demonstration of the extent to which mining operations adversely and positively affect the development of various host communities worldwide is unfolded. It further reviews the perceptions of mining host communities on the effects of mining operations, unfolds mining operations roles in protecting the host community development against negative effects, review measures that could reduce the adverse effects of mining operations towards community development, legislative frameworks protect the host community's development and aims at achieving a balance between economic growth and community development leading to sustainability and further advocate for the host communities.

2.2. LEGISLATIVE AND POLICY FRAMEWORK FOR MINING COMMUNITY DEVELOPMENT IN SOUTH AFRICA

South Africa has a wide range of legislative and policy frameworks which governs the various mining operations and requires that the mining operations positively contribute towards community development and mitigate against the negative effects of mining operations in community development. These legislative and policy frameworks include, amongst others, Constitution, Mineral Petroleum Resources Development Act, Minerals Act, Mining Charter (BBBEE), National Environment Management Act, Mine Health and Safety Act, Guideline Framework for Social and Labour Plans, Social and Labour Plans. These pieces of legislation and policies are discussed in detail below:

2.2.1. Constitution

Mining operations require permission from the state in order to mine. Therefore, full assessment of the environment and the community, consultation of the affected communities is required (Ndlazi, 2022:15). This is done to protect the rights of the individuals and communities when the government issues the approval. The constitution sets out these rights. One of these rights includes just administration action (Ubink & Pickering, 2020:25). Just administration action refers decisions taken by the government that are taken properly and fair (Ubink & Pickering, 2020:25). To ensure that the decisions are taken fair and properly, the affected communities are consulted to have a say and have their inputs taken into consideration and heard.

The constitution further states that everyone has the right to access any information held by the state and mining operations important to protect their rights (Ubink & Pickering, 2020:25). Therefore, affected communities have a right to information about the mining operation, how it will happen, and how the community and individuals will be affected (Ndlazi, 2022:3). This gives the community a platform to participate in decisions made about the mine, monitor the mining operation if there is any breach of the licence and breaking of the law, and objections in granting the licence (Ubink & Pickering, 2020:25). Everyone has a right to an environment that is healthy. The environment must be protected for the current and future generation and benefit from the resources. When a mining operation proposes a mine in the community, a clear plan of how water, land, people, air, buildings, plants, and animals will be protected must be provided. Protection of people from the pollution must be clearly shown, failure to do so the community has every right to report the mining operation to the Department of Mineral Resources (Ubink & Pickering, 2020:25).

Mining operations uses a large quantity of water and pollute rivers and groundwater off the community (Ndlazi, 2022:5). Therefore, it is important that the right given to the people by the constitution of access to sufficient water and food must be protected. Mining operations also takes up grazing and agricultural lands thus, it is important for the

community to know how much land the mine will use and the amount of water. The community also has the right to know how the mine will protect sources of water, crops, livestock, and their gardens. The constitution protects the ownership of people's property, however the MPRDA allows the mine to get the right to mine in the communities without their consent (Ndlazi, 2022:5). The mine is therefore obliged to compensate communities and individuals within which they operate in or uses their land (Ubink & Pickering, 2020:31).

2.2.2. Mining and Petroleum Resources Development Act (MPRDA)

Mining operations produces a noticeable amount of waste that has a great effect on communities and their environment. In order to do away with the negative effects sustainable mining needs to be practised and value given to the worth of the host community. Precautionary measures and legislatives must be implemented. The Mining and Petroleum Resource Development Acts policy was then developed. The Mining and Petroleum Resources Development Act was developed for mining operations to comply with the requirements of environmental management (Agboola, Babatunde, Fayomi, Sadiku, Popoola, Moropeng, Yahaya & Mamudu, 2020:54).

Mineral and Petroleum Resources Act No 28 of 2002 states that every mining operation is obliged to bring development to the local communities through empowerment and expanding opportunities for the disadvantaged in the petroleum and mineral industries, and for the community to benefit from the petroleum and mining resources exploited (Gazette 40923:20). It further states that mining operations must promote economic development and growth, employment, economic and social welfare of the host communities, "ensure that holders of mining and production rights contribute towards the socio-economic development of the areas in which they are operating", and security of tenure throughout the operation (Gazette No, 40923:20).

MPRDA advocates a balance between mining host community's socio-economic development and mining operations (Zwane, 2017:15). Mining operations must contribute, meaningfully to the development of host communities by following operating

principles of social license. Development contributions must come from income generating, enterprise, and infrastructure projects (Gazette No, 40923:28). Local municipalities draw the Integrated Development Plan (IDP) of the local communities; therefore, mining operations must identify and choose a priority from the IDP (Gazette No, 40923:28).

The mining operations contribution towards community development must be as the size of the investment (Agboola et al, 2020:100). All development projects directed to host communities must be aligned to the metropolitan, district, and local government's integrated development plan to achieve high impact on socio-economic development (Agboola, et. Al, 2020:100).

In terms of living conditions of the host communities and workers and their housing, dignity and privacy must be prioritized (Zwane, 2017:25). This means that mining operations must improve the housing standards and conditions of the community they operate in, including workers as stated in the living conditions and housing standard agreement by the law (Zwane, 2017:25).

2.2.3. National Environmental Management Act (NEMA)

The National Environmental Management Act was developed from the constitution of the Republic of South Africa Act, No 108 of 1996. The constitution states that everyone has a right to an environment that is not harmful to their wellbeing and health. It further states that the environment had to be protected for the current and future generations to enjoy; "secure ecologically sustainable development and use of natural resources, while promoting justifiable economic and social development" (Makgoka, 2021: 22). Therefore, to achieve these, the NEMA was developed. It was seen that protecting the environment leads to achieving sustainable development of the nation and communities.

The principle of sustainable development states that the usage of resources must in a way that allows future generations to meet their own needs. The NEMA ask for development to be economically, environmentally, and socially sustainable (Makgoka,

2021: 22). The White Paper requires the usage of resources in a sustainable manner, and avoidance of adverse effects on biodiversity, thus achieving ecologically economic development that is sustainable (Wickham & Barret, 2023:26). Aquatic ecosystem must be protected for safe water consumption of the communities and the future generations (Koti, 2020:30).

2.2.4. Mining Charter (BBBEE)

To ensure development of the nation through mining operations, the MPRDA states that 70% of the procured mining goods and services must be South African manufactured goods (Zwane, 2017:7). From the 70%, 21% must come from black owned businesses, 5% from South African Youth, and 80% from the Black Economic Empowerment (BEE) compliant local companies (Zwane, 2017:7).

The mining charter has the objective of expanding skills and opportunities in order to empower the disadvantaged, provide employment opportunities to enhance productivity and improve the standard of living if the host communities, enhance the economic and social welfare, promote South Africa's mineral commodities beneficiary, promotion of sustainable growth in mining together with the development and growth of host communities (Teleki, 2021:1). According to the mining charter, a mining operation must achieve a minimum percentage of 26 BEE shareholding to be recognised as a compliant (Mpanza, Adam & Moolla, 2021:10). This percentage of the BEE shall be considered in the renewal of the mining rights. A new mine must have at least 30% BEE shareholders which includes the interest of the economy and the society (Teleki, 2021:1). When a new mine commences, there's a certain percentage of employment opportunities expected to be given to certain groups. Minimum of 5% should be given to qualifying individuals, at least 5% to the host communities, and 20% to the BEE entrepreneurship (Mpanza, Adam & Moolla, 2021:11).

The mining charter also sets out the benefits of host communities from the mine. It states that 5% of the mine capital must be given back to benefit the host communities (Teleki, 2021:2). The mine is consulted with the host communities needs by the municipality and

traditional authorities or at times, the mine works together with the municipality and the traditional authorities to identify the community's needs (Mpanza, Adam & Moolla, 2021:15). The mine is therefore responsible for financing the host community development programmes and governance the equivalent equity benefits.

2.2.5. Mine Health and Safety Act

The main aim of the mine health and safety act is to protect the health and safety of mine workers and everyone in the mining environment. Mining operations must enforce measures of health and safety and "promote a culture of health and safety" (Government Gazette, 1996:4). Appropriate system of the state, the mine, and employees must be established to allow participation in safety and health matters, together with effective systems for inquiry, monitoring, investigations, and inspection in order to improve safety and health in mining operations (Government Gazette, 1996:4).

Mine health and safety act give the employees the right to refuse working in a dangerous environment and conditions (Stewart, 2020:35). The mine must ensure that there is better development in human resources and training. Employees are given the right to identify and eliminate, minimize and control any risk associated with health and safety. The mining operation is obliged to ensure that the mine is equipped, designed, and constructed in a way that provide a working environment that is safe and healthy (Stewart, 2020:35).

2.2.6 Guideline Framework for Social and Labour Plans

The Mineral and Petroleum Resources Development Act requires mining operations to submit a detailed guideline framework for social and labour plans. The social and labour plan requires the mine to develop and implement a human resource development programme, local economic development programmes, employment equity plans, and processes that helps in managing and saving jobs (Mogatle, 2021:15). Human resource development includes skills development, education levels, progression of career, internships, mentorship, bursaries and employment equity. The main aim of the social

and labour framework is to promote employment and advancing the economic and social welfare of all citizens, while prioritizing socio economic development and economic growth (Karolia-Hussain & Fourie, 2021:12). The Mining and Petroleum Resources Development Act requires the mine to submit the environmental Management plan with the mine works plan and the Social and Labour Plan when applying for the five years cycle (Mogatle, 2021:15). The mine must therefore ensure that the mining activities meet the needs of the current and future generations by implementing community development initiatives. Mining operations are obliged to ensuring proper housing of employees and host communities together with contributions towards socio-economic development of the host communities (Karolia-Hussain & Fourie, 2021:15).

Mining operations must align their socio-economic plan with the local economic development, and the integrated economic development of the local government as it clearly specifies the social impacts that are positive (Mogatle, 2021:16). The main aim of local economic development is eradicating poverty and uplifting the community. Measure of addressing living and housing conditions of the communities caused by mining operations must be developed and implemented. The district is also responsible for assessing the impact of mining operations on local economic development in five years of operation (Karolia-Hussain & Fourie, 2021:16). The district should further develop a five-year strategy for the mining operation with the aim of ensuring integrated socio-economic programmes targeting local communities (Karolia-Hussain & Fourie, 2021:18). The mining operation is therefore obliged to abide and implement development projects and programmes according to this plan. The social and labour plan also aims at transforming the mining industry and ensuring that the source of workforce and host communities achieve development (Mogatle, 2021:17).

2.3. INTERNATIONAL LEGISLATIVE AND POLICY FRAMEWORK FOR MINING COMMUNITY DEVELOPMENT

Internationally, new and amended laws outline community requirements and forces mining operations to undertake socioeconomic development projects to benefit host

communities (Eerola, 2022:5). Some of the internationally adopted mine operations or laws includes Mines and Minerals Act (MMA) which forces mining operations to formally enter the Community Development Agreement (CDA), Diamond Area Community Development Fund (DACDF), National Advocacy Coalition on Extractives Umbrella, and the Civil Society Organisations (Sovacool, 2019:25).

2.3.1. Mines and Mineral Act (MMA)

Mines and Mineral Act (MMA) is a legal mining framework that requires mining operations to sign a formal Community Development Agreement (CDA) with local host communities. MMA also requires mining operations to contribute 1% of their revenue to the Community Development Agreement (Dupuy, 2018:13). The Community Development Agreement obliges mining operations to undertake development projects that are aimed at the overall improvement of the host community welfare, and the host communities to respect the investment made by mining operations on the community (Dupuy, 2018:13).

The main aim of the MMA is to achieve good mining in the mining industry, to preserve the natural environment, manage waste, achieve better standard of living for the host communities, prevent pollution and damage on infrastructure which limits community development (Dupuy, 2018:33). According to the International Standard of the mining industry, mining licence application must be accompanied by an Environmental Impact Assessment, clearly indicating the risks that the operation will have on the environment and host communities and how they will be minimized, avoided, or prevented (Fichani & Koitsiwe, 2021: 120). Any loss or damage caused by mining operations on host communities and the environment shall be compensated by mining companies (Eerola, 2022:10).

2.3.2. Diamond Area Community Development Fund (DACDF)

The government of Sierra Leone adopted the Diamond Area Community Development Fund policy in early 2001 (Maconachine & Conteh, 2021:39). This a policy that binds

mining operations to return a certain percentage of the diamond mined to the local host communities. The amount of returned diamond is therefore used on the needy and development projects of the host communities, like road, schools, water services, health services and etc (Dupuy, 2018:14). The development projects prioritise the infrastructure of the host communities.

The main aim of the DACDF is to fund the development projects of the host communities to achieve development according to the community development agreement (Novosolov, et. al, 2020:30). This attracts investors, increases employment opportunities, better service provision in the community, high entrepreneurship withing host communities, better infrastructure, netter health, better education, awareness of economic opportunities and available community resources, sustainable development, inclusivity, empowerment, human rights awareness, social justice, equality, and participative democracy (Novosolov, et. al, 2020:30).

2.4. THE ROLE OF CIVIL SOCIETY ORGANISATIONS (CSO) IN ADVOCATING FOR COMMUNITY DEVELOPMENT BY MINING OPERATIONS

The international and domestic civil society organisations played a huge role in ensuring that community development is included in the country's mining legal legislations. These groups fall under the National Advocacy Coalition on Extractives Umbrella which pressures governments to provide increased benefits to the mining host communities (Dupuy, 2018:15). Civil societies require lack of infrastructure to be addressed and host community's empowerment since they are affected by the effects mining operations has on them (Phiri, Mantzari & Gleadle, 2019:27).

Civil society organizations around the world hold mining operations responsible for ensuring positive effects on host communities (Church & Crawford, 2020:230). They engage in practicalities that improves mining operations roles in achieving sustainable development goals (Phiri, Mantzari & Gleadle, 2019:27). In South Africa, the Alliance for Responsible Mining (ARM) advocates for host communities to receive development grant that benefits the whole community (Church & Crawford, 2020:230). It further raised

awareness on the effects that mining operations mining mercury has on human health and succeeded in reducing mercury mining (Church & Crawford, 2020:230). This led to the good health and wellbeing of workers and host communities (Phiri, Mantzari & Gleadle, 2019:27).

In Zimbabwe, the Zimbabwean Environmental lawyers contributed to improving social accountability and performance, and the accountability of the mining operations and supporting the sustainable development goals (Church & Crawford, 2020:230). Civil societies assist to achieve improvements in service provision, community inclusion and requirements in mining laws, sustainable development, economic growth, economic development by ensuring revenues are specifically used on public goods, increase cooperation and trust between host communities and mining operations, channelling host communities' concerns regarding mining operations, community participation throughout the process, and community empowerment (Phiri, Mantzari & Gleadle, 2019:27).

2.5. UNDERSTANDING THE EFFECTS OF MINING OPERATIONS ON COMMUNITY DEVELOPMENT

According to Emmanuel, Jerry & Dzigbodi (2018:5), mining operations affects community development more than any other operations. Mines cause soil erosion, loss of biodiversity, sinkhole formations, cracking of community houses, natural disasters such as earthquakes and surface water contamination (Emmanuel, Jerry & Dzigbodi, 2018:5). This is because the land is cleared to construct roads and infrastructure for mining activities by way of deforestation and removals of other natural landmarks such as mountains, leaving the area vulnerable to soil erosion The occurrence of soil erosion makes it impossible for the area to be recovered.

According to the residents of Asansol-Raniganj area in India, coal mining caused socio economic hazard as the results of crushing, drilling, and movement of vehicles, which left many people sick, dead animals, detriment of road infrastructure, houses cracked and collapsed, and habitant destruction (Ranjan, 2019:47). Emmanuel, *et. al* (2018:5) added that due to pollution caused by gases mines emit such as carbon dioxide, carbon

monoxide, methane and sulphide, human health is endangered, climate change is accelerated, and natural disasters unfold destroying properties and infrastructure. This resulted in high catastrophic cases where human beings inhaled the polluted air, consumed the contaminated surface or underground water, which led to diseases and mortality (Emmanuel, *et. al,* 2018:5). Most health problems were encountered by mine workers. Observed diseases included, black lungs, asthma, asbestosis, silicosis, inflammation, and siderosis (Tepanosyan, Sahakyan, Belyaeva, Asmaryan & Saghatelyan, 2018:22).

In South Africa, Worlany & Jiangfeng, (2021:3) reported that mining contributes, approximately 70% to the economy. On the other hand, it is the country's number one industry that damages the development of its host communities, endangers health of the people and is the reason behind poor economic activities by its emission of greenhouse gases. The South African Environmental Management Act 107 of 1998 states that safe environment to the people must have a surrounding whereby the atmosphere contained in the earth, fresh water, any source and lands, the ecosystem had animals, plants, and macro- microorganisms, "the chemical, physical, aesthetic and all forms of cultural properties and conditions that influence South Africans health, development, growth and their wellbeing" (Worlany & Jiangfeng, 2021:4).

Residents of Mapela reported that underground coal mining resulted in land subsidence which destroyed the structure of the soil, and caused changes to its properties, and furthermore caused eco-environmental problems like vegetable growth limitation, reduced the production of crops, killed plants, and accelerated water soil (Werner, Bebbington & Gregory, 2019:15).

Residents of Mothutlung in Northwest complains about Bushvel Vametco Minerals. The community complained that they have been robbed off opportunities since the mine started operation in their area (Matebesi & Marais 2018:380). The community members states that their house walls are cracking, and sicknesses caused by mining pollution.

The major health problem dominating in this community is asthma (Matebesi & Marais, 2018:380).

There is a social licence to operate signed by operations, however in South Africa, it is treated as an informal agreement, therefore leading to conflicts between mining operations and host communities (Matebesi & Marais, 2018:380). Social licence to operate was one of the measures developed to deal with these conflicts, along with local ownership of mine and accountability (Matebesi & Marais, 2018:380). The cause of conflicts between mining operations are the inability of mining operations to achieve community sustainable development and accountability (Matebesi & Marais, 2018:380). Bushveld minerals claimed to have provided 70% of employment to the host community and implemented projects and programmes aimed at improving the quality of life of the host communities (Matebesi & Marais, 2018:380). Equipment used in mining operations to destroy rocks shake the ground, lead to the infrastructure of the community cracking by causing minor earthquakes. According to the two host communities (Mapela and Rustenburg), mining deprives humans and animals their right to a safe environment. In such cases sustainable development of communities cannot be achieved.

2.6. MINING OPERATIONS CONTRIBUTION TO COMMUNITY DEVELOPMENT IN SOUTH AFRICA

In the past few decades, mining operations have made huge progress in creating awareness and knowledge about the balance between environmental considerations, economic needs, and cultural traditions of the host communities (Jone, Amon & Chapman, 2018:45). Relations that were constructive were developed based on respect, mutual benefit, and real commitment between host communities and their local mines. According to Jiskani, Cai, & Zhou (2020:15), globally, mining industries became aware of the effects they have on host communities' development, therefore adopted mining technologies that are eco-friendly to ensure that these effects were minimized. By adopting eco-friendly technology, the development of the communities is protected. In

Pakistan, mines adopted GIS and remote sensing technologies for exploration of minerals (Jiskani *et al,* 2020:20).

According to Dupuy (2014:1), 32 countries across the world adopted requirements of community on their mining laws. This approach of public regulation addresses more than the effects of mining operations on community development, it forces states to safeguard mines, ensuring their focus is not solely on the effects they have on community development but their translation to positive economic and social benefits for host communities (Dupuy, 2018:2). This also include dealing with the inequitable distribution of benefits and costs of mining.

In Botswana, mining operations harness the country's mineral resources to achieve remarkable growth through professional engineering and investing in the development of sectors and skills of their workforce/local firms (Bester, 2022:25). This approach helps in transferring and developing local skills from local communities and achieving economic growth. In South Africa, a protocol for integrating hosting communities were developed with the aim of ensuring that problems that were associated with the development of mines were approached in a group vision, where all parties benefited from it and were involved in the process (Amos, 2018:10). South African mines further placed aside costs that were associated with managing host communities when they were affected with the mining activities outcomes. Host communities were informed of the mining projects to be undertaken and then an agreement was reached with the mining operations (Amos, 2018:10).

Corporate Social Responsibilities (CSI) and Investments (CSI) were further undertaken by mining operations to help the host community's development (Sibiya, 2023:19). South African mines signed a partnership with the Youth Employment Services (YES) to help the youth to have mining job opportunities and ensuring that CSI mining projects encompasses the YES advertisement so that the organization can have access to many opportunities offered by mining and private sectors (Sibiya, 2023:19). So far Anglo-American has the YES initiative in all its programmes (Chipa & Maraais, 2022:3). The

South African Mining Industry is committed in using its expertise and collective resources in building initiatives that are aimed at giving the country a rapid change (Bester, 2022:15).

The Chief Executive Officer (CEO) of Pan African Resources in Gauteng province states that the mining project will change the area for better, creating economic activities, employment, development of skill, and environment lifting (Bester 2022:10). South Africa's major challenges are unemployment, economic growth, and crime; therefore, the Pan African Resources aims at addressing them. Nkwe Platinum Mine located in Sekhukhune District made a massive contribution in water provision to its host communities. It provided the host communities with clean and safe water for the people and their livestock, where 31 boreholes were equipped across the four host communities (Sibiya, 2023:17). Nkwe Platinum further invested millions of rands in adult education, bettering road infrastructure, bursaries, learnerships and internships. Community engagement and environmental conservation are prioritized in mining development (Sibiya, 2023:17). Yane Resources in South Africa helps mining companies from initiation to execution to ensure that mining companies consider stakeholder involvement, spatial planning, environmental conservation, and community development.

2.7. MEASURES, ACCORDING TO LITERATURE THAT COULD REDUCE THE ADVERSE EFFECTS OF MINING OPERATIONS TOWARDS COMMUNITY DEVELOPMENT

Mining operations have severe negative effects on community development than positive. Thus, it was important to ensure that mining operations undertake environmental management in their daily activities. This will help to save the ecosystem and community development (Tost, Hitch, Chandurkar, Moser & Feiel, 2018:15). When community development is considered, these natural resources are easily managed and accessible to nearby communities for a user-friendly utilization. It is then easier for communities to use these natural resources to meet their daily needs.

Globally, the professional service firm Deloitte reported that mining affected sustainability because of the forever increased demand of mineral resources which led to high usage

of basic resources such as water, soil, and energy. They then came up with the TOMRA machinery to avoid over consumption of these resources (Agboola, Babatunde, Fayomi, Sadiku, Popoola, Moropeng, Yahaya & Mamudu, 2020:14). In South Africa, the International Forum of Mining came up with several issues that each mine must effectively manage to protect communities from mining daily activities (Asr, Kakaie, Ataei & Mohammadi, 2019:5). These issues included biodiversity and ecosystem which emphasized soil, air, water and noise pollution, fragmentation and degradation of the ecosystem and loss of habitat, the authors added.

Another issue was water and waste management, to ensure that mine waste does not end up in rivers as it led to water pollution, climate change and dying of aquatic animals (Asr *et al,* 2019:6). The mine waste affects human health and causes natural disaster, thus delaying the development process of the community when not mitigated. When community development is considered in the planning of the project and the EIA is undertaken, problems that arise and affect community development in the process were identified, solutions were provided, and preventive measures were put in place. It also helps to achieve sustainability, community development, reduce health problems, pollution and natural disasters caused by the environmental reaction.

2.8. SUMMARY OF THE CHAPTER

Different sources were reviewed outlining how mining operations variously affect host community development globally. According to literature, mining operations contributes more than 70% to the economic growth of the country through employment creation, corporate social investments, and mineral resources revenue. However, mining operations hinders the development of the host communities. Some sources revealed that mining operations lead to poor infrastructure, housing, poor health, loss of livelihoods, and the inability to achieve sustainable development. Thus, according to literature, mining operations pays an important role in the economic growth of the country, however negatively affecting host community development. Laws and legislative policies were developed by different countries worldwide to protect communities and their development

against mining effects. Every mining operation must abide by these laws or will face penalties. Literature shows that most mining operations worldwide adopt these laws but do not abide by them therefore not considering the needs of the host communities.

Different scholars outline various effects that mining operations have on host community development. It is supported by literature that mining operations have severe effects on the environment thereby leading to negative and positive effects on community development. It has been observed that the participation of mining operations on the protection of community development resulted in sustainable development. Mining laws and legislative policies advocate for community development and consideration of host communities on their daily operations. In Mokopane, Mogalakwena municipality, host communities face similar challenges stated by the literature, such as health problems, house cracking, and loss of livelihoods. Therefore, the literature will serve as a baseline on the effects that mining operations have on community development and compare literature and reality. It will further help to understand different effects various countries face globally.

Mining operations play an important role in the development and growth of the country. Therefore, it is important for mining operations to place host communities at the centre of their planning, execution, and development. Negative effects mitigation and contingencies must be in place to prevent the effects from happening or minimize their effects. The main aim is achieving sustainable development in communities.

CHAPTER 3: RESEARCH METHODOLOGY

3.1. INTRODUCTION

The previous chapter discussed the various perspectives through literature which highlight the extent to which mining operations differently affects community development Therefore, this chapter will unfold the research methodology the study adopted. It further outlines data collection techniques, data analysis techniques, sampling size and method, description of the study area, target population, validity and reliability of the study and ethical considerations that the study has adopted. The research methodology selected for this study will help answer the research questions. Mixed method will help in getting a deeper understanding of the effects of mining operations on community development. The target population selected will help the researcher to get answers to the research questions. The chosen data analysis techniques will help the researcher to interpret the data quantitatively and qualitatively.

3.2. RESEARCH DESIGN AND METHODOLOGY

3.2.1. Research design

A research paradigm refers to an approach that a researcher adopts to conduct research. There will be different types of research paradigms: positivist and interpretative paradigm. Positivist is a type of paradigm that will mostly use quantitative research where results will generalize from one study area to another, while interpretative paradigm is a paradigm that is used in qualitative research about human behaviours (Romani, Barmeyer, Primecz & Pilhofer, 2018:15).

This study adopted the interpretivist paradigm as it is based on exploring social reality, understanding of human behaviour and will contribute to finding solutions to a social problem through reasoning and observation. The adoption of the interpretivist paradigm leads to the highest level of data validity generation, as it is based on personal contributions with different variables consideration (Alharahsheh & Pius, 2020:2). The paradigm also allows the researchers to consider various factors such as aspects of

behaviour based on experiences of participants, this helps in describing reality given the beliefs and assumptions of the researcher (Alharahsheh & Pius, 2020:2).

3.2.1.1. Qualitative Research Design

Qualitative is a research design that allows data to be collected through descriptions and words. “It relies on interviews, focus groups, and observations to collect rich descriptive data, document behaviours and interactions, and collective insights” (Jason & Glenwick, 2016:6). The main focus of the qualitative research is understanding experiences, perspectives, and meanings. According to Strijker, Bosworth & Bouter (2020:12), it is most resultful in exploring phenomena that is complex and new theory generation. Qualitative research allows the researcher to understand the problem in depth. Qualitative research uses data collection techniques that are structured with open ended questions in order to capture descriptive data (Taherdoost, 2022:5).

3.2.1.2. Quantitative Research Design

Quantitative is a research design that collects data using statistics and numbers. “It uses surveys, experiments, and standardized tests to collect numerical data” (Strijker et al 2020:12). Quantitative research experiments are controlled, and questionnaires are standardized with multiple choice questions (Taherdoost, 2022:5). Quantitative research design allows the identification of patterns and trends through statistical analysis. According to Jason & Glenwick, (2016:6), it is used to generalise and test a hypothesis. Quantitative research uses data collection tools such as surveys that are experiments, standardized tests, and closed-ended questions (Taherdoost, 2022:5).

3.2.1.3. Mixed Method Research Design

Mixed method research design is a combination of quantitative and qualitative research in a single study, to comprehensively answer research questions. 'It can be used to provide a more holistic view of a topic by addressing both what and why aspects of the research" (Strijker et al 2020:12). Mixed methods research uses "both quantitative and qualitative approaches to gain a comprehensive understanding of a research topic by collecting both numerical and descriptive data simultaneously or sequentially depending on the research design" (Strijker et al 2020:12). Mixed method research collects both data types simultaneously and analyse them at the same time. Mixed methods research uses quantitative data to assist in identifying trends (Taherdoost, 2022:5). It uses qualitative data to explore findings that are specific, especially to answer the question "why", behind the quantitative identified trends (Jason & Glenwick, 2016:6).

This study adopts mixed method research using a descriptive enquiry in order to produce better results and obtain a deeper understanding of the effects of mining operations on the development of host communities. In mixed method approach, qualitative approach is used to explain the findings of the study in a theoretical manner, while quantitative approach is used to express the outcomes of the research using tables, tallies, graphs, numbers, and percentages.

Mixed method research helps the researcher to develop more specific data collection instruments in answering research questions (Başhan, 2021:10). This approach helps to find new ways within which the effects of mining operations on community development will be understood. Majority of researchers in this field use quantitative research, by using mixed method approach this study will allow people to express their views and lived experiences on mining effects and community development. Available data in this field is enough however, lacks human experiences perspective. Thus, the mixed method in this study provides human experience.

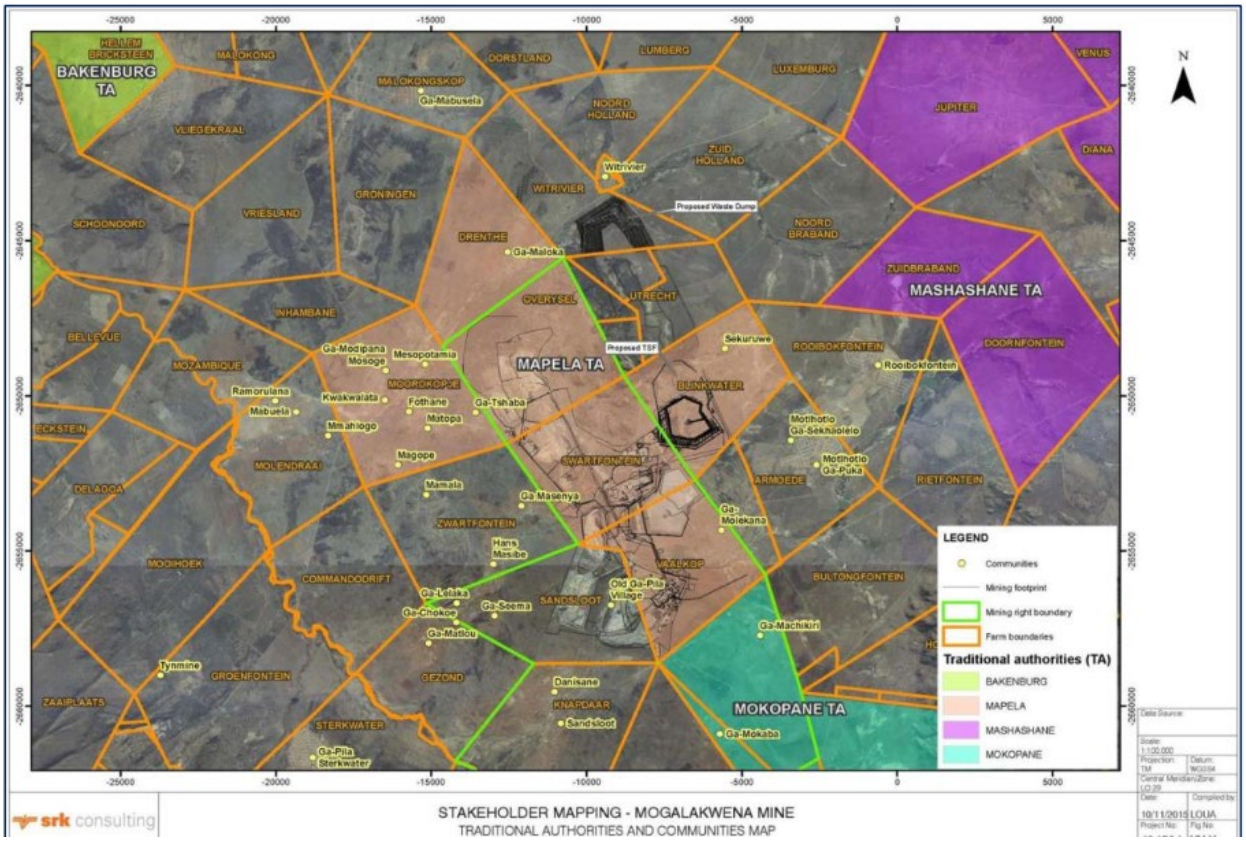
The type of research design that is used in this study is case study design. According to Varkolis & King (2017:7), a case study allows for an in-depth investigation of the phenomenon under investigation. A case study further allows for exploration of deeper causes of the problem, flexible data collection through different means, and help simplify

the findings of the study in an easy way. In South Africa, most studies about mining operations are conducted on a provincial scale, this study adopts the case study design and focus on a local scale (Mogalakwena Municipality).

3.3. DESCRIPTION OF THE STUDY AREA

The study area is Mokopane and Mapela villages, located in Mogalakwena Municipality (Map 1). Mapela has 100 villages, whereas Mokopane has 78 villages (Kekana, Mbhenyane & Mabapa, 2020:12). Half of these communities are developed while others still live under poverty. There are 3 mines surrounding Mapela and Mokopane, 10 shopping centres, and this area (Mogalakwena) is famous for its rich agricultural areas that produces tobacco, wheat, cotton, maize, beef, citrus, peanuts etc. It is also famous for its wealth in minerals with mining of diamonds, platinum, and granite (Mogalakwena IDP).

The three mines surrounding Mapela and Mokopane villages are Platreef Ivanplats Mine, Anglo Mogalakwena Platinum Mine, and Bushveld Mineral Complex. These mines are located around the 178 villages of Mogalakwena and where some of the communities are located near these mines. Approximately half of the citizens of the 178 communities are employed by these mines and half are resettled. Because of the experience this area has in terms of the effects of mining operations on community development, this area serves the relevant case for the study.



Source: Kekana, Mbhenyane & Mabapa, 2020:22

Map 1: TRADITIONAL AUTHORITIES AND COMMUNITIES MAP

3.4. TARGET POPULATION

Target population refers to a group of people who are in possession of characteristics and experiences that relate directly to the issue investigated in this study, that differentiates them from the rest of the population. This group of people helps the researcher answer the research questions and reach findings and a conclusion for the research (Varkolis & King, 2017).

The target population of this study will be:

4 resettled and host communities (5 264 Households) in Mokopane and Mapela villages that are residing near mining operations.

Mogalakwena Municipality Public Officials.

Mining Officials of Anglo Mogalakwena Platinum Mine operation.

Traditional Leaders of Mokopane and Mapela resettled Villages.

3.4.1. Sampling process, type, and size

A sample refers to a group of people that are taken from the larger target population and are a representation of the target population leading to findings being generalized (Hennink, Kaiser & Weber, 2019:2). There are two types of sampling methods, namely probability and non-probability sampling. Probability sampling is a random selection type of sampling method that allows the researcher to make strong inferences about the sample population and any individual member of the population to be picked for the sample can be determined, whereas non-probability sampling is a non-random method that is based on convenience and allows the researcher to collect data easily (Huang, Zhang, Rong & Huang, 2018:15). Probability sampling consist of cluster sampling, systematic, simple random sampling, and stratified sampling, while non-probability sampling consists of convenience, voluntary, judgmental, snowballing and quota sampling.

a) Sampling type for this study

Both probability and non-probability sampling methods are used in this study. The advantage of probability sampling is that the probable accuracy of the results can be determined. It reduces biased model-based estimation (Nahorniak, Larsen, Volk & Jordan, 2015:23). From the Probability Sampling, stratified random sampling was used, which helped the researcher to divide the population into smaller groups of strata, based on the characteristics that they share. In this study the researcher divided the groups into two; the resettled and non-resettled host communities (where quantitative data is collected).

“Stratified random sampling allows the researcher to create a diverse research sample that represents every group in the population of interest” (Pepelysheva, Sovetkinband & Steland, 2016:15). The result of stratified random sampling is a representation of the

entire population. From non-probability sampling, purposive sampling is used which represents the qualitative method part of the study. This sampling method which groups people according to different categories and characteristics, and most importantly focus on those who have full knowledge about the issue being researched (like Municipal and mine officials within which qualitative data will be collected).

b) Sampling size

The total sample size of the study was constituted by:

At least 4 households from each resettled and host community (a total of 20 households answered the questionare).
2 officials (one from Anglo American Platinum Mogalakwena mine operation, and one from Mogalakwena municipality).
1 Traditional leader or their representative from Mapela village and
1 Traditional leader or their representative from Mokopane Village.

3.5. DATA COLLECTION METHODS

In this study, data was collected from both primary and secondary data sources. Primary data refers to data that the researcher gathers using questionnaires and interviews to answer the research questions of their study and make conclusions, while secondary data refers to data that has been organised, collected and published by other scholars, such as articles, academic books, and government documents and policies (Sileyew, 2019:6). Primary data (using the questionnaire and the interview schedule) is used to gather perceptions of mining host communities on the effects of mining operations, determine the understanding of mining operations roles in protecting the mining host communities, and recommend measures that can be used to reduce the adverse effects of mining operations towards community development. Trustworthiness of data is ensured by involvement that is extended, triangulation, persistent observation, and producing a detailed and comprehensive report for the data collected.

Data collection techniques that are used to collect quantitative data are questionnaires (can be self-administered), for qualitative data, interviews, observations, recording events and focus groups are used (Worldbank, 2019:1). These data collection techniques are good in testing hypotheses derived from theory. Data is collected from participants in their situational characteristics to statistically control their influences on the outcomes of research (Worldbank, 2019:1).

3.5.1. Interviews

Interviews provide flexibility and a better response rate to questions. However, interviews are expensive and time consuming, and sometimes the respondent may reject or refuse to participate (Bailey, 2015:15). “An interview schedule is a structured set of questions used by an interviewer to guide a conversation during a face-to-face interview” (Buschle, Reiter & Bethmann, 2022:13). An interview involves the researcher actively questioning the respondent. It is used in a qualitative study to fully explore and understand topics, and based on the respondent’s answer, it allows the researcher to ask follow-up questions (Buschle et al, 2022:13).

The respondents, Municipal and mine officials were interviewed face to face, and follow up interviews were also done to ensure the reliability of data, clarify concepts, and follow up on a particular issue. The officials were handed a semi-structured interview schedule with the researcher having the same set of questions at hand. The title, the aim, and the ethical considerations of the study were explained to the respondents and understood. The respondents gave consent to continue with the interview and have it recorded. This is because collecting qualitative data takes a great deal of time, therefore records are made of any potentially useful data accurately, systematically, and thoroughly, using sketches, field notes, photographs, and audio tapes (Bailey, 2015:15).

3.5.2. Questionnaires

According to Debois (2019:6), questionnaires are the most affordable way of gathering quantitative data, therefore, paper-pencil-questionnaires is sent to the sample population of the study (At least 4 households from each resettled and host communities) and this

will save time and money. Questionnaires are scalable, meaning that they allow the researcher to gather information from a large audience (Debois, 2019:6). “a questionnaire is a list of questions that respondents fill out independently, without direct interaction with an interviewer, allowing for data collection from a larger group of people more easily” (Buschle et al, 2022:13). A questionnaire is self-administered by the respondent. It is used in quantitative research to collect data from a large number of people in a time efficient way and helps to maintain anonymity of the respondents (Buschle et al, 2022:13). A questionnaire is structure with closed-ended questions.

In this study, questionnaires were used as the most affordable way of gathering data from the respondents of the study. In Tshamahansi village, the researcher had a meeting with the traditional leaders to explain the purpose of the research, the ethical considerations, proof of where the student is from and to ask permission to conduct the research in their village. Permission was granted and a date was given to the researcher to come collect data. The traditional leaders gathered the community members in a hall to make things easier for the researcher. Questionnaires were handed out, ethical considerations were read to the community members and understood, together with the purpose of the research. In Mapela Hans, Danisani and Sterkwater, the researcher was granted permission to go from door to door and collect data.

People are more truthful and honest when responding to the questionnaires regarding personal, controversial, and confidential issues with the idea of their responses being anonymous (World Bank, 2019:1) but they also have drawbacks. The challenge is that people might give answers that they think the researcher want and majority of the sample population who receive questionnaires do not return them and those who do or gladly participate are not be the representation of the originally selected sample (World Bank, 2019:1). Some people leave some questions unanswered while some answer the questionnaire having hidden agenda or pursuing their own agenda (World Bank, 2019:1). The researcher eliminated these challenges by communicating thoroughly with the participants. The respondents were informed about the importance of their honest and truthful feedback based on the experience. All households of the four villages returned their questionnaires.

Qualitative data have a significant impact on the aim of this study. It is useful in understanding the observed results and assesses the peoples' understanding on the effects of mines in their communities and their wellbeing. It improves the quality of survey-based quantitative evaluations by strengthening the design of survey questionnaires, clarifying, and expanding quantitative evaluation findings. It helps generate evaluation hypothesis.

3.5.3. Data Analysis Techniques

Statistical Package for Social Science (SPSS) was used in this study as a tool to manage and analyse quantitative data. The SPSS is a software package used for the analysis of statistical data (Rouse 2018:6). In utilising SPSS, the researcher analysed scientific research results and unstructured data. Inferential statistics and descriptive statistics are used as quantitative analysis techniques.

Qualitative data was double checked and clarified while identifying valuable pieces of the data. During the analysis, key questions were identified and answered through the analysis. The analysis was focused on the answers to research questions or topic (Berg & Lune, 2015:2). Data was categorized, and a framework was created for indexing or coding the data. Patterns or themes were identified that consisted of concepts, ideas, behaviours, phrases, and interactions (Webster 2020:3).

Identification of patterns, making connections and themes is done to look for relative importance of responses received, attempting to find explanations from the data and identifying relationships between data or themes sets (Rouse, 2018:18). Coding in a form of thematic analysis was used in categorizing qualitative data to perform qualitative analysis and identifying themes that correspond with the research questions. Findings are explained, and data is interpreted. After patterns, themes, relationships, and connections are identified, meaning and significance are attached to the data. This is helpful in the process of developing lists of key ideas, creating diagrams and the usage of models to explain the findings.

3.5.4. Validity and Reliability

Validity and reliability are based on the outcomes of the data collected which demonstrated how consistent and accurate the measures were. Measurements are considered reliable when the same results were consistently achieved by using the same method under the same circumstances, whereas validity refers to the accuracy of a method to measure what it intended to measure, in such a way that it produces results that correspond to variation of real social and physical world (Middleton, 2019:12).

In this study, reliability was measured through the test-retest, whereby the sampling population completed the questionnaire, and the very same questionnaire was completed again after two days. The same answers were given for both questionnaires, then this means that the data is highly reliable (Webster, 2020:21). Anonymity and privacy were ensured throughout the data collection process and measures were kept as consistence as possible to avoid the external factors influence, this also helped to ensure the reliability of the data. Validity was ensured firstly by choosing the right measurement techniques (data collection techniques) which was the interview schedule and the questionnaire. Secondly, content was used to measure the validity of the data, whereby the interview schedule and the questionnaire covered all aspects of the research questions and concepts measured. The right sample population was chosen which represented the entire population.

3.6. ETHICAL CONSIDERATIONS

When conducting this study, there were ethical considerations that the researcher adhered to. This ensured that or made it easier for participants to participate freely and to ensured that the rights of the participants were not violated. This study will adopt all the ethical considerations of research. Which will be as follows:

a) Ethical considerations before the study

Biasness-The researcher carefully written questions to avoid biasness and ensuring that they were not opinionated or misleading. The researcher also ensured that participants were not discriminated in any way, and that all their opinions are important in the project. This helped to avoid one group feeling less important than the other group (participants).

Turfloop Research Ethics Committee (TREC) and permission to conduct study- where the TREC committee gave permission to the researcher to collect data. The TREC permission ensured that no individual was harmed or violated during the data collection process of the study. It ensured the protection of the participants. The TREC committee gave permission to the researcher to collect data for the study. Efforts by the University to promote ethical issues

b) Ethical considerations during the study

Respect for privacy- the researcher respected the privacy of participants or ensured that the process did not in any way invade participants' privacy (Pietilä, Nurmi, Halkoaho & Kyngäs, 2020:15). The researcher also ensured that they adhered to the participants wishes on how to use the data collected from them. Participants were also told that the research was strictly for academic purpose therefore will not be published. This ensured participant's dignity, self-determination, and safety.

Will not harm or threaten their self-esteem- It is important to ensure that the researcher understands the dangers that might affect the participants and the researcher during the data collection process. People are vulnerable; therefore, the researcher ensured that the process of data collection did not harm any member of the community (both physically and psychologically in a form of pain, stress, self-esteem, or anxiety) either direct or indirectly involved.

Consent- The researcher provided a detailed explanation of the study and the aim to the participants. Participants decided whether to take part in the research or not, after deciding then a consent form was signed by both the researcher and

participants. The researcher did not ask participants questions without their consent. Participants were given the right to choose whether to participate or not or to complete any section of the questionnaire or interview and to withdraw at any point during the study

c) Ethical considerations after the study

Respect and respect for anonymity and confidentiality- Different groups of people might not provide certain information with a fear of the information being tracked back to them. Therefore, the researcher treated all participants with respect and ensure that they remain anonymous irrespective of the answer they give. Anonymity was carried out throughout the study and after.

3.7. CONCLUSION

This chapter of the study outlined the methodology of the study that the researcher followed to collect data and throughout the study. The overall plan of the study was outlined including, how the study was conducted, target population and how data was collected. Chapter one unfolded the introduction, background, and the problem that the study investigated. It further broke down the problem into questions to make it easier for the researcher to find answers to the problem which were being investigated. The aim and objectives of the study were cleared, outlined, and realized. Chapter two provided a clear literature of the trends of the effects that mining operations has on host community development globally. It further outlined legislative policies guiding mining operations on how to mitigate the effects and prioritise community development. Chapter three outlined that plan of the study, how the study was undertaken and tools which were used to collect data. Chapter three further unfolded the target population and how data was used afterwards.

CHAPTER 4: PRESENTATION AND INTERPRETATION OF FINDINGS

4.1. INTRODUCTION

This chapter provides the analysis, interpretations, and presentation of the findings of the study from data collected through interviews and questionnaires. The previous chapter unfolded the research methodology the study adopted. As the study indicated in the methodology that the target population are the resettled and host communities of Mokopane and Mapela Village residing near mines, Mogalakwena municipal Official, Mining officials of Anglo Mogalakwena Platinum Mine, and traditional authorities. During data collection, four Mokopane and Mapela communities and their traditional authorities were involved, namely Sterkwater (Ga-Pila), Danisani and Hans (Mapela Communities) and Tshamahansi (Mokopane community).

Furthermore, four traditional headman authorities were interviewed to mitigate individual biasness and to gather sufficient and detailed information about the experiences and opinions of individuals in different areas regarding the effects of mining operations on community development. Traditional authorities answered the same questionnaire their communities answered to understand if they face the same problems their community faces, to get their point of view on the effects, and to also ensure that all aspects of research questions are covered. One mining and one municipal official were interviewed, and six mine workers were interviewed. Throughout data collection, all ethical considerations were considered. Presented and interpreted below are the findings of this study.

4.2. DEMOGRAPHIC PROFILE OF THE PARTICIPANTS

The demographic profile of the respondents is unfolded in this section. The study collected data with a questionnaire from 22 responded of which 16 are households and 4 are traditional leaders, and interviewed 2 respondents, one official from the mine and one official from the municipality. Findings on the number of the household members of the respondent are interpreted and analysed below.

Participants	Community
A, B, C, D & E	Mapela Danisani Village
F, G, H, I & J	Tshamahansi Village
K, L, M, N & O	Sterkwater Village
P, Q, R, S & T	Mapela Hans
U	Mining official
V	Municipal Official

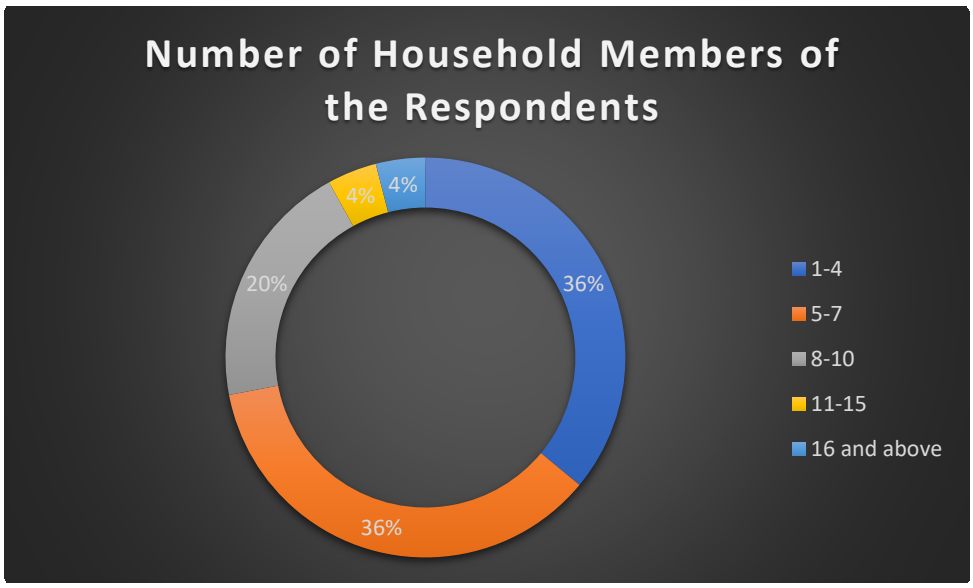


Figure 4.1. Number of Household Members of the Respondents.

Figure 4.1 shows 36% of the respondents that lives in a household of 5-7 members, 36% of the respondents living in a household of 1-4 members. The figure further shows 20% of the respondents living in a household of 8-10 members, 4% living in a household of 11-15, and another 4% that lives in a household of 16 members and above. This shows that most households are overpopulated, reason being lack of resources that allows them to move out of their homes. In conclusion, most households are in underpopulated households.

Interpreted and analysed below is the household expenditure per month of the respondents.

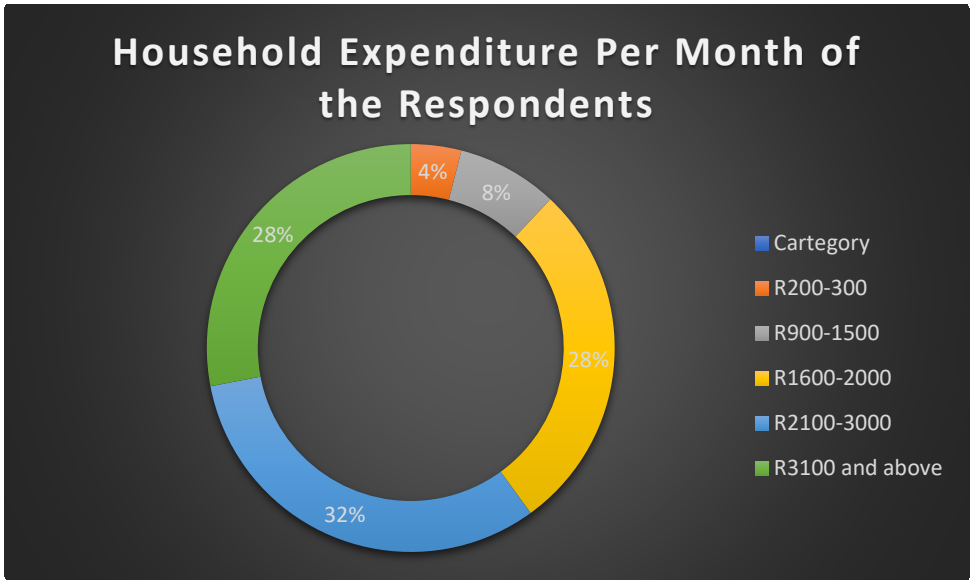


Figure 4.2. Household Expenditure Per Month of the Respondents.

Figure 4.2 shows 32% of the respondents that spends R2 100 to R3 000 per month, 28& that spends R1 600 to R2 000 per month. The figure further shows 28% of the respondents that spend R900 to R1 500 per month, 4% of the respondents spending R200 to R300 per month, and 8% of the respondents that spend R200- R300 per month on their households needs.

Findings on the household income category of the respondents per month are interpreted as follows:

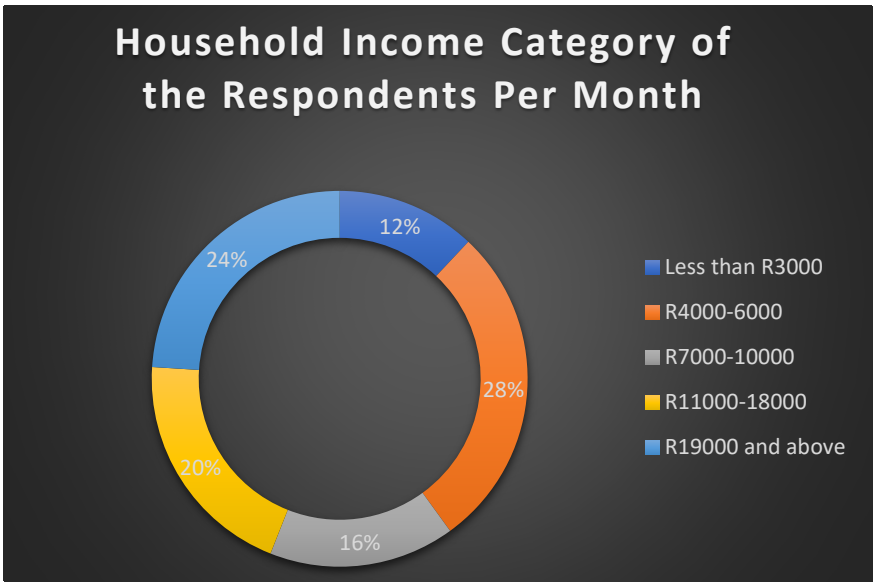


Figure 4.3. Household Income Category of the Respondents Per Month.

In the above figure 4.3, shows 28% of the respondents receiving and income of R4 000-R6 000 per month and 20% of the respondents receiving R11 000-R18 000per month. The figure further shows 24% of the respondents receiving R19 000 and above, 12% of the respondents receiving less that R3 000, and 16% of the respondents receiving R7 000-R10 000. This shows that 60% of the respondent receive enough money to fulfil their monthly basic needs, while 40% of the respondents barely earn enough to support themselves.

The interpretation below is the employment status of the respondents.

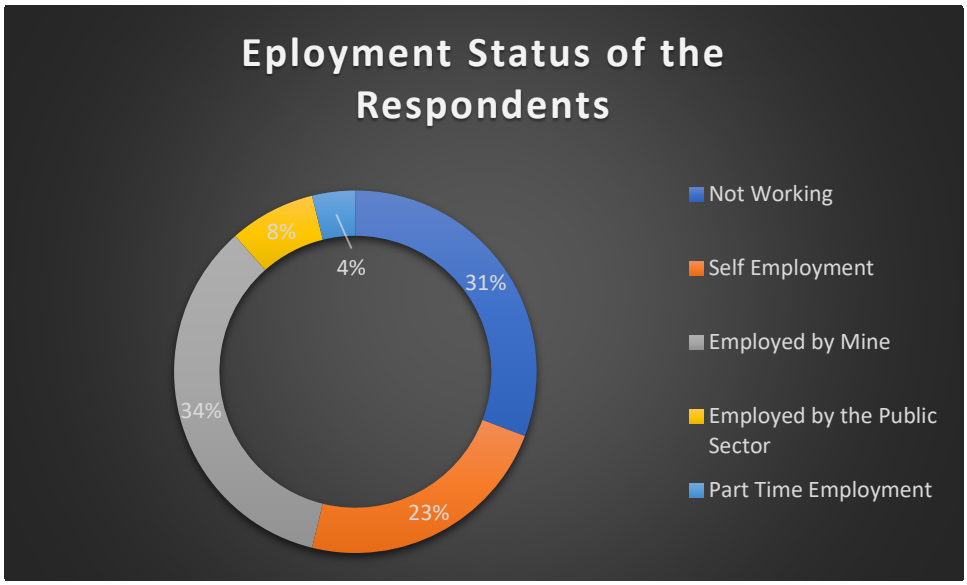


Figure 4.4. Employment Status of the Respondents.

Figure 4.4 shows 31% of the respondents that are not working. This means that a total of 31% of the population is unemployed, highlighting the issue of unemployment that most communities experience. The figure further shows 34% of the respondents employed by the mine. This shows that the mine was able to reduce the unemployment percentage in the host communities. A percentage of 23% of the respondents are self-employed.

Participant G, H & I stated that none of the self-employed respondents render their service to the mine, however benefits from mine workers as they are the consumers of their services.

The figure further shows 8% of the respondents that are employed but the public sector, and 4% that works part time. Therefore, this figure shows that the mine was able to provide employment to 34% of the population out of the total. This implies that the majority of mine employees are from outside the host communities. Mining operation provide limited employment opportunities to the host communities.

Findings on the household main source of income of the respondents are interpreted and analysed below.

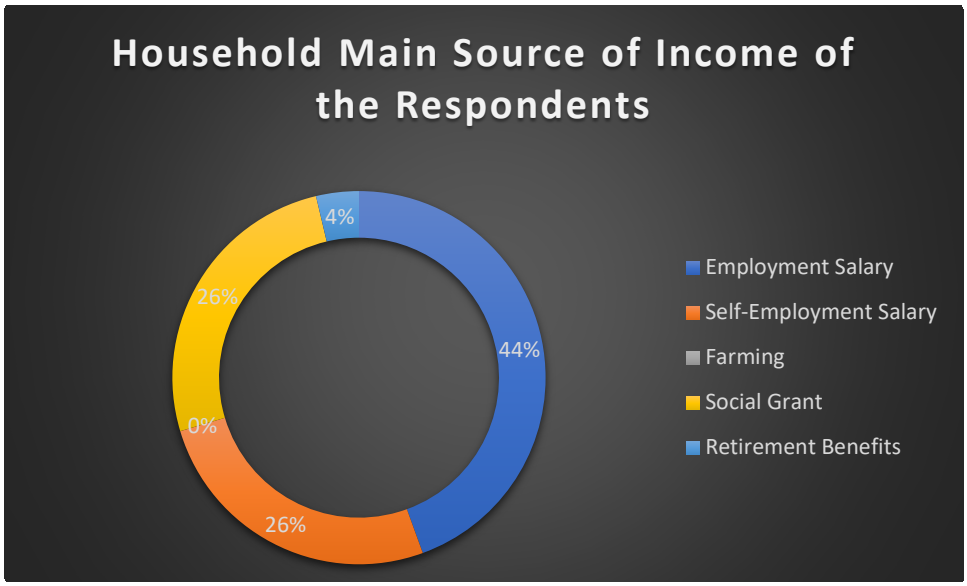


Figure 4.5. Household Main Source of Income of the Respondents.

The above figure 4.5 shows 44% of the respondents receiving employment salary as their household main source of income, and 26% of the respondents receiving self-employment salary as their household main source. This figure further shows 26% of respondents receiving social grants as their household main source of income, and 4% receiving retirement benefits as their household main source of income. This shows that the host communities do not participate in farming activities.

Respondent O and E stated that this is due to contaminated underground water affecting their crops and the resettlement that led to loss of farms and livestock.

4.3. PERCEPTIONS OF MINING HOST COMMUNITIES ON THE EFFECTS OF MINING OPERATIONS TOWARDS COMMUNITY DEVELOPMENT

The findings of mining operations having negative and positive effects are collected from respondents in Tshamahansi, Mapela Ga-Hans, Mapela Danisani, and Sterkwater are interpreted below.

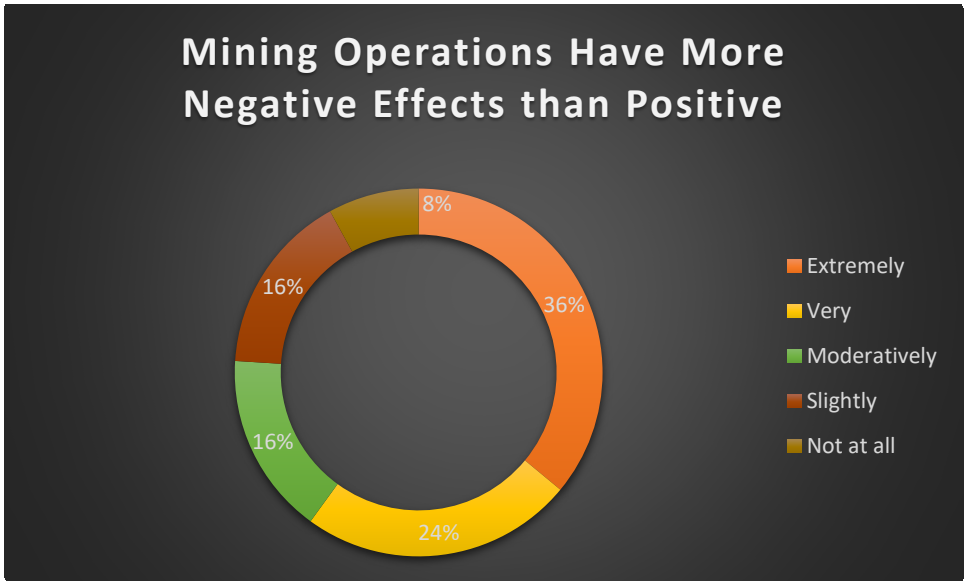


Figure 4.6. Mining Operations Have More Negative Effects Than Positive

Figure 4.6. shows 36% of the respondents indicated that they extremely believe mining operations have more negative effects that positive. This shows that 36% of the mining host community households are affected negatively by mining operations. It further shows 24% of the respondents that indicated that they are affected by negative effects than positive. This is supported by Emmanuel, Jerry & Dzigbodi (2018:5), who stated that mining operations negatively affects community development more than any other operations.

Respondents G stated that *"even the slightest positive thing like the R1 000 compensations that Ga-Magongwa and Hans receives every month from Anglo-Mogalakwena, we don't get it".*

Respondent E, T and O also states that Danisani and Sterkwater feels disregarded when it comes to the mine benefits.

Respondent E further stated that *"Danisani and Sterwater villages only endure negative effects like house cracking, health problems, air pollution from the mining operations".* This is supported by Ranjan (2019:47), who states that residents of Asansol-Raniganj area in India, stated that coal mining caused socio economic hazard as the results of crushing, drilling, and movement of vehicles, which left many people sick, dead animals, detriment of road infrastructure, houses cracked and collapsed, and habitant destruction.

The MRPDA states that mining operations has more negative effects as much as it has positive. Mines cause soil erosion, loss of biodiversity, sinkhole formations, cracking of community houses, natural disasters such as earthquakes and surface water contamination, that is why the MPRDA requires the mine to submit the environmental Management plan with the mine works plan and the Social and Labour Plan when applying for the five years cycle (Mogatle, 2021:15). This plan includes all possible effects that the mine has on host communities and how they will be mitigated. However, 8% of the respondents' states that mining operations have slight negative effects than positive, while 16% of the respondents think mining operations have slight negative effects than positive.

Respondents P, R, S, T, and Q confirmed that *there is compensation that they receive every month and employment opportunities from the mine.*

Respondent U stated in the interview that *"we believe in positive contributions to the community, that is why we support regional and local economic development".* The respondent further stated that *"as a mine we invest in supporting lives and livelihoods, health and wellbeing, education and livelihoods as our vision clearly states that we aim for a shared and sustainable prosperity in our host communities".*

The figure further shows 16% of the respondents moderately agreeing that mining operations have more negative effects than positive. Thus, looking at the findings, mining operations have more negative effects than positive. This is supported by Worlany & Jiangfeng, (2021:3), who reported that mining contributes, approximately 70% to the

economy, on the other hand, it is the country's number one industry that damages the development of its host communities, endangers health of the people and is the reason behind poor economic activities by its emission of greenhouse gases.

The findings on community development mostly affected by mining operations were analysed and interpreted below.

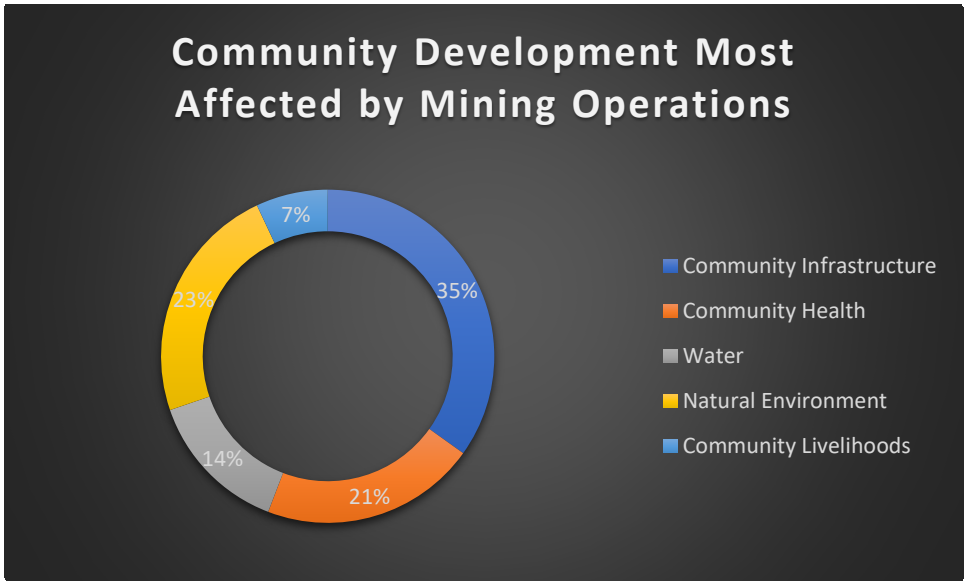


Figure 4.7. Community Development Most Affected by Mining Operations

Figure 4.7 shows the category of community development that is most affected by Mining operations. Participants with a total of 35% believe that community infrastructure is the most affected community development category.

Respondent V stated in the interview that most households are cracked, and most roads have potholes.

However, 21% of the respondents' states that community health is more affected by mining operations.

Respondent V, E and J stated that there is a lot of air pollution inhalation by the host communities. Respondent V further argued that "*most retired employees suffer from bad coughs that doesn't end".* This is supported by Tepanosyan, Sahakyan, Belyaeva, Asmaryan & Saghatelyan, (2018:22), who states that observed diseases encountered by mine workers included, black lungs, asthma, asbestosis, silicosis, inflammation, and siderosis.

This figure further shows 23% of the respondents that says the natural environment is most affected, while 14% of the respondents' states that water is the most affected development by mining operation.

Respondent K stated that *"this is because of the blasting, waste disposal and contamination of underground water".*

Furthermore, 7% of the respondents' states that community livelihoods are the most affected. It is argued that provinces such as Limpopo in South Africa are experiencing failure in achieving the development of host communities as a result of major environmental problems that mining practices has on the host community's environment (Coetzee & Chevrel, 2016:12).

Therefore, the findings shows that host communities believe that community infrastructure is the most affected development by the mine. Even though the Mines and Mineral Act requires mining operations to sign a formal community development agreement (CDA) with local host communities and a contribution of 1% of their revenue on the community development agreement (Dupuy, 2018:13), it does not seem to apply in Mapela. Academic sources revealed that mining operations lead to poor infrastructure, housing, poor health, loss of livelihoods, and the inability to achieve sustainable development. Matebesi & Marais (2018:380) also emphasises that equipment used in mining operations to destroy rocks shake the ground, lead to the infrastructure of the community cracking by causing minor earthquakes. In such cases sustainable development of communities cannot be achieved.

Attached below are pictures taken by the researcher on the 22nd of March 2024, at 16:36 in Mapela Ga Chokoe, of the road infrastructure in Mapela Ga-Chokoe supporting the findings. These pictures show poor, old, damaged, and unmaintained road infrastructure by the government and the mine.






Below is the analysis and interpretation of the findings on the extent to which the respondents agrees/disagrees that mining was able to provide employment opportunities to the people.

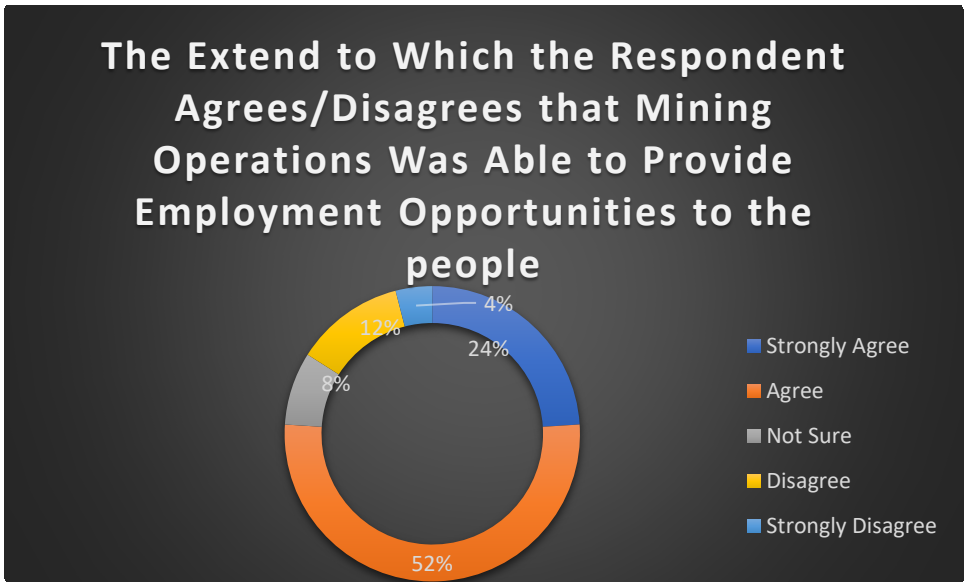


Figure 4.8. The Extent to Which the Respondents Agrees/Disagrees that Mining Operations Was Able to Provide Employment Opportunities to the People.

Figure 4.8 shows 52% of the participants that agrees and 24% of the respondents that strongly agrees that mining operation was able to provide employment opportunities to the host communities.

Respondents F, P, Q, R, S, H, G and I from various communities attested that unemployment rate has reduced due to mining operations being able to provide employment.

The Community Development Agreement signed by the mine as a requirement of the MMA includes investment of host communities' education, employment opportunities, community infrastructure development, funds assistance for small businesses, and local government support (Eerola 2022:10). The total of 4% of the respondents strongly disagree, while 12% disagree that mining operation was able to provide employment opportunities to the people.

Respondent A, B, and D states that *the mining operation offers learnerships only and require experience for job application.*

Respondent E and O, which are traditional authorities stated that there is lack of employment, especially in Danisani community. Respondent E further states that *"the community do not have job opportunities' thus leading to continued unemployment".*

The figure further shows 8% of the respondents who are not sure if mining operation was able to provide employment to the people. The findings show that the host communities believe mining operation are providing employment to the communities. According to the Mining Charter, when a new mine commences, there's a certain percentage of employment opportunities expected to be given to certain groups. Minimum of 5% should be given to qualifying individuals, at least 5% to the host communities, and 20% to the BEE entrepreneurship (Mpanza, Adam & Moolla, 2021).

Findings on the type of job opportunities that the mine was able to provide to the host communities are interpreted below.

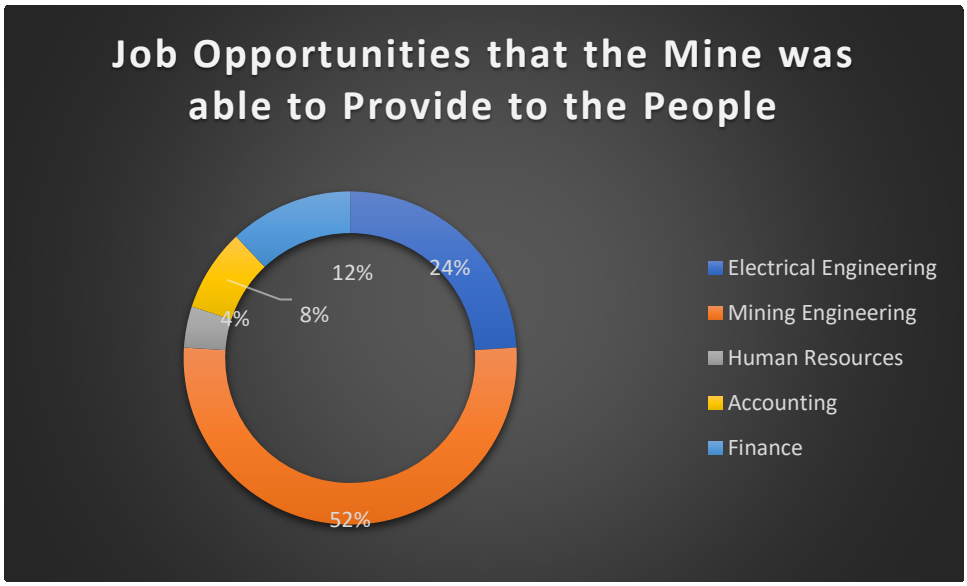


Figure 4.9. Job Opportunities that the Mine was Able to Provide to the People.

Figure 4.9 shows 52% of the respondents stating that the mine provided mining engineering job opportunity to the people.

However, Respondent V stated that most mine employed people to works underground to dig the mineral and using different mining machines and trucks, thus they are not Mining engineers.

Respondent U stated that hired mining engineers are from outside as they are trained and qualified.

It further shows 24% of the respondents that says electrical engineering is the most provided employment, while 12% of the respondent's states that Finance department is the most hiring in the mining operation. The total of 8% of the respondents' states that mining operation provided most accounting jobs, whereas 4% of the respondents' states that human resources management is the most provided job by the mine. According to Mogatle (2021:12) human resource is the most important mining to develop and implement programmes of human resource development such as skills development, internships, mentorship, bursaries, and employment equity. This indicates that mining engineering is the most provided employment by the mine.

However, the respondents J, O, and T states that underground miners are the most hired.

Findings on the extent to which the respondents agrees/disagrees that the community benefits from the mining operations are interpreted and analysed below.

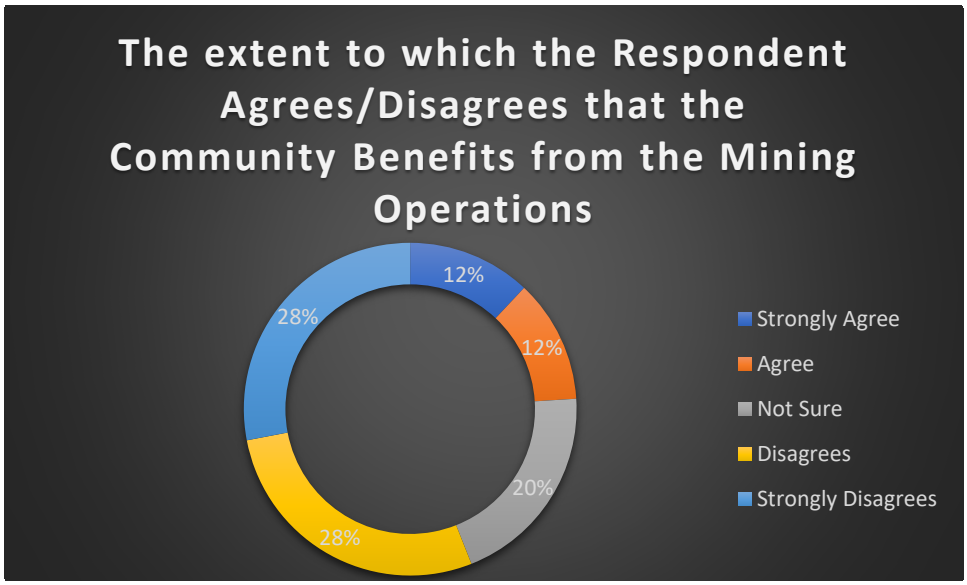


Figure 4.10. The Extent to Which the Respondents Agrees/Disagrees that the Community Benefits from the Mining Operations.

Figure 4.10 shows 28% of the respondents disagreeing that the community benefits from the mine, and 28% of the respondents that strongly disagrees that the community benefits from the mine.

Respondent E stated after making his selection that *"the mine makes empty promises to the communities for formality, they do not know the needs and problems of the community because there is lack of community engagement therefore end up doing what they think benefits the community".*

Respondent O and E, the traditional authorities stated that the communities have been suffering for 26 years since the mine started and there is nothing the mine is helping the community with.

Respondent B, I, R and S state that the communities strike every year so that they can be heard by the mine thus it occurred to them that mining operations only cares about profit, not the improvement of the communities.

This is supported by the residents of Mothutlung in Northwest complains about Bushvel Vametco Minerals, community complained earlier this year, 2023, that they have been

robbed off opportunities since the mine started operation in their area (Matebesi & Marais, 2018:380).

The figure further shows 12% of the respondents that agrees that the host communities' benefit from mining operations, and 12% that strongly agrees that host communities' benefit from mining operations in the area.

According to respondents E, this is because there are some communities that are compensated monthly and some that are prioritised when there are employment opportunities.

The total of 20% of the respondents are not sure as to whether the community benefits from mining operations or not.

Respondent M state that this is because most communication between the mine and the community is done through traditional authorities.

Therefore, this shows that there are limited benefits that host communities gets from the mining operations. This is supported by Matebesi & Marais (2018:380), who stated that there are conflicts between mining operations and host communities, this is due to the inability of mining operations to achieve community sustainable development, fulfil promises, and achieve accountability.

Findings on categories of CSI projects that mining operations offer to the community.

Figure 4.11. Categories of CSI Projects that Mining Operations Offer to the Community.

Figure 4.11 shows 56% of the respondents stating that employment opportunity is the only corporate social investment that the mine offer to the communities.

Respondent E, H, Q, N and M stated during data collection that there is nothing that the mine offers to the community other than employment.

It further shows 4% of the respondents stating that the mine provides bursaries as CSI to the community.

Respondent U confirmed to say every year bursaries are issued to top performing learners of the host communities, together with internships and learnerships. Respondent U further stated, *"that the mine goes all out when it comes to education and the youth, there are programmes developed in partnership with the department of basic education for both learners and teachers, to improve literacy, numeracy, English and mathematics by addressing issues behind poor education".* Furthermore, the respondent U further stated during the interview that Anglo American aims at using education as a drive to long term and systematic gains.

However, respondents B, C, I, K and L stated that most youth matriculated but were unable to further their studies because of lack of funds.

Respondent T and E who are traditional authorities stated that *2%* of the matriculants that their families hold superior positions in the mine gets bursaries, the bursaries are not for everyone.

The total of 7% of the respondents' states that mining operations offers adults literacy to the community.

Respondent U confirmed to say, *"we have a second phase of education which its focus includes learner and parent support initiatives and adult literacy".*

However, according to the researcher's observation and some respondents, there are many adults that are unable to read and write and spend most of their times sitting at home doing nothing.

The figure further shows 15% of the respondents stating that mining operations provide infrastructure development to the community.

Respondent U attested that there is a school that was built by the mine at Danisani and Mapela.

However, respondent E, J, and O complains about the condition of the roads, houses, health infrastructure, and water.

According to respondent E and T of Danisani and Mapela, the municipality provided them with street taps, but the water comes out one day in a week sometimes the water doesn't come out for 3 weeks and there is nothing that the mine is doing. According to Dupuy (2018:15), Civil Society Organisations put pressure on the government to provide

increased benefits to the mining host communities, the government therefore ends up trying to meet these benefits.

The total of 18% of the respondents' states that mining operations provide skills development to the people.

Respondent S, H, and F states that the learnerships that the mine issue is to a certain percentage of the community.

This shows that employment opportunities are the most provided corporate social investment. Bester (2020,10) states that South Africa's major challenges are unemployment, economic growth, and crime; therefore, the Pan African Resources aims at addressing them. According to the Mining Charter, when a new mine commences, there's a certain percentage of employment opportunities expected to be given to certain groups. Minimum of 5% should be given to qualifying individuals, at least 5% to the host communities, and 20% to the BEE entrepreneurship (Mpanza, Adam & Moolla, 2021).

Findings on the satisfaction/dissatisfaction of the respondents with the current living conditions of the community with mining operations in the picture.

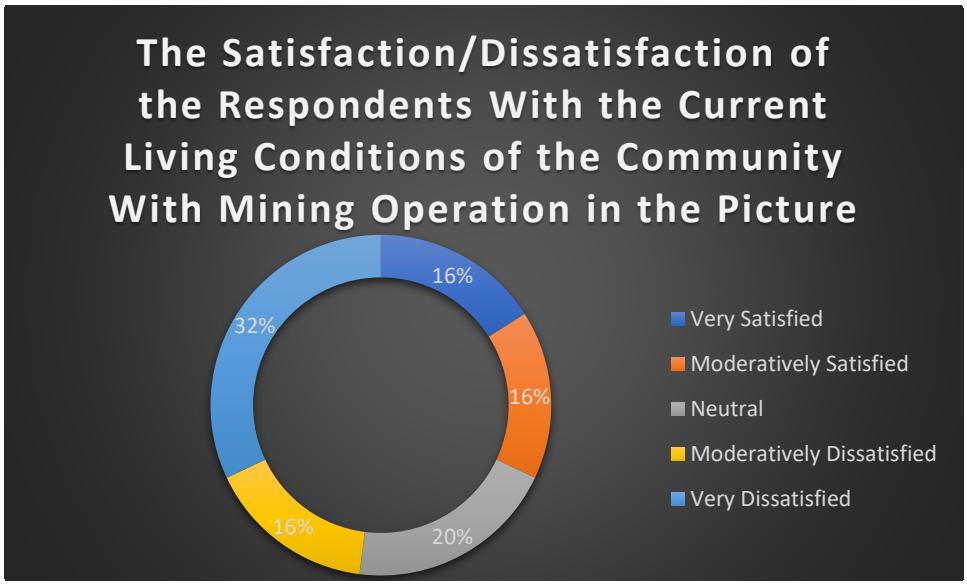


Figure 4.12. The Satisfaction/Dissatisfaction of the Respondents with the Current Living Conditions of the Community with Mining Operation in the Picture.

In figure 4.12, 32% of the respondents are very dissatisfied with the current living conditions of the community with the mine in the picture, while 16% of the respondents are moderately dissatisfied.

Respondent O who is a traditional authority states that *"the communities continue experiencing poverty, poor standards of living, poor health care, lack of infrastructure, poor water supply, and the inability to achieve sustainable livelihoods, especially in resettled communities".*

This is supported by communities of Mothutlung in Northwest complained earlier in 2023 about Bushveld Vametco Minerals that their house walls are cracking, and sicknesses caused by mining pollution, and that the major health problem dominating in this community is asthma (Matebesi & Marais, 2018:360). Bushvel promised to rehabilitate the houses 5 years ago, but they were never fixed, hence the community is dissatisfied (Matebesi & Marais, 2018:360). The figure further shows 16% of the respondents who are moderately satisfied with the current living conditions of the community with the mine in the picture, whereas 16% of the respondents are very satisfied.

Respondent K, M, C, D and O mentioned that some communities are satisfied because there are some communities that benefits from the mine better than others.

Respondent O further stated that *"this means that the closer the community is to the mine, the better the benefits".*

The total of 20% of the respondents are neutral with current living conditions of the community with the mine in the picture. Therefore, the findings shows that communities are dissatisfied with the current living conditions of the community with the mining operation in the picture. This is supported by Matebesi & Marais (2018:380), who stated that conflicts arise between the mining operation and the host communities due to the inability of mining operations to fulfil their promises and achieve development of the community.

Findings on the extent to which the respondents agree/disagrees that people are able to cope with the new resettlement environment and if the community is able to grow in terms of development are analysed and interpreted below. Both host and resettled communities answered this question so the researcher can have the external and internal view.

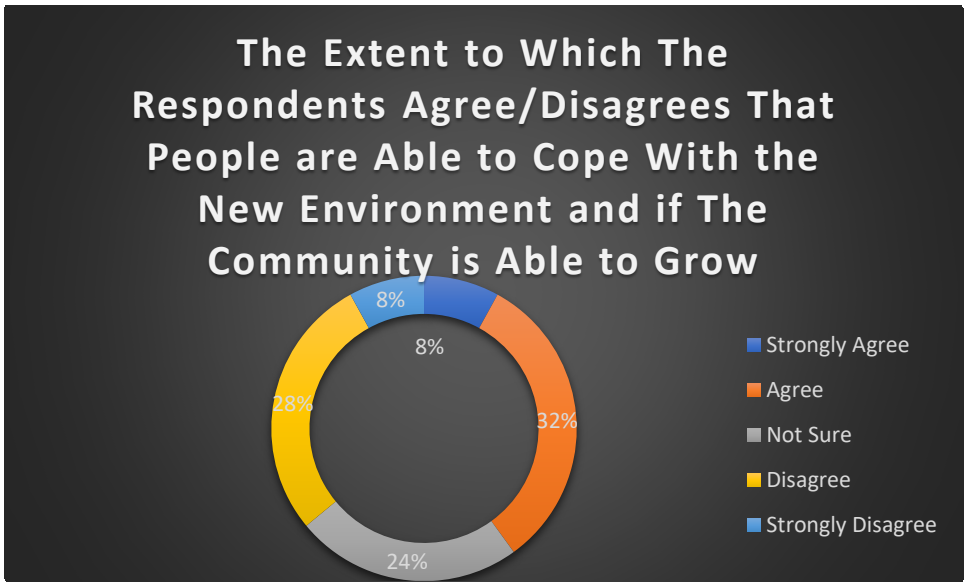


Figure 4.13. The Extent to Which the Respondents agree/disagrees that People

can Cope with the New Environment and if the Community is able to grow.

Figure 4.13 shows 8% of the respondents that strongly disagrees that people are able to cope with the new environment and that the community is able to grow, and 28% of the respondents that disagrees.

Respondent V stated that the displaced communities lost their agricultural livelihoods, livestock, and receive no compensation and benefits from the mine, this led to sustainable livelihoods and development negatively affected.

According to Matebesi & Marais (2018:380), there was a loss of livestock in the Northwest communities, where the mining operation fenced their cows and goats claiming it belong to the mine. The figure further shows 32% of the respondents strongly agreeing that the people are able to cope with the new environment and the community is able to grow, while 8% agrees. The figure further shows 24% of the respondents that are not sure if people are able to cope with the new environment and if the community is able grow.

Respondent V stated that according to mining policies and resettlement policies, the mine is supposed to fully develop the area of resettlement and ensure that it is suitable for people to live in before people could move to that area, however the mine just moves people to the new area and expect the local government to provide basic services to the people. Respondent V further stated that it is important for the people to live in an area where their social lives are close to the economic activities so they can have opportunities of growth and development*, "the community lost everything they owned and are left to cope on their own with no follow up done by the mine or any means of livelihood assistance".*

4.4. THE UNDERSTANDING OF MINING OPERATIONS ROLE IN PROTECTING THE MINING HOST COMMUNITY DEVELOPMENT AGAINST NEGATIVE EFFECTS

This section interprets findings regarding the understanding of mining operations role in protecting the mining host community development against negative as well as the

contribution of mining operations on the community health and education. This section furthermore unfolds the extent to which mining operation attracts migration.

Findings regarding the extent to which respondents agree or disagrees that mining operations understand their role of protecting mining host community development are interpreted and analysed as follows.

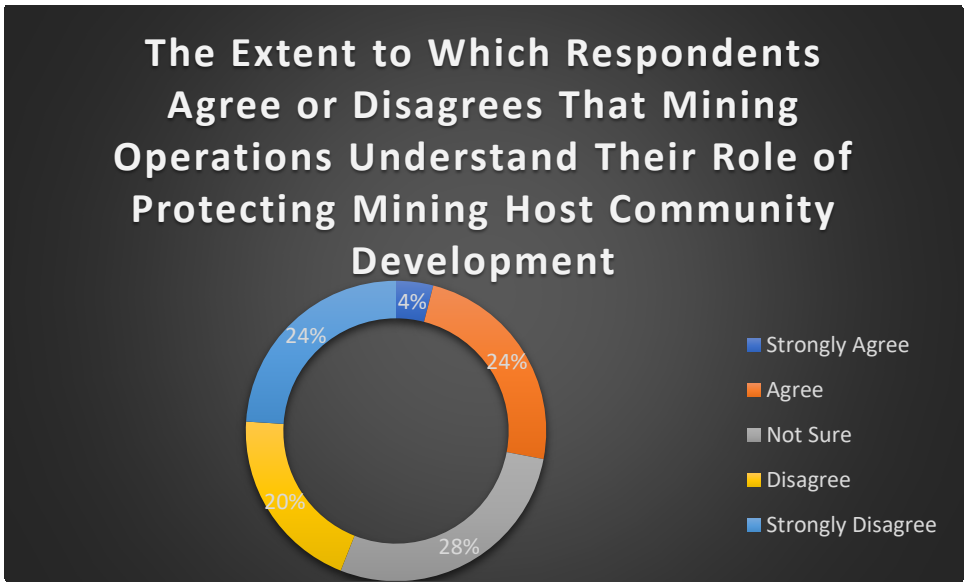


Figure 4.14. The Extent to Which Respondents Agree/Disagrees that Mining Operations Understand their Role of Protecting Mining Host Community Development.

Figure 4.14 shows 4% of the respondents strongly agreeing and 24% of the respondents agreeing that mining operations understand their role of protecting mining host community development.

Respondent V states, *"that mining operations are aware from initiation stage that host communities must be protected from mining activities, they therefore chose to perform otherwise".*

Respondent U states that *"on the sustainable mining plan, the mine has a collaborative regional development in partnership with the community to ensure scalable independent and sustainable economic development in communities around the operation".*

Respondent V further states that *"the main objective is to improve lives by creating thriving communities that endures and prospers well beyond life of the mine".*

According to Asr, Kakaie, Ataei & Mohammadi (2019:5), the International Forum of Mining came up with several issues that each mine must effectively manage to protect communities from mining daily activities, this includes biodiversity and ecosystem which emphasized soil, air, water and noise pollution, fragmentation and degradation of the ecosystem and loss of habitat, the authors added. The figure further shows 20% of the respondents disagreeing and 24% of the respondents strongly disagreeing that mining operations understand their role of protecting mining host communities' development.

Respondent D, R, H, F, and A mentioned that during data collection that had the mine understood their role in protecting the community development of host communities, then the community would not be in the poor state it is right now.

Respondent E stated that *by the mine understanding* their role means putting the improvement of the community at the front of their operation*, "sustainable development would have been achieved by now since the mine has been running for almost 26 years".*

The total of 28% of the respondents are not sure if the mining operation understand their role of protecting the development of the host communities.

This is because respondent J stated that *"I believe that the community would be in a better state if the mine understood its role, the mine operates without consideration of the community development, that's the truth, they are profit driven, that's it".*

In conclusion, it is shown clearly in the MPRDA what the mine is expected to do and what it is expected not to do, therefore mining operations understand the role they are supposed to play to protect and improve community development of the host communities.

Findings on mining contributions towards the health of the community are interpreted and analysed below.

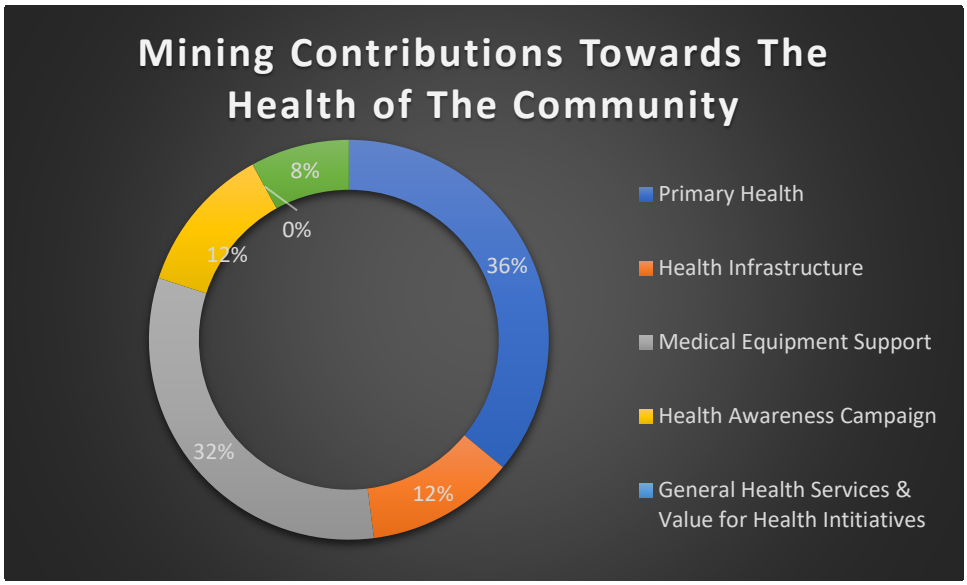


Figure 4.15. Mining Contributions Towards the Health of the Community.

Figure 4.15 shows that 36% of the respondents stated that the mine has made contribution towards primary health care more in the community, 12% of the respondents stating that the mine contributed more on health infrastructure, and 32% of the respondents stating that the mine contributed more on medical equipment supply.

Respondent E, J, O and T stated *that the mine-built clinics for its employees and donates equipment's to the local clinics.*

The figure further shows 12% of the respondents stating that the mine contributes more on health awareness campaigns, and 8% of the respondents stating that the mine does not contribute towards health development of the community. Overall, the figure shows that mine contributes more on primary health and medical equipment supports to the health development of the community. According to the Government Gazette (1996:4), the main aim of the mine health and safety act is to protect the health and safety of mine workers and everyone in the mining environment. Mining operations must enforce measures of health and safety and "promote a culture of health and safety".

Findings on mining contributions towards the education of the host communities are interpreted and analysed as follows.

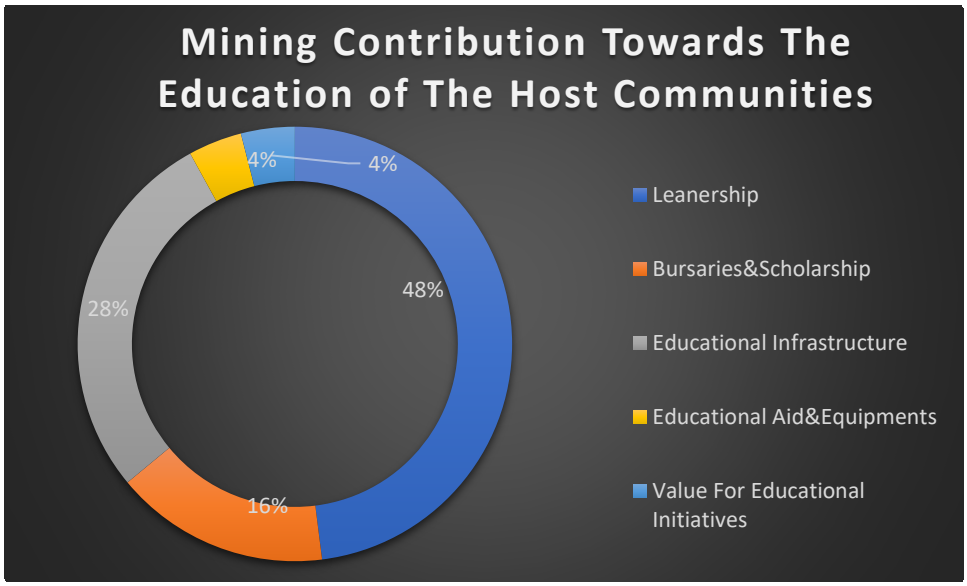


Figure 4.16. Mining Contribution Towards the Education of the Host Communities.

The above figure shows that 48% of the respondent's states that the mine contributes more on learnerships when it comes to the education of the community.

Respondent E, R, S, G, P, B, A, and Q confirms that the mine releases more than 50 learnership vacancies every year, however in most of the learnerships, the mine requires specific qualifications and experience that the local people do not have, which therefore leads to people outside the host communities getting the learnerships.

However, Respondent U emphasises on putting the community first in learnerships.

This is supported by Sibiya (2023:17), who stated that Nkwe Platinum invested millions of rands in adult education, bettering road infrastructure, bursaries, learnerships and internships. The figure further shows 28% of the respondents stating that the mine contributes more on educational infrastructure as an investment to host community education.

Respondent U, E, and T states that the mine-built schools at Mapela and Danisani.

The total of 16% of the respondents' stated that the mine contributes more on bursaries and scholarships, 4% of the participants stated that the mine contributes more on

educational aid and equipment, and 4% of the respondents stating that the mine contributes more on value for educational initiatives.

Interpreted and analysed below are findings on the extent that mining operations attracts migration.

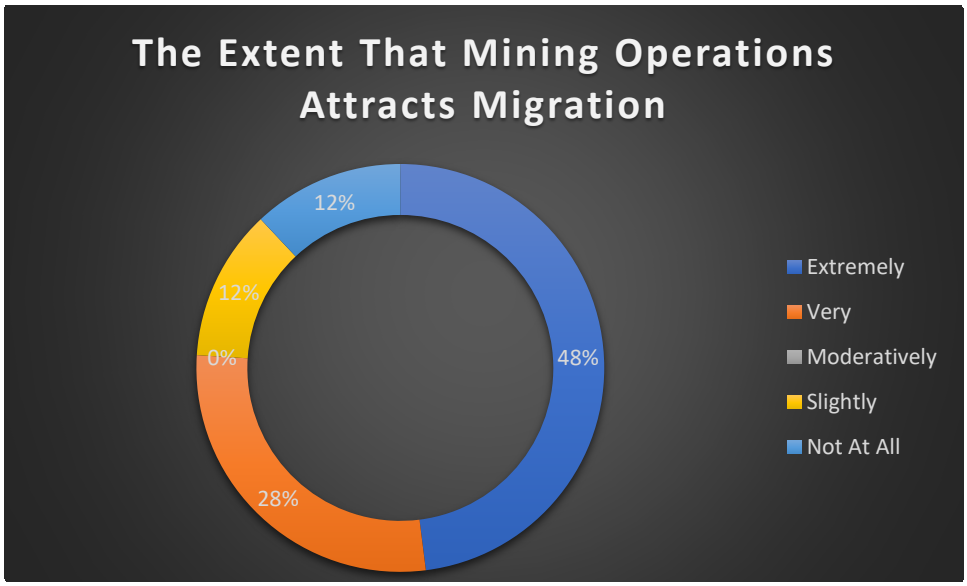


Figure 4.17. The Extent that Mining Operations Attracts Migration

Figure 4.17 shows 48% of the respondents believes that mining operations extremely attracts migration, and 28% of the respondents stating that mining operations attracts migration.

Respondent O states that people move from different areas to the area where the mine is located in search for jobs.

Respondent V mentioned in the interview that the community therefore becomes overpopulated and limited resources of the community becomes exhausted and exploited due to high population.

Respondent E confirms that this further limit the chance of local people getting employment opportunities, leads to air pollution cause by traffic congestions of the over population in the area.

The figure further shows 12% of the respondents stating that mining slightly attracts migration, 12% that states that mining does not attracts migration, and 0% of the respondents that states that mining moderately attracts migration. Therefore, the above figure shows that mining extremely attracts migration. This is supported by Chapter 1.2 of the Institute for Responsible Minning Assurance (IRMA), which states that new communities emerge as the result of the mining operation.

Host communities' perception on which vulnerable groups mostly supported by the mines.

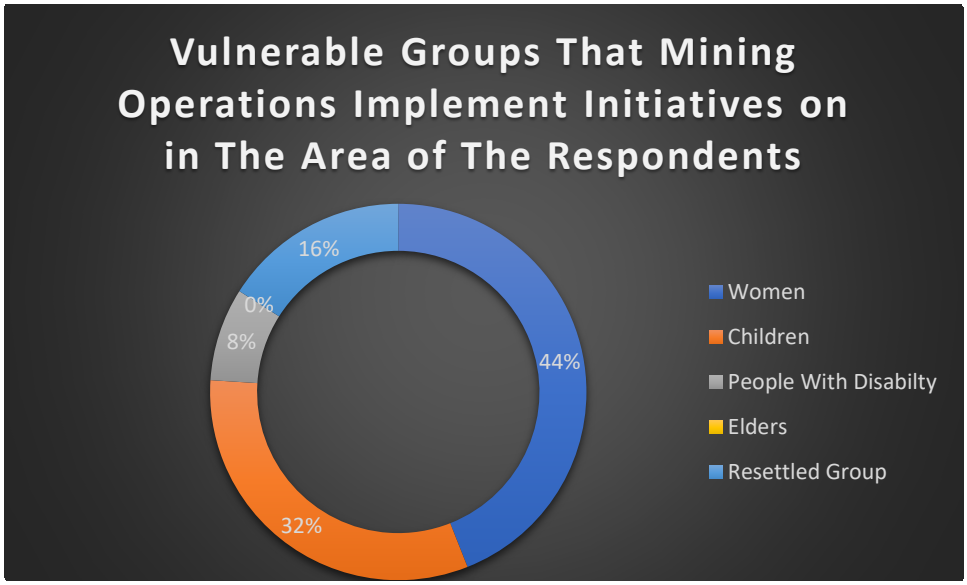


Figure 4.18. Vulnerable Groups that Mining Operations Implement Initiatives on in the Area of the Respondents.

The figure 4.18 above shows that 32% of the respondents stated that the mine implements more initiatives for children, 44% of the respondents' stated that the mine focuses more on women than any other vulnerable group, and 16% that states that the mine focus more on the resettled group than any other vulnerable group.

Respondent T and U stated that the mining operations has built schools for children, prioritise women empowerment and gender equality when it comes to employment.

Further, recently most women were employed to work underground and normal office jobs than men in Anglo Mogalakwena (anonymous respondent).

The figure further shows 8% of the respondents stating that the mine implement initiatives on people with disability more. It is interesting to note that no respondent is aware of any initiatives aimed at the elderly. The above figure shows that the mine implement initiatives aiming at women and children. This is supported by Chipa & Marais (2022:3), who stated that Mogalakwena mine contributes more on the education of the children and further prioritise women empowerment in their operation.

4.5. RECOMMENDATION OF MEASURES THAT CAN REDUCE ADVERSE EFFECTS OF MINING OPERATIONS TOWARDS COMMUNITY DEVELOPMENT.

This section unfolds the recommendations of measures that can reduce adverse effects of mining operations towards community development according to respondents. The section unfolds what the respondents suggest can be done before the implementation of the mining operation and what the mining operation can do after the implementation.

Interpreted and analysed below are findings on the respondents' opinions on what can be done different during mining operation.

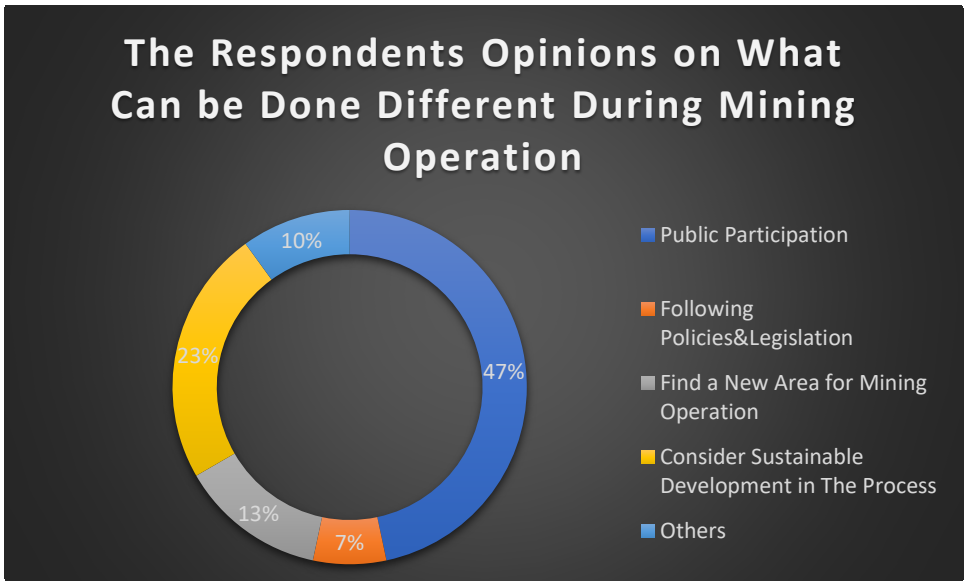


Figure 4.19. The Respondents Opinions on What Can be Done Different During Mining Operation

The figure 4.19 above, shows that 47% of the respondents stating that the mining operations must enhance public participation during mining operation implementation.

Respondent V, E, J, and O stated that the mine must include the community in every stage of the mining process and allow the community to have an input as the development is happening in their area therefore must place the community at the centre.

Chapter of the Initiative of Responsible Mining Assurance states that mining operations, financial institutions, and the government must build strong long term a relationship with the host communities in order to improve management and identification of effects and risks to increase optimal results for the mining operation and host communities. The Constitution also states that to ensure that the decisions are taken fair and properly, the affected communities are consulted to have a say and have their inputs taken into consideration and heard. The figure further shows that 7% of the respondents stated that the mine must follow policies and legislation during implementation.

Respondent V states that mining policies and legislations clearly states the requirement of mining operations to undertake development in the area, including the protection of the community, its development and involvement.

The total of 13% of the respondents' stated that a new area must be found for the mining operation.

Respondent V stated that this will reduce the negative effects on community development, the health of the people, and over population caused by migration.

The figure further shows 23% of the respondents stated that the mining operation must consider sustainable development in the process.

Respondent V stated that sustainable development of the host communities must be at the core of the mining operation and prioritised throughout.

Findings on the respondents' opinions on what can be done differently next time after the implementation of mining operations are interpreted and analysed below.

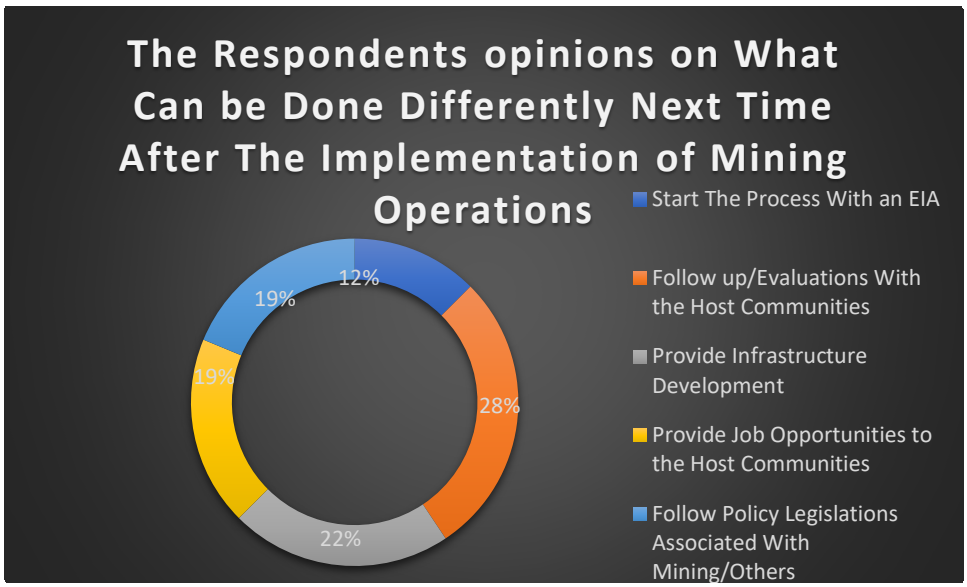


Figure 4.20. The Respondents Opinions on what Can be Done Differently Next Time After the Implementation of Mining Operations.

Figure 4.20 shows that 28% of the respondents that stated that the mine must follow policy and legislations associated with mining, 22% of the respondents stating that the

mine must provide employment opportunities to the host communities, and 19% of the respondents stating that the mining process must begin with the EIA process.

Respondent V and E stated that *the* EIA process will help identify possible effects that the mine pose to the community and help identify solutions and contingencies together with priorities.

The EIA also helps with the implementation of smooth public participation and communication.

Regarding employment, respondent A, D, M, K, L, S suggests that the mine must prioritise host communities first before inviting external applicants.

The figure further shows 12% of the respondents stating that the mine must follow up with host communities, especially the resettled.

Respondent J, O, and T believes this will help in knowing if the community is affected negatively or positively by the mining operation, if the resettled communities are able to cope and if they need help with livelihoods start up or any means that will help them cope.

Ubink & Pickering, (2020:5), states that the mine is obliged to follow up and compensate communities and individuals within which they operate in or uses their land. Lastly, the figure shows 19% of the respondents stating that the mine must provide infrastructure development.

Respondent V stated that this refers to health infrastructure, schools, water, houses, and transport infrastructure. The respondent further stated that Investment on infrastructure will lead to sustainable development of the community.

4.6. CONCLUSION

Findings shows mining operations affects host community development negatively more than positively. Communities were resettled to create space for the mining operations, this led to loss of livelihoods and the inability to cope in the new environment, some host communities being unable to cope with the mine in the picture. However, employment opportunities were given to host communities by the mine, even though employment opportunities that requires qualifications are grated to individuals from outside the host communities.

Host communities have certain expectations about the development that the mine will bring to their communities; however, the mine did not attempt to meet the expectations. Findings shows that some communities are compensated whereas some communities are not compensated. Community participation is disregarded. Host communities have been in the same state for the past 26 years since the mine started operation, there is no improvement especially on infrastructure development and education. Findings further shows that mining operations attracts migration which leads to high population, increase pollution, and exploitation of local resources. Migration also leads to reduced access of host communities to the benefits of the mines. Mining plays no role in protecting host communities and their development. Commitments made before the mine was implemented are not fulfilled, especially to the resettled communities.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1. INTRODUCTION

The previous chapter provided the analysis, interpretations, and presentation of the findings of the study from data collected through interviews and questionnaires. This chapter provides a summary of the research findings, conclusions, recommendations to problems identified regarding the effects of mining operations on community development together with the conclusion of the study.

5.2. SUMMARY OF THE RESEARCH FINDINGS

5.2.1. KEY FINDINGS

The study was conducted in Mapela and Mokopane Villages with aim of investigating and providing an insight into the effects of mining operations in community development: a case study of Mogalakwena Mine in the Limpopo Province, South Africa. The aim was achieved by determining the perceptions of mining host communities on the effects of mining operations towards community development, determining the understanding of mining operations' role in protecting the mining host community development against negative effects, and recommending measures that could reduce the adverse effects of mining operations towards community development. To ensure validity of the data, population and ecological validity was used, where the sample population reflected the population being studied and the generalised findings are to the real world. The researcher also used validated and multiple data collection tools such as interviews, observations, focus groups, questionnaires, and recording events to ensure validity and verification of the findings.

The study disclosed that Mogalakwena mine made commitments to the government through the regulatory body (DMRE) and the local communities' prior commencement of its mining operation that it will prioritise the development of the community and its wellbeing. The DMRE provided the mine with the guidelines, policy and legislative framework applicable to the imperative need to make

meaningful and positive contribution towards host communities and protecting and promoting the health of the host communities before issuing the mining license. The mine identified possible effects that will affect the community and its development, together with mitigation measures and contingencies. However, Mogalakwena mine is found not to have prioritized and/or put the community development first as the community development status is far worse than it was 26 years ago.

Daily mining activities continue to affect the development of the host community by blasting's, heavy vehicles on the roads, pollution, and overpopulation caused by migration, and the mine does not implement mitigating measures. The house conditions, health, and road infrastructure of the resettled and host communities worsens as years goes by due to blasting, air and underground water pollution rises without mitigation.

The only positive effect that the mine provides is job opportunities to the host communities, the resettled communities and labour sending communities. However, highly specialised and technical professional job opportunities or categories such as engineering is granted to qualified and experienced individuals outside the resettled and host communities. Some of the host community's youth have passion for engineering and other mining profession, however they lack funds to pursue their dreams and further their education and/or career development opportunities. The mine is obliged to provide bursaries to the matriculated youth so that they can be able to further their education and then come back to work at the mine. Bursaries that the mine has benefits youth outside host communities due to illiteracy levels in the mine host communities.

There is lack of communication and consultation from the mine to the resettled and host communities with regard how the communities are affected by the mining operation, what they need, how the mine will work, availability of information about the mine, and the community's input in everything. However, in the beginning,

participation was passive where the mine informed the communities about the resettlement process and the implementation of the mining operation, not getting a platform to make decisions, be part of the process, and make amendments in the development that affects their own life. This led to host communities being excluded from decision making, planning, and implementation.

Follow up after the implementation of the mining operation and the resettlement of communities was made on some hosts communities and some parts of those communities, rather than on all affected communities. Different communities face different problems, thus following up with all the host communities is important so that the mine will know how to assist. The follow up process was made for formality purposes, meaning that nothing was done regarding the problems that the resettled and host communities face to adjust with the mine in the picture.

Mogalakwena mine did not fully develop the resettlement area. Proper services must be initiated before the resettlement process, but the mine resettled people and expected the government to provide services to them instead of collaborating with the local government. The mine is expected to investigate about the resettling area in line with the proclamation of the resettled community by the municipality, because there are some areas that are not meant for residential purposes.

The development of the community is undertaken by the municipality more that the mine. The municipality has limited resources therefore provide inadequate development; thus, the mine is expected to take over from where the municipality left off or develop on important areas that the local government is unable to. For example, access to water supply, the local government drilled boreholes at the end of every street and the water only comes out after a week sometimes after months. This affects the agricultural livelihoods of the people and their health. The mine was expected to create a pipeline from the boreholes going to each household and ensuring that the communities get water every day.

Mining operations have more negative effects than positive effects. Host communities experience more negative effects than positive effects from Mogalakwena mine. This therefore became clear to the host communities that the mine cares more about profit that the wellbeing and development of the communities.

The study further uncovered that mining operations attracts migration. People move from their areas to Mokopane and Mapela villages in search of jobs and to reside there as it is close to their area of employment. This leads to overpopulation and exploitation and exhaustion of local resources. This also leads to unemployment of local people and rise in pollution level as the migrated population gets more opportunities from the mine than the host communities, and increased car movements.

Mogalakwena mine hinders sustainable economic development and agricultural development of the host communities.

The government, especially the DMRE monitors the operation of the mine to see and ensure that the mine adheres to the policies and regulations of protecting the host community development and health. Even though there is constant government monitoring, there are still no changes in host community development.

5.2.3. UNPLANNED/PERIPHERAL FINDINGS

The study also revealed that compensation according to the commitments the mine made to host, and resettled communities is made to host communities that are closer to the mining operation and have powerful traditional authorities. Among all communities in Mokopane and Mapela village, only two communities receive compensation from the mine. This shows that the host communities residing closer to the mine benefits more than others.

Communities resort to strikes as a way of being heard by Mogalakwena mine. Every year communities send their problems, requests, and complains to the mine, however the mine does not respond to any of the requests. This therefore leads to communities striking and disrupting mining operations in order for their requests to be heard. If they do not strike, the mine will ignore their problems. Communities strikes led to the mine building schools and a clinic, high percentage of employment of host communities' youth and adults.

The study further uncovered that host communities saw mining operations as an escape to better life and eradication of poverty and poor living conditions. This is because host communities had expectation about the mine and the positive effects the mine will bring to the development of their communities in line with the promises made. The positive effects include eradication of poverty, SMME's financial support/start up, infrastructure development, better education, bursaries, proper housing, better access to water, better health facilities and services, reduced rate of unemployment, skills development, support of their agricultural livelihoods and livestock, stability in socio-economic development and life, sustainable development, and programmes that supports adult literacy and health education.

5.3. RECOMMENDATIONS

Recommendations are divided into three: after the process, during the process and measures to reduce the adverse effects of mining operations towards community development, according to the literature.

5.3.1. During the Process

There must be meaningful and extensive public participation of the host communities in the development of Social and Labour Plans (SLPs) process. This is because everyone has the right to take part in decision making of matters affecting their own lives. Host communities must participate fully to take decisions that favours them, stating their concerns, how suitable the process must be to

accommodate them in order to avoid loss of livelihoods, inadequate development, and negative effects, to know what the process entails and be able to make amendments. Participation is important to make sure that the mining operation benefits both the mine and host communities, minimizes conflicts, mitigate challenges and effects that host communities' development might face, including in resettled communities. It also helps to make sure that the community is heard. In essence, SLP must be the product of the wishes and aspirations of the host communities including economically displaced and resettled communities.

There is a need for compliance with policies and legislations during the process of mining. Compliance with policies and legislations ensures that the mine understand the effects that the daily activities will cause to the host communities and their development. Policies outlines the requirements of mining before issuing the license to ensure that the development of the host communities is protected. The EIA is drafted outlining possible effects of mining operations of host community development, mitigation measures, contingencies, developmental benefits of the mine to the community. The document is therefore submitted to the regulatory body for approval of the project, if the mitigation measures are not realistic and non-attainable, the mining license will not be issued. It is only when the regulatory body is satisfied with the protection of the host communities' development that the plan will be approved. Some policies states that if the mine violates clearly stipulated laws that protects the host community's development, and their environment will lead to the licence revoked. Therefore, following policies and legislations will protect host communities.

Mining operations as change agents should consider finding a new area for the resettlement of the nearby communities which are directly impacted by mining operations. There must be an alternative, a new area must be searched for and having Mokopane and Mapela as a second option in case a new area is not found. Finding a new area for the directly impacted communities will help avoid negative

effects that the mine has on community development such as pollution, diseases, poor road infrastructure, house cracks, loss of grazing lands, loss of wetlands, and underground water contamination. This should be done in consideration of the loss of livelihoods, and where applicable, appropriate resettlement compensation should be provided.

Mogalakwena mine should consider sustainable development in the process. The mine must ensure that their daily activities protect the development of the current generation, however not compromising the development of the future generations. Possible mitigation measure must be implemented to ensure that the houses of the people are maintained or rather not affected by the blasting, road infrastructure is maintained, investing in the education of the host community's youth, protecting underground water, managing pollution, rehabilitation of land and soil, and supporting local businesses, skills, and talents. Host communities' socio economic and environmental development must be at the core of Mogalakwena mine, unlike the mine pursuing immediate results without considering the harm the host communities face.

5.3.2. After the Process

Once the mining project is approved, it is important for the EIA to be revisited in every activity undertaken. This will help to ensure that every problem or effect that arise, the EIA guides the mine on how to deal with it and mitigate it. If the mitigation measures do not work, then the EIA will help the mine to implement contingencies. Revisiting the EIA will help to remind the mine the main goal, focus, prioritising and protecting host community development. It will also help the mine to be able to prevent the effects on community development before they can occur.

Mogalakwena mine should follow up/ evaluate with the host communities their current living condition through socio-economic baseline assessment which will assist in helping the mine to identify and prioritize community needs for inclusion in the SLP. Regular following ups and engagements with host communities will

help the mine to know if the host communities are coping with mine's effects and risks. If the communities are not able to adjust to the new environment, measures must be implemented to help the community cope. Same procedure must be followed to follow up with the resettled communities in order help with lost livelihoods, agricultural markets, service delivery, and better infrastructure, etc. This will help to achieve sustainable development of host communities.

The mine should provide infrastructure development to the host communities. Infrastructure such as road is used by both the mine and communities, thus the mine must continuously maintain the road due to damages caused by their dumbstruck, heavy vehicles, and transportation. The mine should invest in schools, health care facilities, water supply, houses, and roads in order to achieve sustainable infrastructure development in the community. This is because host communities' infrastructures are affected by Mogalakwena mine activities, therefore the mine must take responsibility in maintaining and improving them. Infrastructure development must be undertaken by the mine to achieve the agreement of protecting the development of the host communities.

Mogalakwena mine should provide job opportunities to the host communities. Employees of the mine should be hosting communities, in this way the standard of living of the people will be improved, poverty will be eradicated. Bursaries should be provided to the matriculated to further their studies and get the jobs that requires qualified individuals in the mine instead of the mine offering individuals outside the communities the jobs. This will empower host communities. Skills development programmes must be initiated to help improve the performance of the host communities and allow them to learn more skills to get the job done. Sub-contracts in the mine must be given to small businesses in the hosting communities or individuals with a potential to allow them to grow. Job opportunities are a starting point to community development.

The mine should follow policies and legislations associated with mining. This will ensure that there is a good relationship between the host community and the mine. It will also ensure that community development is protected and both the mine and the community benefits from operation.

5.4. CONCLUSION

In conclusion, the main aim of the study was to investigate the effects of Mogalakwena mine on the development of host communities in the Limpopo Province. The objectives of the study was to determine perceptions of mining host communities on the effects of mining operations towards community development, to determine the understanding of mining operations' role in protecting the mining host community development against negative effects, and to recommend measures that could reduce the adverse effects of mining operations towards community development.

The study through appropriate methodology and desktop literature review provided insights into how mining operations affect community development across local, regional, and national spectrum. Data collection assisted in unearthing useful information on how mining host communities are developed by mining operations but more importantly how the mining operations are affecting community development with specific focus on Mogalakwena Mine. Therefore, conclusions drawn from the study includes that the closer the community is to the mine, the better the benefits. Employment opportunities is the only benefit the host communities get from the mine. Mining operations focuses on the profit and does not care about host community development. Policies and legislations are followed to get approval and license to mine, after that the policies are disregarded. Mining affects infrastructure development and the overall development of host communities negatively. Participation is passive and host community visitations are done for formality not to follow up and hear the community problems. Mining operations do not implement any mitigation measures to the effects they pose to the host communities. Mining operations attracts migration. Mining operations have more negative effects than

positive. There is no follow up done after the resettlement process. Inadequate or no community engagement on mining operations. There is barely contribution of mining operations towards community development, however, expects the government to undertake development of host communities. Resettled communities lack proper infrastructure and basic services. Commitments made to the resettled communities were never met. Resettled communities are left to survive on their own without livelihood restoration plans. Agricultural development of host communities is affected by loss of livelihoods, lack of water services, and loss of grazing lands. Community development is not prioritized.

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