# MINE CLOSURE NARRATIVES IN THE FREE STATE GOLDFIELDS, SOUTH AFRICA

**BY**

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**DECLARATION**

I, **BOITUMELO JOY ALEC**, declare that the thesis **"MINE CLOSURE NARRATIVES IN THE FREE STATE GOLDFIELDS, SOUTH AFRICA"** hereby submitted for the qualification of **MASTERS IN DEVELOPMENT STUDIES**, at the University of the Free State, is my own independent work and that I have not previously submitted the same work for a qualification at another institution of higher education.

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**ABSTRACT**

This study examines the experiences of mineworkers who lost their jobs after mine closure. The researcher applied qualitative methodology in this study, and interviews with selected participants narrated their experiences (the focus is on their experiences after retrenchment). The interviews were semi-structured. This study's findings revealed significant changes regarding the South African government concerning all mining policies, ranging from the White Paper on Minerals and Mining, leading to the Mineral and Petroleum Resources Development Act No. 28 of 2002 (MPRDA) and other mining-related policies. The study discussed the Labour Relations Act 66 of 1995 (LRA), which deals explicitly with industrial relations and employment conditions. The National Environmental Management Act, 107 of 1998 (NEMA), establishes guidelines for decision-makers on environmental issues that impact people to ensure cooperative environmental governance. The discussion proceeded to the Skills Development Act No. 97 of 1998 (SDA) and Mine Health and Safety Act No.29 of 1996; its objective is to ensure sustainable skills development and individuals' health and safety in mining operations. The study found out that The Employment Bureau of Africa (TEBA), the mining recruitment agency headhunted young men to work in the mines. Women have lately joined the mines, replacing family members who have been extraordinarily ill or passed on. Few respondents have entered the mines at a lower primary education level. The respondents did not obtain many other skills and training programs under the Social and Labor Plan, the MPRDA, and the SDA requirements. Section 189 of the South African Labor Relations Act No. 66 of 1995, concerning the retrenchment process, seemed to have been flawed, as most of the respondents indicated how shocked they were when they found out about their retrenchment. There was also no mention of any counseling given before or after the retrenchment. Family dysfunction was often a challenge due to a lack of income. Some families were unable to take the children to the anticipated institutions of higher education after their retrenchment.

The study recommends the implementation of education and training in line with the SDA. Companies should use counsellors to provide counseling to workers that face retrenchment. This study found that some respondents contracted Tuberculosis (TB) during the subsistence of their working contracts and even after retrenchments. Together with the mining houses, the government and all other relevant stakeholders must improve on oversight strategies regarding the infection and reinfection of TB towards the retrenched mineworkers. The mines should continuously provide ex-employees accessibility to the health care system.

**ACKNOWLEDGEMENTS**

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**Great is the Lord our God**

Praise Him forever

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| | |
|---|---|
| BCEA | Basic Condition of Employment Act (Act 75 of 1997) |
| DMR | Department of Mineral Resources |
| GDP | Gross Domestic Product |
| ICMM | International Council of Minerals and Metals |
| LRA | Labour Relations Act (Act 66 of 1995) |
| MHSA | Mine Health and Safety Act, 1996 (Act No. 29 of 1996) as amended as amended from time to time |
| MHSA | Mine Health and Safety Act (No.29 of 1996); |
| MPRDA | Mineral and Petroleum Resources Development Act, 2002(Act No. 28 of 2002) |
| NEMA: | National Environmental Management Act [No. 107 of 1998] |
| NUM | National Union of Mineworkers |
| SDA | Skills Development Act No. 97 of 1998 |
| SLP | Social and Labour Plan contemplated in section 23 of the MPRDA |
| TB | Tuberculosis |
| TEBA | The Employment Bureau of Africa |

# CHAPTER 1 :
# SETTING THE SCENE

## 1.1 INTRODUCTION AND BACKGROUND

Mining is the basis of human civilisation and has played a significant role in many countries' economic development. The mining industry supplies essential resources to people, which are transformed into infrastructural developments, promoting the local businesses and social infrastructure. Furthermore, mining plays a substantial part in creating and producing capital, employment opportunities and technology, as well as country-level economic development through tax and revenue recovery. Regrettably, mining operations are finite and not meant to last forever. Therefore, mine closure is an international phenomenon.

Stacey, Naude, Hermanus and Frankel (2010), summarise the reality in the following words, in considering the international and national mine closure experiences, the mining operation is a finite mineral resource in which its post-closure will result into related characteristics such as economy, environment, and social challenges as part of mining operation life cycle.

The mining industry is the primary contribution sector of employment in South Africa, both directly and indirectly. The mining and manufacturing sectors are economic catalysts in South Africa; however, their contribution to the Gross Domestic Product (GDP) had declined at the expense of service sectors, such as finance, wholesale, transport, and even personal service (Leew and Mtegha, 2018). The Minerals Council South Africa (2018) estimates that the mining industry's share in the economy of South Africa is 6.8%. Mine closures have resulted in the retrenchments of workers, and further contributing to poverty. This study identifies the socio-economic consequences of the retrenchment of mineworkers.

The Mining, Minerals and Sustainable Development (MMSD) (2002) recommend that mine closing procedures and legislative guidelines must improve. Mining companies must abide by the South African Constitution and the Common Law during production and close down by observing human rights.

The Constitution of the Republic of South Africa (Act 108 of 1996), gives birth to the other pieces of legislation, which advocates and demands for closure objectives that are meaningful to socio-economic outcomes. This study will further assess the South African regulatory framework and will include:

- White Paper, A Minerals and Mining Policy for South Africa, of 1998;
- The Mineral and Petroleum Resources Development Act No. 28 of 2002 ("MPRDA") as amended Act No. 49 of 2008;
- THE BROAD -BASED SOCIOECONOMIC EMPOWERMENT CHARTER FOR THE MINING AND MINERALS INDUSTRY, 2018 (herein referred as the Implementation guidelines for Mining Charter, 2018)
- The Social and Labour Plans (SLP);
- The National Environmental Management Act No. 107 of 1998 as amended (NEMA);
- Labour Relations Act (Act 66 of 1995) ("LRA");
- The Basic Conditions of Employment Act 75 of 1997 "BCEA")
- Mine Health and Safety Act of 1996 ("MHSA"); and
- The Skills Development Act No. 97 of 1998 (SDA).

## 1.2 PROBLEM STATEMENT

The continuing mine closure in South Africa results in frequent job layoffs, which causes anxiety and fear among mining employees. Prinsloo and Marais (2014) anticipated that most gold mines in South African would close in the following 25 years. Malherbe and Segal (2000) assert that during 1990, the South African mining sector in South Africa generated 41% in total exports. These figures suggest that no government can ignore the contribution of mining to South Africa's economy.The Free State Goldfields has experienced mine closures and related employment reductions and has lost more than 150,000 mineworkers between 1988 and 2019. These figures translate to an 80% loss of employment in the mining industry in the area since 1988 (Marais, 2013a). Of the original 44 mining shafts constructed, only nine are currently operational (Marais, 2013a). The Chamber of Mines SA (2015)[1] corroborates Marais's statement by stating that gold production halved between 2003 and 2013. The closing of mine shafts translates to job losses that result in unemployment in the region, nationally and labour-sending countries.

The mining industry employed about 490 146 individuals in 2016, compared to 538 144 individuals in 2012 (South Africa, 2016). There were about 47 998 job losses in the mining industry between 2012 and 2016. Statistics South Africa (2016) further outlines that the total revenue from the mining sectors was about R419, 5 billion in 2015, in which there is an increase of 2.2% compared to 2012.

According to Minerals Council South Africa (2018), The mining industry had contributed US$26.6 billion (R356 billion) revenue to South African GDP in 2018, signifying an increase of about 7% as compared to the previous year, 2017. PwC (2014) identified deep mining as one of the main reasons for the closure of gold mines. The decline in gold mining has grave implications for gold mining areas and the Matjhabeng area did not escape closure and downscaling (Marais, 2013a, 2013b; Marais *et al.,* 2017; Sesele, 2020). Mine closure has severe implications for mineworkers who lose their jobs, yet, we still do not know much about the experiences of job losses of mineworkers. Therefore, the study seeks to address the following main research question: What are the former mineworkers' experiences regarding mine closure or downscaling and its effects on their social life?

[1] Now known as the Minerals Council of South Africa

The broad developmental study research interest in the Matjhabeng Local Municipality has attracted many researchers, because of its social dynamics, as well as the economic status of the societies that are residing in the region, whose livelihood is impacted (Marais, Burger & Van Rooyen, 2018).

## 1.3 AIM AND OBJECTIVES

This study examines the experiences by former mineworkers who lost their jobs, due to mine closure in Matjhabeng (Free State Goldfields).

The dissertation has the following objectives to achieve the aim mentioned above:

- To evaluate global, national, and local literature that relates to downscaling and mine closure and its inadvertent consequences for employment.
- Assess the legislative framework for mine closure in South Africa.
- To document the experiences of former mineworkers after losing their jobs.
- To make recommendations about the policy implications of the research results.

## 1.4 KEY TERMS

The following terms follow part of the study and require a definition.

**Ex-workers/former mineworkers:** the ex-mine workers/former mineworkers any person who used to work in the mines. The research uses the terms ex-workers and former mineworkers interchangeable. The terms refer to employees who worked in the mines previously and lost their job, due to retrenchment.

**Free State Goldfield:** The Free State Goldfields region included the following towns: Welkom, Virginia, Allanridge, Hennenman, Odendaalsrus and Theunissen. Theunissen forms part of the areas as the Beatrix Mine falls in the magisterial district of Theunissen or the Masilonyana Local Municipality.

**Labour Sending Areas:** The term refers to arreas and regions from which mining companies sourced a large proportion of South African mineworkers (either current or historical).

**Mine:** The researcher use the term in the study to explain the process of extraction and excavation, executed on and under the earth surface to retrieve mineral deposits.

**Mining Charter** means broad-based black economic empowerment (BEE), which is a national policy to accelerate economic development and increase Black people's economic involvement (African, Colored and Indian citizens of South Africa) in the South African economy.

**Mining:** The terms refers to the operation, occupation, and sector involved with mineral resource exploitation.

**Retrenchment** means any form wherein the employee loses his or her job, voluntarily or involuntarily.

## 1.5 RESEARCH METHODOLOGY

Fink (2000) asserts that traditionally, social science employs empirical scientific research to emphasise quantitative measurements, because it aimed to replicate the natural science's traditional way of study methodology. However, this study will not attempt this, as it is deeply rooted in social constructionism and focuses on the experiences of mineworkers who lost their jobs. The methodology will further outline how this research study will unfold.

### 1.5.1 The research selection of study area

The present study covers the Free State Goldfields which largely include the Matjhabeng Local Municipality (MLM) in the Lejweleputswa District Municipality, Free State Province. The area has experienced substantial mine decline over the last three decades. The MLM is in the Free State Goldfield. It encapsulates the total surface area of 514km$^2$ and comprises six towns of varying sizes, namely, Welkom (Thabong, Bronville and Riebeeckstad), Odendaalsrus (Kutlwanong), Allanridge, Hennenman (Nyakallong), Virginia (Meloding), and Ventersburg (Mamahabane).

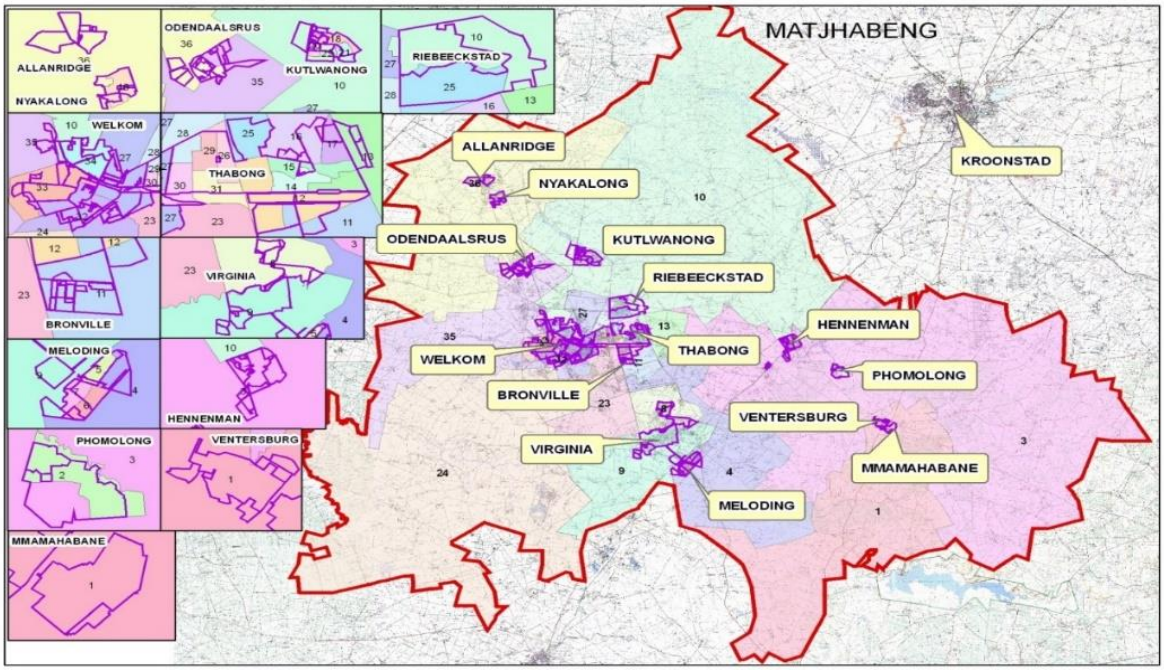


*Figure 1.1: Matjhabeng Local Municipality's towns and townships*

The mining history in Free State Goldfield (Matjhabeng Local Municipality) began on the 8th November of 1933 when Alan Roberts started prospecting on the farm Aandenk. However, due to the financial challenges, the prospecting ended. It was only later in March 1939 that the drilling began in the farm known as Uitsig by Africa and European Investment Company (Marais & Nel, 2016). According to Marais (2013b), the first mining operations started in the Goldfield Free State, the Orange Free State Province in 1947, near Welkom.

Marais and Nel (2016) state that companies sunk 44 mines between 1945 and 1993. The first 22 shafts developed before 1970 and the other 22 between 1970 and 1993. In 1988, the mines in the areas employed approximately 180 000 people (Marais & Nel, 2016), while the area has only 20 000 mineworkers today.

### 1.5.2 Research approach and design

The study follows a qualitative approach. Bryman (2016) defines qualitative research as the study method that uses words rather than numbers while gathering and analysing data. Terre Blanche, Durrheim, and Painter (2006) say qualitative research incorporates the investigation to discover the human and social challenges, including the introspection on how other things occur. The main reason

for choosing qualitative research was to understand the experiences of retrenched mineworkers. The case study draws the stories and personal views of a narrative struggle, faced by ex-mineworkers after retrenchment. The researcher connects their stories to explain how different facets of an ex-miner's life are connected. This case study may assist various stakeholders in the mining sector and other related fields to design or complement the existing policies and programs that can help the mineworkers during and after retrenchment.

### 1.5.3 Data collection strategy

The data was collected through interviews. The interviews were semi-structured, and interviewees had to provide narratives of their work experience and retrenchment from the mines. The semi-structured interview approach allowed the interviewees enough time and chance to share ideas that needed to be shared in open-ended guidance to allow providing their view. A list of questions, which was divided into two phases was prepared in advance, which served as guidance when conducting an interview.

In **Phase 1**, the main question read as follows: Tell us the story of being employed at a mine. Briefly explain how you initially got a mining job, how long you worked in mining, when did you lose the mining job and how you lost that job? What were the consequences for you and your family after losing this mining job?

In **Phase 2**, all interviews will be transcribed and follow-up questions will be clarified with the participants.

***Questions (20 min):***

1. How prepared were you to make a living after mining?
2. What helped you to make a living after mining?
3. What skills did you not have to make a living after mining?
4. Document the following:
    - The age of the worker;
    - Where the interview was conducted;
    - Gender;
    - Is the person married?
    - Is there evidence of having been or still is a migrant worker?

Because of COVID 19 restrictions, the researcher recorded the discussions using the audio recording device on a mobile phone. The researcher explained the reasons for using an audio recording device with the interviewee, and the interviewees provided verbal consent to the interview. The use of telephonic interviews is a cost-effective way to speak to people who are geographically scattered. The telephone interviews minimised travelling costs. The interview discussion-recording allowed the researcher to afterwards listen to the interview and it enhanced data analysis. The researcher transcribed all interviews during the data analysis stage. In analysing the data, the researcher used narrative analysis.

### 1.5.4 Sampling Design

A sample is a group of considerably fewer people, selected for research purposes from a larger population. The sampling technique used in this research study is the non-probability sampling technique because it was impossible to interview all former mineworkers. According to Marlow (2011), the non-probability technique entails selecting the participants that could meet the required and relevant criterion to a research question. The purposive sampling helped to select prospective participants for this study. According to Bryman (2016), purposive sampling exonerates the researcher from seeking a random sample of participants. For this study, of the population of all retrenched mining employees in the Goldfields area, the researcher interviewed 15 individuals.

The population included for an interview in this study was selected because they have the characteristics that match the study topic and its objectives. Therefore, the study population consists of all former Free State Goldfield mine workers who were retrenched from work due to any reason. The interviewees further include men and women who are young or old and had been retrenched for a period of more than 12 months. Therefore, the study excluded all retrenched mineworkers who never worked in the Free State Goldfield area, including those who volunteered to take a severance package from the mines. The study further excluded the temporary former mineworkers and those who worked for the contractors in the mines.

## 1.6 DATA ANALYSIS

Bryman (2016) described data analysis as the stage that incorporates several elements, including the application of the statistical techniques to data collected. Mouton (2016:108) says that "Data analysis purposes are to understand the constitutive fundamentals of data through assessment of the relationship between the perceptions, concepts or variables and further to determine if any pattern that can be identified or be isolated or to create themes in the data." Data analysis is a method of consistently arranging, transmitting, ordering and interpreting data.

The analytical data strategy that was employed, is thematic analysis. The activity of analysing data began immediately after the interview had been completed. The researcher used thematic analysis to evaluate the data. Oplatka (2001) describes coding (thematic analysis) as a process which involves the sorting of information by themes and phrases repeatedly by the respondents.

On completion of the interviews, the researcher commenced transcribing the data from the audio recorder. After the transcription of the audio recordings, all material was labelled by number, including the interviewee's location, duration of the interview, and data collection date.

After the research's data analysis phase and data collection, transcripts were colour-coded to the most prevalent themes throughout the interview series. During analysis the researcher managed to ensure that all data are compatible with the themes (or codes) when they arise and included the cross-checking and remembering whatever the template meanings are.

## 1.7 ETHICS

According to Bryman (2016), most people regard the research that can be harmful to the participants as unacceptable. According to Mouton (2016), organised research is a practice of human conduct, so such practice must conform to the established values and norms. Therefore, the researcher received approval from the University of Free State's research ethics committee. The ethical committee and the ethical guidelines serve to protect the research participants and further are there to protect the institution from unacceptable behaviour. "The ethics committee also serves to protect the researcher from conducting research that might damage their reputation" (Bryman, 2016:525). The interview was done in Sotho and all participants understood the language.

### 1.7.1 Harm

The only harm that occurred was the loss of time of the interviewee. This harm is very light and was justified by explaining to the interviewee how these results might assist in proper planning regarding the future retrenchment in the mines provided the mines consider the study results.

### 1.7.2 Informed Consent/Assent

Informed consent is a system to ensure that people know what engaging in a research study entails so that they can consciously and deliberately determine whether to participate or not. One of the concerns encountered during the interview was the unwillingness of some purposively selected interviewees to participate in this data collection process. Therefore, during these instances, the researcher selected the other respondents from the same categories of samples.

According to Bryman (2016) the principle behind consent is to give the prospective participant enough information concerning the research so that she/he can make an informed decision whether to take part in the research questions or not. The consent form was created containing information about the research to be conducted, the nature and purpose of the study, the researcher's information, and the procedure to be followed during an interview session.

Prospective participants were informed that to protect their privacy and identity, all information collected from them will remain anonymous and be informed about potential harm or threats. It was initially planned as a prerequisite for the prospective participants to voluntarily sign a consent form so that each signed form gets attached as an annexure in this study. Unfortunately, that could happen

because all interviews were carried out by telephone, which was prompted by the Covid-19 pandemic and to reduce the social contacts and spreading of the disease. In any case, the consent was provided verbally through the telephone conversation.

Informed consent and communication with the interviewee consisted of the following essential items: -

• What is the research objective
• what is required of the participant in the study, such as the period likely to be needed for participation
• Possible risks and disadvantages even benefits to society.
• The acknowledgment that participation is voluntary and that there are no unintended repercussions at any time
• How and when to protect privacy
• researcher's names and contact details to always be consulted for study-related questions or concerns
• the names and contact information of the relevant person to approach about participant's rights queries (the supervisor)

### 1.7.3 Confidentiality & Anonymity

The respondents were notified before the interview that all personally identifiable information would be rendered anonymous. The researcher explained that he would use the appropriate reference number for each respondent and how confidential information will be safely kept. The researcher explains the research study's aim to respondents in a broader context. The researcher did not, in any circumstance, create false expectations to lure the cooperation of the participant.

Interviewees provided verbal consent. According to Bryman (2016), the principle behind consent is to give the research participant enough information concerning the research so that she/he can make an informed decision on whether to take part in the research questions.

## 1.8 LIMITATION

Coronavirus disease 2019 (COVID-19) has provided a tough situation for face-to-face research to be performed and research methods thoroughly be evaluated. For disadvantaged populations, the face-to-face traditional interview study approaches are limited and challenging. The main limitation experienced during the process of this research was the COVID-19 pandemic. The COVID-19 pandemic restricted the researcher to conduct face-to-face interviews with the respondents and the researcher had to conduct telephonic interviews. The decision to conduct the interview telephonically was taken later and as advised by the ethnic committee to reduce the risk of COVID-19.

Cooper and Emory (1995) describe a population as the entire gathering of units of elements about which one desires to make the inferences, while a component is an individual of whom the measurement is being taken and regarded as the unit of study. For this study, the population is defined as the retrenched mining employees in the Free State Goldfield region. A sample is a smaller group of the studied population. As such a sample of fifteen (15) participants is derived from the entire population. The fifteen (15) respondents were deemed suitable since it reduces the population for the research to a manageable size. A suitable sample size makes the analysis quite useful. As mentioned in the above paragraph of dealing with sampling technique that the study employed a purposeful sample method. Thus, Patton (2002) elaborates that the purposeful sample technique is used to select and identify valuable information, which will be more effective and efficient by using limited resources. Out of a vast data of the retrenched individuals from the mines provided by the respective mining houses, labour unions and the local unemployment forum. It was challenging to get many prospective respondents, such as from neighboring countries, because their contact details have changed. Even the local participants, the phone numbers provided were not working, or the numbers were used by other owners. Some participants decided to block the researcher's number even after initially agreed to take part in the interview. Some indicated that they are not interested in the research.

## 1.9 OUTLINE OF THE STUDY

This study has five chapters and follows the following pattern.

**CHAPTER 1: Setting the scene.** Chapter one has dealt with the study's introduction and background. It reflected on the problem statement and identified the methodology, which briefly outlined how the researcher carried out the study.

**CHAPTER 2: Mining and development.** The socio-economic issues of mine downscaling and closure will discuss mining's socio-economic aspects. It will analyse the economic contribution of a mine from a global perspective and provide more literature on socio-economic consequences that arise due to closure. This chapter will deliberate more on the socio-economic impacts of mine closure.

**CHAPTER 3: Mine policy in SA: perspectives on closure.** This chapter will confine itself to the mine closure legislation requirements in South Africa. This chapter assesses the Republic of South Africa's legislation on mine closure, where the focus is mainly on the socio-economic aspects of closure. Still, this depends on some of the environmental regulations. The chapter discusses national legislation and other subordinate legislation that regulates mining closure on socio-economic and environmental sustainability.

**CHAPTER 4: Research findings and analysis.** The research finding and analysis chapter provides an analysis of the research findings, following an extensive data analysis.

**CHAPTER 5: Conclusion and recommendations.** In the final chapter, the researcher summarises the research and identify the main findings from the research. Also, the chapter makes some recommendations and identifies future research topics.

# CHAPTER 2 :
# MINING AND DEVELOPMENT: THE SOCIO-ECONOMIC ISSUES OF MINE DOWNSCALING AND CLOSURE

## 2.1 INTRODUCTION

The mining industry plays a significant part in the economy of many countries. Mining contributes positively towards industrialisation, employment opportunities, urbanisation, wealth and economic development. However, the mining industry has also contributed negatively toward the environmental destruction, social ills, unsustainable development, and adverse health effects. Amirshenava and Osanloo (2018) state that a mine's lifespan is finite and unpredictable. Laurence (2006) argues that the mines close because of various issues like economic transitions, the geological nature of minerals, the occurrence of technicalities because of hostile geotechnical circumstances, an inability to comply with the set regulatory requirements, the finite nature of the mining industry and social opposition from communities. However, the social consequences of mine closure can be a long-lasting and devastating issue to the mine-hosting communities, its surrounding areas, local business and other stakeholders. Bainton and Holcombe (2018) argue that even though the production phase in mining operations is usually significant in the life of a project, mine closures cover more than the decommissioning of the processing plant or the physical rehabilitation of the mine site. At the same time, local leadership should also develop proactive strategies for mine closure (Nel, Hill, Aitchison & Buthelezi, 2003). It is therefore vital to understand the notion of mining and mine closure at the community level. This chapter has two main sections. First, the chapter investigates the positive role of mining to society and communities. Secondly, the chapter discusses the socio-economic implications of mine closure.

## 2.2 THE ROLE OF MINING IN THE GLOBAL ECONOMY

Mining is a cornerstone of human civilisation and the second oldest economic activity in the world (after agriculture). Mining has played a significant role in economic development. Many countries regard their mineral resources as an opportunity to ensure economic growth. The World Bank (2002) notes that the economic development and growth of many countries globally depends on the vibrant mining sector.

The mining sector also supports social development by providing raw materials for infrastructural development and technology advancement. In this regard, Carvalho (2017) states that there was a progressive increase of metal mineral ore extraction over the years with periodic rushes for some mineral deposits like radium, gold and silver, which were in high demand globally. The manufacturing industry uses a wide range of minerals for technological equipment, like computers and electronic chips (Carvalho, 2017). Farahani and Bayazidi (2018) emphasise that mining plays a significant part in the creation and production of capital, employment opportunities and technology, the supply of essential resources, the growth of local businesses and social infrastructure, and the country's economic development through tax and revenue recovery. In this respect, the International Council on Mining and Metals (ICMM) (2014) notes that mining contributes in several different ways to economic prosperity in many countries. This section highlights five contributions of mining to the global economy.

### 2.2.1 Mineral raw material and as a natural resource economy

The world has over 6 000 registered mining companies, and some 20 million small and artisan mining companies operate in 30 nations (Que, Wang, Awuah-Offei, Yang & Hui Jiang, 2019). In the United States only, there was approximately 14 000 mines providing metal and non-metallic mineral goods and many governments view mining different from other industries (World Bank, 2002). For example, many governments and people view natural resources as 'public' assets. Consequently, mines contribute extensively to the development of many towns or cities. Besides, many states have historically been dependent or are currently reliant on mining.

### 2.2.2 The introduction of technology through mining activity

There is a significant link between mining and technology. The raw material derived from mining activity contributes to technology and innovation. Innovation and technology are critical components

of the operational efficiency of many businesses worldwide. The mining industry is not an exception. Over the last few decades, mining companies have made significant improvements in safety and operational efficiencies (Ghose, 2009; Macfarlane, 2001). For both surface and underground mines, the general technical pattern has been to expand the scale of projects, and to embrace modern mining technologies. According to Macfarlane (2001) technology is a vital part of developing and applying new mining inventions to increase overall safety, health and operating performance in the mines.

The innovation in the introduction of electric cars had been a focal point for the last few years, however, the major obstacles has been the energy storage capacity which resulted in the use of lithium-ion batteries (LIB) (Coffin & Horowitz, 2018; Mo & Jeon, 2018, Sapru, 2014;). Therefore, the transition for achieving a low carbon society requires the mining of lithium for motor vehicle batteries.

Advanced technologies depend on minerals. The circuits of many electronic appliances like global positioning systems (GPS), computers, televisions, mobile phones and many other electronic devices require tiny quantities of gold. The primary purpose for using small amounts of gold in many electronic devices is its softness, resistance to corrosion and its heat conductivity. Technologies closely associated with mining, play an essential part in the recent technology and innovation space.

### 2.2.3 Mining as a public source of revenue

The mining industry contributes towards government revenue in the form of company tax, royalties, personal income tax from employees, Value-Added Tax (VAT) and other fees. Many governments support the mining industry, because of the flow of fiscal revenues that they derive from this sector (ICMM, 2014; Sánchez, Silva-Sánchez & Neri, 2014). The UNDP - United Nations Development Programme and UNEP-United Nation Environment Programme (2018) claim that the mining industry is one of the largest sources of fiscal revenues in most countries. The mineral taxes in many low-income countries, with limited capabilities to collect the taxes from their local communities and other small business, rely on mining companies for their substantial source of overall income (ICMM, 2014; Neil, Tykkyläinen & Bradbury, 1996).

In many countries, mining produces between 25% to 30% of tax revenues (World Bank, 2002). For example, mining contributes 34% of state revenues in Botswana, 25% in Guinea, 25% in Zambia, 24% in Mongolia and 17% in Chile (Sánchez *et al.*, 2014). Neil *et al.* (1996) suggest that many cities in developing countries derive more tax revenue from the mining industry than from their national

governments. There is a need for community education on mine taxes, because “such contributions are part of government budget infrastructure and community development in countries like South Africa" (Muswaka, 2017:1). The collected taxes from the mines should contribute to the public needs over time and in a sustainable manner, as most developing countries’ mine towns are too dependent on these funds.

In Great Slave Lake South Bank in Canada's Northwest Territory, known as Pine Point, the Pine Point Mine Limited contributed almost 70% of the municipal tax base, as the company owned 80% housing in town (Kendall, 1992). The revenue is for development projects and programs in other areas of the economy, like infrastructure projects, which will create more job opportunities and provides public services.

### 2.2.4 Contribution to employment

In addition to fiscal revenues contribution by the mining industry, mining creates employment. The construction and commissioning of a mining operation require the economic activity of local people, companies and government entities in which local people rely on mining for work (Owen & Kemp, 2018). Mining is a vital employment sector in many countries around the world.

Mining employees are usually well-remunerated by large mining firms in comparison to wages in other economic industries (ICMM, 2014). These above-average wages go together with housing benefits for staff and service employees, like accommodation and other facilities (Wolfe, 1992). These higher employment rates and remuneration packages enhance the economic growth of any country, region, city or town. For example, the mining sector in South Africa employs about half a million people (Leew & Mtegha, 2018), and this has contributed to place-specific economic development. According to Kendall (1992), Pine Point Mine Limited employed about 66% of the labour force from Pine Point Town, Canada. Mining is also a significant employer in the United States of America. The US mines provided direct employment to 634,000 workers and around 1,27 million indirect employment opportunities in 2012 (Que *et al.,* 2019). Subsequently, US mining has generated approximately 1.9 million full and part-time workers.

### 2.2.5 Role of mining to the gross domestic product (GDP) and exports capability

The mining industry has contributed significantly to many nation's economic development and growth. Generally, the direct contribution of mining to GDP is significant, while the indirect contribution further supports the mining industry's importance. The ICMM (2018) claims that mining typically contributes between 3% to 10% of national GDP figures in the case studies for which they have data. In South Africa, the mining share of GDP has steadily dropped from 15% in 1993 to 8% in 2015 (Leew & Mtegha, 2018) and 6.8% in 2018 (Minerals Council of South Africa, 2018). Service sectors like finance, wholesale, transport, and even personal service have slowly replaced the importance of mining.

Mineral exports in many countries account for a significant share. The mining industry is mainly export-oriented in developing countries due to the small domestic market. In 2012, more than 25% of the mineral exports originated from 38 countries (ICMM, 2014). About three-quarters of these countries are low-income or middle-income countries. According to ICMM (2018), many mine-reliant countries continue to depend on mineral resources as the primary driver of their economies, as confirmed by the 2018 Mining Contribution Index (MCI). The export market also increases the exchange rate of many developing countries with weaker currencies. The downside is that when countries export most of their mineral resource, local capacities for beneficiation and final product processing do not develop.

Mining operations and their associated mineral resources are very diverse in bringing positive change to the host mining nation's economy when exported to other countries. On the other hand, the mine closure may lead to numerous social, economic, and environmental footprints. Past mining operations have left such environmental imprints, but two problems are significant and global significance.

## 2.3 SOCIO-ECONOMIC ISSUES OF MINE DOWNSCALING AND CLOSURE

The preceding section discussed the economic value of the mining sector. Mine closure brings its own set of problems. Laurence (2006:285) noted that, “The enthusiasm and fanfare that usually happen surrounding the development of a new mining venture does not occur during the final stage of mine closure." Mine closure is an international phenomenon and mining operations are finite and

not meant to last forever. Carvalho (2017) states that mining has enormous environmental and social impacts during operations and that closure further intensifies these impacts. The social impacts on mining communities are inevitable, because mine closure will result in negative impacts on basic income and livelihood. This section analyses the socio-economic effects of mine closure.

### 2.3.1 The notion of social mine closure

To understand the events surrounding the social impact on communities due to mine closure, it is necessary also to understand the terms “mine closure” and “social mine closure”. The term “social mine closure” has become a guide to understanding the social characteristics endured, due to the end of mining operations (Bainton & Holcombe, 2018). Nehring and Cheng (2016) argue that the term “mine closure” often relates to the environmental treatment of the degraded mining area with the decommissioning of the related operation and other facilities.

The ICMM (2008) outlines mine closure as a development that encompasses the life cycle of the mine. This definition often means that the mining company hands the mine site back to the relevant authorities (government) at the end of operations and the subsequent removal of infrastructure and lastly availing the site for monitoring. UNDP and UN Environment (2018) state that closure involves the termination of activities, reconstruction and refurbishment of mine sites and the transition of the mine property to a responsible government. Therefore, meaning that formal closure involves the regulatory authority to provide a closure certificate (Stacey *et al.,* 2010). Several unforeseen circumstances also play a role in mine closure. These circumstances include the relinquishing of the mining licenses, rehabilitation, social closure and decomposition in which all these mentioned issues form part of the mine lifecycle (Stacey *et al*., 2010).

Vivoda, Kemp and Owen (2019) state that the government view a mine closed, only when there is no more mineral extraction, including the decommissioning and the removal of all infrastructure. Activities that will follow will be the rehabilitation which includes the surface soil levelling, which serves to prepare the land for another economic and social usage. However, very few mines go through the closure process. Globally, mining companies are more likely to either sell their mines to smaller companies that do not have the capacity close these mines. Alternatively, the companies will place the mines in indefinite care and maintenance because the cost of total closure is just too high.

### 2.3.2 The social dimension of mine closure

The economic development associated with mining, stimulate economic growth and many local stakeholders and local communities embrace crush activities over time. Usually, there is an expectation for a significant role of mining in social and economic development. Therefore, it is imperative to address the social aspects of mine closure and incorporate them in the mine's lifecycle. There exist relatively few publications that address the social aspects of mine closure and associated planning and management by the end of the project lifecycle, as compared to the significant literature detailing with environmental, economic, cultural and political impacts of the mining industry (Bainton & Holcombe, 2018). Therefore, in defining the social aspects of mine closure, concepts become vital because it carries many different connotations for many development practitioners and academics.

Bainton and Holcombe (2018) define the social aspects of mine closure as the socio-economic, political, cultural and institutional impacts that arise at the end of the project lifecycle; the planning and management processes that are required to mitigate these impacts; and the post-mining future. More often these impacts rise at the end of the project lifecycle, which according to the ICMM (2018), consists of eight phases, namely exploration, pre-feasibility, feasibility, construction, operation, decommissioning, closure and post-closure (ICMM, 2008). Owen and Kemp (2018) suggest that sustainable investment in social management capabilities should be promoted and should serve as an anchor in mine lifecycle planning. Vivoda *et al.* (2019) argue that *"*social" often refers to having consequences for local communities only. However, the social aspects have ramifications for land-use policies, how mines engage with communities and how residents interact, work, communicate, relate and unite to address their desires.

The social closure principles from international best practice perspectives*"*should be built in the social closure planning of the project lifecycle and be incorporated in the pre-feasibility and feasibility phases of project development" (ICMM, 2008; CSMI, 2010:9). Owen and Kemp (2018) argue that effective and efficient closure is only possible when there is comprehensive information of effects and how mine closure will affect social, economic and environmental systems. Mine companies should anticipate social consequences and develop mitigation plans. Owen and Kemp (2018) argue that it is the responsibility of mining companies, government, states and community stakeholders to review the budgeting and resources related to the social impact anticipated, due to mine closure. It is essential to mitigate and plan for programs at the closure stage.

Mine closure requires additional aspects than merely the withdrawing from the mineral processing plant or the physical restoration of the mine site (Bainton & Holcombe, 2018). The social effects of mine closure are mostly adverse towards the local communities, including the employees and their families. The closure usually disrupts the special connection between the mining company and the mining communities. This disruption of social reliance by communities in mining is because of the dependency created by the mining. The closure results in a negative socio-economic development base, which includes livelihoods interruption, demographic changes, environment and health issues and increases the unemployment rate.

#### *2.3.2.1 The disruption of livelihoods and increased poverty*

In many developing countries, many communities rely on the natural resource as their source of livelihood. Nel *et al.* (2003) found out that the mining activity may occupy land which had always been used by the local community to derive their livelihood and source of food security. Ackerman, Van der Waldt and Botha, (2018) argue that mining and potential mine closure affect the livelihoods of community members. The environmental injustice more often happens when the vulnerable rural indigenous communities become the victims of mining through relocation, taking away their land and livelihood, destruction, political conflict, and pollution of the local natural resource (Ackerman *et al.,* 2018).

The responsible mine rehabilitation process is not only about the production stoppage, decommissioning and environmental management. However, it also calls for land restoration to be preserved for former mine employees, family members and broader communities to have secure livelihoods. The rehabilitation process should include a comprehensive plan for land-use after mining closure that will benefit the community post-mining activities. Land-use changing from agricultural activity to mining might degrade the natural resource base like water, land and biological diversity which at the end threatens the livelihood in which communities had relied on particularly in rural areas (Nel *et al.,* 2003). Having post-mining lands transferred into agricultural cultivation may contribute to the recovery of both economic, social and environmental land-use functions.

Post-mine closure measures should include a holistic program to provide land for both rural and urban cultivation. All the designed programs should benefit local people, because farming is the leading rural subsistence operation for household income safety and food production throughout most rural households. However, the use of reclaimed lands raised numerous difficulties in central Queensland

(Australia). Everingham, Rolfe, Lechner, Kinnear and Akbar (2018), note that clear guidelines were absent. However, Bainton and Holcombe (2018) list the following crucial social aspects of mine closure: the mine footprints, the degree of remediation required to ensure non-contamination and the types of current livelihoods and the nature of the food production criteria, in the assessment of the feasibility of agricultural as post-mining land-use and economic development.

Often the emphasis is on the value that mining brings to communities. For example, mines often compensate indigenous communities for their loss of natural resources by providing employment. Mbilima (2019) noted that local people are searching for broad socio-economic services to promote healthy livelihoods, secure jobs and mining business opportunities. However, Stacey *et al.* (2010) argue that the mining communities that depend solely on the mine for their livelihoods are socio-economically vulnerable, that mine closure affects the social investment ventures and employee well-being of host communities. Mine closure leads to job loss, usually that of men and household breadwinners. According to Rixen and Blangy (2015), job loss due to the closing of a mine exacerbates the social problems. Individuals experience low self-esteem, get involved in alcohol abuse, while family tensions and domestic violence are common. Strambo, Aung and Atteridge (2019) argue that closure of a mine will always have an immediate and significant adverse economic impact on the local community. Proper and well-planned consultation with local communities affected by social mine closure, is critical as this closure occurrence affects their sustainable livelihood.

#### *2.3.2.2 Demographic changes due to mine closure*

The opening of a new mine venture creates in-migration. Consequently, the opening of new mining changes the demographics of the mining region. Outmigration, due to the mine closure is bound to happen, because the mine closure has a severe local implication (Mancini & Sala, 2018; Marais & Cloete, 2013; Owen & Kemp, 2018). Eikeland (1992) states that the issue of population decline is inevitable when a mine closes. However, the level of people leaving the mining area depends on the employee's age, their education qualification and policies used by the mines to lay off the employees. Bainton and Holcombe (2018) argue that it is difficult to manage the demographic change, because these demographic changes are complicated by economic over-dependence during the mining phase. Usually, the mine workers that are less skilled or older stay behind while the employable move away to better job opportunities

#### *2.3.2.3 Environmental impacts*

Mining operations have extensive environmental consequences. Research points to many environmental problems, like groundwater contamination, rivers, wetlands, land degradation, air pollution, deforestation, biodiversity loss and natural drainage that can be contaminated and or be destroyed by mining activities (Jhariya, Khan & Thakur, 2016; Sánchez *et al.,* 2014; UNDP and UN Environment, 2018). Mining companies receive blame for not considering necessary precautionary measures when dumping waste, which results in significant air, surface and water pollution.

Carneiro and Fourie (2019) state that the pollution are the main visible symbols of environmental liability, associated with mining. Some people live at the foot of a mine dump. Nkosi (2018) found that living near mine dumps increase rates of asthma, pneumonia, emphysema, chronic bronchitis, wheezes and persistent cough. These areas experience heavy dust falls in the windy, dry months of the year. Other risks include the stability of the dam, dam failure, interference with groundwater, restrictions on future use and fault in the coverage and drainage system (Sánchez *et al.,* 2014). One such an example was the burst of one of the slime dams near Virginia (in the Free State Goldfields) in February 1994 in which the mud and water killed 17 people and destroyed 80 house (Van Niekerk & Viljoen, 2005).

The mines may leave behind the contaminated water resource that can be a health hazard to the local communities. Mine acid drainage threatens the water resource and has a devastating long-term impact in most aquatic life, including the rivers (Jhariya, Khan & Thakur, 2016; Sánchez *et al.,* 2014; UNDP & UN Environment, 2018). The mining company should try to sustain this critical water resource from any form of pollution. Owen and Kemp (2018) argue that the mines should anticipate and prevent water contaminations and declare this activity as one of the critical ones to be carried out meticulously. Mining activities and their consequences can result in an enormous risk to the groundwater and vegetation. Rixen and Blangy (2016) note that the mining actions' residuals had contaminated some of the freshwater sources, resulting in unsafe food security programs.

#### *2.3.2.4 Human health and wellbeing*

Mining operations may bring opportunities, as they generate employment, resources, revenues and livelihoods for employees, communities and the broader economy. However, they often present a health threat for employees and environments, surrounding them from accident and illness. The

human health is equally affected by this chemical residue leakages and their impact may appear after an extended closure of the mine.

The asbestos-related diseases may also occur as a bacterial infection in individuals involved in jobs with high asbestos dust exposures. Many years ago, a large asbestos mining sector grew in South Africa: asbestos, which presents a major danger to the safety and wellbeing of populations, is one of the main problems in South Africa (Cornelissen, Watson, Adam & Malefetse, 2019). According to Cornelissen *et al.* (2019), asbestos poses a major danger to environmental safety and well-being. The effects of many asbestos-related diseases can last for a very long time, even after mining activities. Some of the worst practices that include disposal of mining waste, directly or indirectly affect the community's well-being. It is a prerequisite for mine operators to carry out their mining activities in a well-managed environmental and health conscious manner.

#### *2.3.2.5 Increased unemployment due to mine closure*

Mine closure affects the broader community, but the most significant burden of mine downscaling and closure falls on those losing their jobs (Amirshenava & Osanloo, 2018). Neil *et al.* (1996) emphasise that mine closure renders people unemployed, but these mineworkers are not able to find an alternative job, because their skills are mining-specific. Unemployment creates societal and family instabilities. Mine closure results in employees losing benefits like medical assistance, unemployment insurance and pension benefits. More often the mines do not prepare mine employees to be able to be absorbed by other sectors after the mine closure. Consequently, mineworkers become unemployed.

The social dimension of mine closure during and after the mining operations is contentious and dynamic. Mineral production can generate prosperity, but it can also cause significant damage to social life. The displacement of established populations is a major cause of discontent and dispute, associated with large-scale mineral production. Entire families may be uprooted and compelled to relocate.

### 2.3.3 Mine skilling and reskilling

Mineworkers have encountered various changes in their working environment. These changes need a new approach for the mining workforce skills development, rather than adopting the traditional pattern. Skills development for mine employees and communities play an essential part in local economic development. Stacey *et al.* (2010) note that one of the closure risks include insufficient levels of skills development for employees to find or create alternative employment after closure. Bainton and Holcombe (2018) suggest reskilling as a legacy issue, among others like infrastructure development, labour redeployment, improving local livelihoods and food protection landscapes that may have emerged during the mine closure process. The various alternatives throughout the mine closure cycle, involve the reorientation of facilities and mining property, redeployment of jobs, the development of new employment prospects, skills development and reskilling.

Scoble and Laurence (2008) state that significant innovations and technology development originate from mining operations. These innovations include infrastructure and best practices, guided by human resource capital. The skills deficit increases as mining gets more digital and more reliant on technology. Mining Technology (2018) states that in a 200 year period of the mining sector in Australia, the latest training module prepared for employees, embraces key fields, like automation, robotics and information technology.

According to Mining Technology (2018), the Australian mining sector has now moved from about 75% traditional mining operations in the *open-pit mining* to just 56% by introduction of a plan that aimed at the withdrawal of diesel trucks from the field and switching to electric cars. The migration from diesel equipment to electric is cheaper and it is also reducing the environmental pollution. Therefore, the introduction of these innovations and technology requires new skills for the operation of these electric vehicles. The high-tech equipment and advanced systems, like those found on most mining operations, require a highly specialised workforce and no longer the traditional miner.

The mining associations, chambers and other role-players should also play a role by addressing this challenge with training institutes that have a significant impact on reducing the shortage in their workforces. The need for mechanics, machine operators and electricians is increasing, as well as other artisans, due to new technology introduction. There is also a growing need for project management and technological competence in such operations. It is thus incumbent to train people in digital and technology skills that will match the newly introduced equipment in the mining operations.

## 2.4 CONCLUSION

This chapter analysed the global economic contribution and the literature on socio-economic consequences of mine closure. Mineral production can generate prosperity, but it can also cause significant damage.

The first section of the chapter discussed the contribution of mineral raw material to the economy, the introduction of new technology, the contribution of mining to countries' revenues, contribution to employment opportunities, mining industry exports' ability and contribution of mining to the Gross Domestic Product (GDP). At the same time, the focus of this chapter in the second section dealt with the socio-economic consequences.

The social aspects, which are associated with mine closure that constitute the socio-economic, political, cultural and institutional, more often occur at the end of the mine project cycle. The planning and management processes that are required to mitigate these impacts post-mining, rise at the end of the project lifecycle. The consequences of mine closure in any area of the world are undoubtingly terrifying. It is of course incumbent that the local leaders develop the proactive strategies that will diversify the economy from the mining sector to other economic sectors for the area where mining is starting to show some signs of decline. In the next chapter the focus shifts to a South African perspective.

# CHAPTER 3 :
# PERSPECTIVES ON CLOSURE: MINE POLICY IN SOUTH AFRICA

## 3.1 INTRODUCTION

Following from the socio-economic aspects as discussed in Chapter 2, the mining sector is under growing strain to close mines in sustainable ways. Mining can create employment and much-needed household income; it can encourage a more educated labour force, contribute to human capital accumulation, housing, and education. In the absence of a comprehensive legislative and regulatory structure, these beneficial advantages are difficult to accomplish (Linde, Matti and Jagers, 2012, Crawford, 2015, UNDP & UN Environment, 2018). It is noted by McNamara (2009) that the mining industry's leading countries began to initiate the International Mining Program over the past fifteen (15) years by introducing a comprehensive approach, called the Mining, Minerals and Sustainable Development Programme. This self-regulatory framework, known as Mining, Minerals and Sustainable Development Programme, includes environmental practices over all other enforcement practices, either the mining business in developed as developing countries (McNamara, 2009). The international legal approach and requirements encapsulated the domestic legal framework. Therefore, the mining host countries' legal frameworks, such as the constitutions and other related regulations, policies, and laws, should be coherent with international laws and norms (UNDP & UN Environment, 2018).

Marais and Nel (2016) say that the long-term consequences of mining activities, its downscaling and closure are unavoidable. Chapter 2 has pointed to the inclusion of mine closure aspects during the mine lifecycle. Admittedly, regulators have started to pay more consideration to the closure and rehabilitation of mines (Oliveira, 2016). The word “mine closure” is most often used to rehabilitate a degraded mine site and the related method demolition and other facilities (Nehring & Cheng, 2016). As the researcher has indicated in Chapter 2, it does not automatically include social considerations. Bainton and Holcombe (2018) call for a responsible approach when dealing with the social aspects of mine closure, as the emphasis is often on the environmental aspects. Mine closure legislation

requirements vary between jurisdictions and the financial insurance obligations regarding the closure costs (Vivoda *et al.,* 2019).

The Mining, Minerals and Sustainable Development (MMSD) (2002) suggests that the mine closure practices and policies regarding the regulatory requirements need strengthening. Few countries have committed to implement mine closure regulations and laws, despite extensive regulations in this respect (Clark, Clark & Naito, 1998). The legislative requirements and financial guarantees regarding mine closure, vary from country to country (Vivoda *et al.,* 2019). Clark *et al.* (1998) found out that, in most cases, the criteria for mine closure are either prescribed in mining regulations or related laws and regulations or environment-specific legislation for the mining sector and not in independent mining laws.

This chapter assesses the Republic of South Africa's legislation on mine closure. The researcher's focus is mainly on the socio-economic aspects of closure, but often this depends on the environmental regulations. The chapter discusses the set of national legislation and other subordinate legislation that regulates mining closure on socio-economic and environmental sustainability. The specific pieces of legislation and policy guidelines are:

- The White Paper, A Minerals and Mining Policy for South Africa, of 1998;
- The Mineral and Petroleum Resources Development Act No. 28 of 2002 ("MPRDA"), as amended Act No. 49 of 2008;
- The B-BBEE Mining Charter, 2018, that will include the Social and Labour Plans ("SLP");
- The National Environmental Management Act No. 107 of 1998 ("NEMA"), as amended;
- The Labour Relations Act, 1995 ("LRA");
- The Basic Conditions of Employment Act ("BCEA");
- Mine Health and Safety Act of 1996 ("MHSA"); and
- The Skills Development Act No. 97 of 1998.

The Constitution of the Republic of South Africa (Act 108 of 1996) ("Constitution") is the supreme law of the country and establishes, protects, and promotes equal constitutional rights for both natural and juristic persons within the borders of the Republic of South Africa. The mining companies must

adhere to the South African Constitution and the common law during operations, and closure, by considering the people's rights (Swart, 2003).

Section 24 of the Constitution is arguably the cornerstone for sustainable mining. It proclaims the right of everyone:
(a) to an environment that is not harmful to their health or wellbeing; and
(b) to have the environment protected, for the benefit of present and future generations, through legislative and other measures that – (i) prevent pollution and ecological degradation.
(ii) promote conservation; and
(iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

## 3.2 THE WHITE PAPER: A MINERALS AND MINING POLICY FOR SOUTH AFRICA (1998)

The South African formal mining sector is more than one century old. For long, profits were the main driving forces and limited guidelines existed about mine closure. South Africa's mining regulations only started to include sustainable development notions by the early 1990s (Ferraz, 2016). The democratic dispensation thoroughly reviewed all mining policies and developed the White Paper on Minerals and Mining (1998). The White Paper has six main themes, namely:

- Business Climate and Mineral Development, which looks at the continuation of policy, conducive to investment and includes a section on Mineral Rights and Prospecting Information, which presents changes to the system of access to, and mobility of, mineral rights;
- Participation in Ownership and Management, which examines racial and other imbalances in the industry;
- People Issues, which looks at health and safety, housing needs, migrant labour, industrial relations and downscaling;
- Environmental Management;
- Regional co-operation; and
- Governance.

For this section's interest, only two will be discussed, which are People Issues and Environmental Management. The People Issues theme discussed health and safety issues, housing needs, migrant labour, industrial relations, and downscaling. The White Paper indicates that job opportunities have declined in mining and mining-related industries. The government has a responsibility to support businesses, staff, business vendors and mining-related populations to predict and mitigate the effects of large-scale employment reductions. Regarding the issue relating to Industrial Relations and Employment Conditions, the employers must notify workers of possible employment insecurity and prepare, in conjunction with government and labour, as well as provisions to safeguard employment or mitigate retrenchment impacts. Labour needs effective government intervention to extend mines' existence and to protect the welfare of workers and residents impacted by influences that contribute significantly to the downscaling of mines. The government will seek to improve the social consequences of significant downscaling and closure of mines. White Paper on Minerals and Mining (1998) calls for the South African National Government to note the pace, context, and impacts of mines' downscaling. Preserving mining employment, the government will scrutinise whether government aid should be accessible to mines and regions facing downscaling and, where fitting, develop guidelines for such aid. White Paper on Minerals and Mining (1998) openly emphasises for considerable consultation with the labour force in cases where mine closure looms. It further calls for the establishment of the Social Plan Fund, which will assist during the interventions and initiatives agreed between employers and employees experiencing systemic losses in jobs when mines close.

Regarding environmental management, the White Paper identified three primary policy and regulatory areas: the environmental impact of the exploration, effects on the operation and the closing of the mine and sustaining recovery programs where mining operations have ceased. The White Paper emphasises that government shall promote comprehensive and systemic environmental protection across South Africa. Therefore, the state aims to introduce a single national environmental policy that will adhere to a common national strategy on the environment and sustainable development within cooperative governance.

## 3.3 THE BROAD-BASED BLACK SOCIO-ECONOMIC EMPOWERMENT CHARTER FOR THE SOUTH AFRICAN MINING AND MINERALS INDUSTRY, 2018 ("MINING CHARTER")

The Broad-Based Black Socio-Economic Empowerment Charter for the South African Mining and Minerals Industry is commonly referred to as the Mining Charter. The Mining Charter establishes a system for the mining and other mineral-related sectors to achieve a specified transformation target for a specific time. The mining charter's other purpose is to ensure meaningful economic participation of previously disadvantaged people in the South African mineral resources industry, and it requires existing and new owners of mining rights to meet specific standards (Marais *et al.*, 2017).

The mining charter is establishing two essential aspects that might be valuable for the employees of the mine post-closure, homeownership and skills development (Marais, 2018). The Mining Charter emphasises that the proper housing development strategy for mineworkers should entail that, post-mining closure, such an employee might not see himself or his family on the street. Unfortunately, most of the mine employees' lives depends on their employment contracts.

The mining charter further promotes employees' skills development where they can be employable by other mining industries, post-closure of the mine. Such can be beneficial to the employee post-mine closure if such an ex-employee would be provided with employment opportunities by another operating mine. In the absence of the employment opportunity, the skills might benefit the ex-employee less. In practice, only a small number of previous mineworkers became employed, because they did not have the necessary and relevant skills for employment in other sectors; therefore, this is placing an encumbrance on the Free State Provincial administration (Marais, 2016). Marais and Nel (2016) argue that mineworkers' inability to be employed by other sectors, is because of unrelated skills acquired during mining.

## 3.4 MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT NO 28 OF 2002 (MPRDA)

Before accepting the MPRDA in 2002, previously implemented and the enforcement of environmental protection was enforced through the Mineral Act of 1991 (Act No 50, 1991) to safeguard and mitigate ecological effects and rehabilitate the mining areas impacted. The objective and purpose of Mineral Petroleum Resource Development Act 28 of 2002 is to acknowledge the

State's internationally recognised right to exercise independence and be the custodian of all mineral and petroleum resources within the Republic; to facilitate equal opportunities to the country's national mineral and petroleum resources for all South Africans, especially historically disadvantaged people, such as women; and to protect the environment. The Act ensures that mining rights contribute to the social and economic wellbeing of the communities in which they work and that mining activities are not environmentally damaging (MPRDA, 2004).

Under the Minerals Act, the government must provide permission for prospecting and mining activities before submitting the Environmental Protection Program (EMP). In October 2002, the MPRDA was approved and enacted by the South African Legislature (RSA, 2004). Consequently, the mining sector's restructuring and transformation became a key provision of South Africa's Constitution and needed implementation through the MPRDA. Chapter 2 of the MPRDA provides the fundamental principle and objectives of the act in which section 2(f) pursues to the significantly and meaningful extension of possibilities of entry into the mineral and petroleum industry for traditionally marginalised persons, particularly women, to access the mineral and petroleum wealth of the country. The objectives of the MPRDA further seek to ensure environmentally sustainable production of minerals, petroleum and gas resources and to promote economic and social development in the aspirations of the present and future generations.

Section 38(1)(d) of the MPRDA states that the mining permit or mineral right holders will take liability for the mining area, which is impacted by their mining operations. The area must be restored and rehabilitated, mining permits or mineral right holders' companies should adhere as much as possible to the practice of sustainable development (Van Eeden, Liefferink & Durand, 2009). Section 38(1)(d), as mentioned above of MPRDA, emphasises that mining companies should always consider the systematic and reasonable land rehabilitation during and after mining activities. While acknowledging the provision of rehabilitation within the MPRDA, the main weakness encountered, is the lack of details and specifics of these requirements (Stacey *et al.*, 2010).

Section 42 provides essential information regarding the management of residue stockpiles and residue deposits. Both terms (stockpiles and residue) receive adequate attention. The stockpiles and residue deposits require proper management, as prescribed in the act to be dumped in a demarcated area for that purpose in the Environmental Management Plan. No temporary or permanent deposit may occur on any other site that is not part of the Environmental Management Plan.

Section 43 of the MPRDA deals with the issuing of a closure certificate. This section lays down the granting of a closure certificate by the Minister of Minerals and Energy, including the transfer of environmental obligations to a capable institution. Section 43 of the MPRDA requires any permit or mining right's holder granted the prospecting, mining and retention rights, to be liable and accountable for any environmental pollution or ecological degradation until the time when the closure is certificated. Section 43 of the MPRDA further requires the mine owners to apply for a closure certificate when the mining right lapses, when they want to abandon a specific portion of the granted property for mining purposes and other related activities, including a shutdown of activities. The application must be submitted within 180 days of the mining period's ending, abandoning, discontinuance, removal, termination or completion to the relevant Regional Manager. In Section 41(5), the MPRDA allows for retaining part of the financial obligation in consideration of persistent or residual environmental consequences, even after the granting of the closure certificate, if this involves a restoration of the closed mining activity.

Section 89 of the MPRDA gives effect to the provision of a financial guarantee by any mining company before mining operations commence. The purpose of this financial guarantee serves to ensure that there is money available in case the mining company fails to rehabilitate and remedy the environmental damage caused by their operations in the event of their closure. More often, it happens that years after the termination of mining operations and required closure processes were followed and adhered to, the environmental impacts start showing when not expected (Muswaka, 2017). Section 41(5), of the MPRDA allows for retaining part of the financial obligation in consideration of persistent or residual environmental consequences even after granting the closure certificate. Section 46 allows the Minister of the mineral resource to use the financial deposit guarantee for the rehabilitation of the environmental.

The above guidelines focus on the environmental side of mining. The MPRDA says very little about the social aspects of mine closure. It does make provision for the development of social and labour plans. It provides for continuing involvement in socio-economic development until the granting of a closure certificate which, when released, frees the holder of any additional liability under the MA.

The apartheid system excluded the majority of people in black communities from the mining sector. The MPRDA seeks to restore and enforce the participation of the historically disadvantaged majority communities in the mining industry. In brief, the MPRDA's section 100(2)(a) stipulates the establishment of the South African Mining and Mineral Industries broad-based Black Economic

Empowerment Charter ("Mining Charter"), as a mechanism for transforming with different objectives. Section 100 of the MPRDA gave birth to the Mining Charter.

## 3.5 SOCIAL AND LABOUR PLANS (SLP) GUIDELINES 2010

The primary objective of the MPRDA is, among others, to instill transformation in the mining and development industry. To ensure successful reform in this respect, the MPRDA introduces the Social and Labour Plan (SLP) submission as one of the requirements before issuing mining rights with the following objectives:

- The promotion of economic development, mineral and petroleum resources of South Africa (Section 2 (e) of the MPRDA);
- Promoting job opportunities and advancing the social and economic well-being of the Republic (Section 2(f) of the MPRDA;
- Ensuring that the holders of mining or production rights contribute to the socio-economic growth of the communities wherein they exist and in labour-sending areas (section 2 (i) of the MPRDA, and the Charter); and
- To leverage and develop the available skill base for the advancement of HDSA and to support the community.

The Social and Labour Plan is a concerted effort to address the promotion of economic growth and the development of minerals and petroleum, thereby enhancing the platform for the creation of jobs, which will result in strengthening the social and economic welfare of all South Africans (DMR, 2010).

Section 23 (f) of MPRDA states that the mining rights will only be granted by the Minister to the prospective mining company applicants, as contemplated in section 100 of the Mining Charter after adhering to the prescribed SLP guidelines. Over and above Section 25 (f) of the MPRDA, they provide directive to all mining right holders to submit the Social and Labour Plans (SLP) as a prerequisite for the granting of production rights by the Department of Mineral Resources. The SLP has a lifecycle of five years, and then a mining company must submit a new one after this period has lapsed.

The Mining Charter lays out the items and guidelines needed to be incorporated when mining companies develop their Social and Labor Plans' (SLPs) documents in South Africa. It further requires the mining houses to support the socio-economic development in which the mining is taking

place, including labour sending areas (DMR, 2010). The Department of Minieral Resources (DMR) has developed the guidelines for submission of a Social and Labour Plan, as required by regulation 46 of the Mineral and Petroleum Resource Development Act (Act 28 of 2002). The Social and Labour Plan requires all mining companies to develop the Human Resource Development Plan, a Mine Community Development Plan, Housing and Living Conditions Plan, Employment Equity Plan the implementation of processes to manage downscaling and retrenchments and financial provisions for the implementation of the social and labour plan (DMR, 2010).

### 3.5.1 Human Resource Development Plan

According to DMR (2010) the human resource development program's primary purpose is to promote the acquisition of skills needed for apprenticeships, financial aid (fundamental and essential skills), artisans, ABET training and other training programs representing demographics, as specified in the Mining Charter. The skills development of both mine employees and the community is an essential issue under this program. The provisions require companies to develop measures to ensure the diversification of skills and economic sectors to minimise the negative impacts of mine closure (DMR, 2010). The skilling of employees in portable competencies, related to existence outside the mining environment, can be applied to sustain individuals and communities once mining operations end. The Human Resource Development Plan makes the provisions that require the mining companies to undertake programs that ensure the diversification of skill and economic sectors to reduce the adverse effects of the closing of mines (DMR, 2010). The skills development should make provision to incorporate portable skills that will contribute to life beyond the mining environment

### 3.5.2 Mine Community Development Plan

The Mining Charter and the Social and Labour Plans are the main transformative methods primarily driven by the MPRDA. The main components include the dissemination of ideals designed to transform mineworkers, communities, and the community in general. It also offers an incentive to strategically design long-term results that can ensure that self-sustaining communities are self-reliant of the host mining (DMR, 2010). The focus on community development plans illustrates the commitment to community development. The concept depends on a program to develop alternative economies to enable communities to support themselves in the post-mining period. The Mine

Community Development Plan strategy, aims to mitigate post-closure social effects, reduce community reliance on mine and economic benefits, and leave a meaningful social legacy (DMR, 2010).

### 3.5.3 Housing and Living Conditions Plan

The SLP makes provision for the Housing and Living Conditions Plan, whose intended purpose is to align itself with the municipality's human settlements in addressing employee housing. The main objective of this requirement is to promote homeownership. Marais and Cloete (2013) found that in some instances, the outcome of family housing projects, associated with mortgage bonds turned out that large proportions of mine employees' owned assets fail to sell during mine closure. The SLP program also requires the mining companies to convert the old single quarters into hostels and family units. Although a hostel is more often inhumane, hostels sometimes serve as a better housing option, since tenants of hostels rarely have a long-term investment in the mining town in the event of downscaling (Marais & Cloete, 2013). In acknowledging the hostel condition's inhumanity, SLP calls for all mines to develop a five-year living improvement strategy for workers with specific targets. The Sishen Iron Ore Mine in the town of Kathu, Northern Cape, is an example of a fundamental shift, regarding the increasing mineworkers who need housing. Cloete, Venter, and Marais (2009), recounted that later, the mining company started revamping the hostels.

During the renovations of Sishen mine hostels, there was a substantial decrease in density, and people moved to the nearby city of Sesheng due to this upgrade, whereby most people lived in shacks or rented rooms in the backyards (Cloete *et al.*, 2009). The SLP's main objective regarding the Housing and Living Conditions Plan in addressing employee housing, therefore curbed the vulnerability of mineworker's families after the mine closure.

### 3.5.4 The implementation of processes to manage downscaling and retrenchments

Retrenchment of employees due to mine downscaling, is unavoidable, because mineral resources are finite. Thus it is essential that mining companies first ensure that they engage more workable opportunities for achieving operational requirements before actually contemplating retrenching employees. The SLP system is also in alignment with prior-existing labour law provisions, addressing mine closure and retrenchments. Both the regulations and the guidelines provide for processes about

downscaling and retrenchment. The SLP guidelines require the mining company to develop a standing procedure that deals with downscaling and retrenchment as informed and in line with the terms of Section 52 (1) of the MPRDA, National Social Plan Guideline of the Department of Labour (DoL) and Section 189 of the LRA. The mine must establish turnaround strategies and job-saving mechanisms, prevent unemployment, and prevent downscaling. The mines are also required to develop comprehensive training programs for self-employment and re-employment programs, inclusive portable skill development plans, and outline the projects identified for workers affected by the retrenchments. The mines further require to submit all the proposals mentioned above to the Department of Mineral, Resource and Energy withing 24 months before starting the downscaling process.

SLPs focus on accelerating transformation and implementing measures to significantly improve the living conditions of mine employees, host communities and major communities from which most employees originate. Socio-economic initiatives should focus specifically on support for initiatives for local, small and informal businesses. The SLP identifies employees and community programs/projects by committing on both how and when the company plan to implement them with budget allocation for each programme identified. Marais (2013a) suggested that SLPs should incorporate partnership with local administration, financial guarantees to sustain post-mining economy and clarity on project selection, and their acceptability status. According to Marais and Nel (2016), only a small number of previous mineworkers became employed, because the others did not have the necessary and relevant employment skills in other sectors. The skills shortage jeopardise the former mineworkers' employability chances outside the mining industry.

The primary focus of Social and Labour Plans are to promote transformation objects of the MPRDA and the mining charter. Social and Labour Plans spell out programs that seek to achieve social and human resource development of mine employees and the communities where mining operations are taking place. The guidelines express the need to create a sustainable economy after the mine's existence and ensure a sustainable economy after the mine's lifetime. According to section 43 of the MPRDA, the operation of the Social and Labour Plans is valid until the government provides a certificate of closure.

## 3.6 THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT 107 OF 1998 (NEMA)

Among other legislative mandates and objectives of chapter 2(h), the MPRDA 2002 is intended to give effect to section 24 of the Constitution, by ensuring that the mineral and petroleum resources of the land are exploited in an organised and environmentally sustainable form, and at the same time stimulating proper social and economic growth. A violation by the mining sector according to section 24 of the Constitution, breaches many other constitutional rights, including the right to enough water, environment and land (Muswaka, 2017). The South African apartheid government ignored the environment and the social injustices caused by mining companies, because both parties enjoyed the economic benefits from that relationship (Van Eeden, Liefferink & Durand, 2009). While the Constitution does not only function as specific legislation, it also operates as a framework for South African mining and environmental laws (Muswaka, 2017). Van Eeden *et al.* (2009) reveal that many mines escaped from being held legally accountable for the full effects on the environment and the socio-economic impacts they caused as they abandoned or claimed bankruptcy.

The introduction and objective of the National Environmental Management Act 107 of 1998 (NEMA) is to ensure cooperative environmental governance by developing standards for decision-makers on environmental issues affecting the people. The introduction of NEMA was followed by several amendments to keep mining companies liable for past and current mining operation violations. The NEMA turned out to be an excellent legislative instrument that deals decisively with non-compliance with many mining companies during their operations and after closure. Any application for the mining right or the mining permit requires environmental authorisation, including the environmental assessment, environmental management plan, closure plan, and the financial assurance, which will guard for the rehabilitation and closure (Watson & Olalde, 2019). Section 24(R)(1) of NEMA says, "The holder remains responsible for any environmental liability, pollution or ecological degradation, the pumping and treatment of polluted or extraneous water, the management and sustainable closure thereof notwithstanding the issuing of a closure certificate by the Minister responsible for mineral resources."

The amendment of the NEMA in 2014 made provision for financial security for the rehabilitation, mine closure, post-closure prospecting, exploration, and mining operations. Such regulations state that a mining company needs to account for the adverse environmental damage by rehabilitating and applying best management practices in all mining processes. It is in this instance that the NEMA Act 107 of 1998 provides specific costs that include… "rehabilitation; the decommissioning and closure

activities at the end of the life of mine; and the remediation and management of latent or residual environmental impacts which may become known in the future, including pumping and treatment of polluted or extraneous water." The NEMA stipulates how owners of the mining rights and holders of mining permits should provide and rehabilitate the environmental impact of their operations and ensure financial provisions for these risks.

Section 34 of the NEMA (1998) requires a mining right holder to have the closure certificate to avoid legal action during mine closure. A closure certificate also servers to ensure that the mining company cannot be held liable for any damage caused in the previously mined area (Van Eeden *et al.*, 2009). For a closing certificate to be issued, the holder of the mining rights or permit must rehabilitate the mining area, according to the set standards (Watson & Olalde, 2019). These closure certificates acknowledge the successful completion of closure completed and that the mining company does not carry out any obligation towards government or community members (Stacey *et al.*, 2010). Accordingly, the closure certificate benefits the mining company more than the government and community members. The mining company will not be responsible for any other social and environmental damage after this issuing of a certificate. The mining closure certificate is for the mine owner's benefit to escape the post-mining liabilities, regarding environmental damages.

Swart (2003) states that an environmental management plan (EMP), premised on an Environmental Impact Assessment (EIA), should be presented and formally endorsed as the principal environmental and rehabilitation prerequisite when mines submit their mine closure plans. Section 41 requires financial provision, which is the money set aside to provide for closure. The mining companies deposit the money in a rehabilitation account, owned by the government to ensure that there is financial provision for rehabilitation at closing (Swart, 2003). The closure relieves mining companies legally from their responsibilities with regards to pollution and to transfer the burden of the rehabilitation of their mining site to the DMR (Fourie & Brent, 2008). In this regard, the closure certificate is only valid when an environmental risk report and a closure plan accompany the application (Swart, 2003).

Watson and Olalde (2019) argue that the inadequacy of mine closure requests and the low rate of a successful application to the Department of Mineral Resource and Energy could indicate the complexity of large mines' rehabilitation efficiently. Mines have not made adequate provision for financial obligations. The indefinite care and maintenance of a mine or the sale to avoid a closing are more comfortable and cheaper (Watson & Olalde, 2019).

The NEMA is an overarching legislative framework for all environmental issues in South Africa. Since mining ends, environmental and social consequences are increasingly worsening as no more remediation money is available. Mineral contamination presents a danger to human health and other species that rely on land (soil), atmosphere and the supply of water. The NEMA deals with mining and waste disposal practices, which would harm water quality for future generations. Land use, and particularly land post-use, is a significant element of this regulation, because it can make or break the livelihood of mining host communities.

## 3.7 MINE HEALTH AND SAFETY ACT 29 OF 1996 (MHSA)

The objective of the Mine Health and Safety Act 29 of 1996 (MHSA) is to protect the health and safety of persons at mines, as well as to give effect to the public, international law obligations of South Africa that concern health and safety at mines. The Mine Health and Safety Act 29 of 1996 (MHSA) further serves to provide for effective monitoring and enforcement, to provide for culture, training, implementation, and improve health and safety measures at mines; between the state, employers, employees, and their representatives.

Section 2 and section 5 of the Mine Health and Safety Act (29 of 1996) states that the employers shall ensure that all mine phases, such as decommissioning and closing, provide a safe, stable atmosphere even after operations (Swart, 2003). The onus still lies with the mining company to ensure that there are proper plans in place when the mine operations are nearing closure, and their mining area is not functional as contemplated in section 2(2) of the Mine Health and Safety Act. The Mine Health and Safety Act, 1996 (Act No. 29 of 1996) and Regulations require that the mining company further submits the rehabilitation plan for the mined area surface, prevents water and air pollution, and then apply for final closure of the mining area. The Mine Health and Safety Act, 1996 (Act No. 29 of 1996) states that all companies are obliged to continuously take reasonable steps to prevent injuries, ill-health, loss of life, or damage of any kind from occurring at or because of the mine. This requirement refers to the mining area, which is not currently worked at, but has not yet been granted the closure certificate, according to the MPRDA.

## 3.8 SOUTH AFRICAN LABOUR RELATIONS ACT NO. 66 OF 1995 (LRA)

The Labour Relations Act No. 66 of 1995 (LRA) regulates the trade unions' right to exist, promote and facilitate collective bargaining at work, encourage employee involvement in decision-making, provide transparent processes for resolving disputes by statutory conciliation, mediation, and arbitration, and create the Labour Court and Labour Appeal Court with exclusive jurisdiction over labor matters. Section 1(a) of the LRA states that its purpose is to advance economic development, social justice, labour peace and the democratisation of the workplace by fulfilling the primary objects of the act, which are amongst other things, to give effect to and regulate the fundamental rights, conferred in terms of the Constitution.

Section 185 of the LRA's legislative mandate is that labour practices during the employment relationship must be fair and that employees must not be substantial, unprocedural and unfairly terminated. Furthermore, in terms of section 84(1)(c) of the LRA, the employer must consult with workplace forums (i.e. trade unions) about the proposals relating to partial or total plant closures. This process includes the dismissals of employees for reasons based on operational requirements or what is commonly known as retrenchment. Operational requirements are defined in section 41(1) of the BCEA, in that they are requirements, based on the economic, technological, structural or similar needs of an employer.

Mine closure is indicative of the mine's ability to meet its economic need. According to the LRA, when a mine is unable to meet its economic need, it may retrench its employees on that basis. Section 189 of the LRA requires that the retrenchment is procedurally and substantively fair in terms of the Act.

In terms of section 189 of the LRA, for dismissals of the employees during a mine closure to be fair, the employer must give employees notice of not less than 60 days, consult with employees or alternatively their trade union, on the proposed dismissals.

Having considered what the legislative mandate of the LRA is, 60 days notice given to the employees is not sufficient and is not fair for employees. Employees plan their lives guided by their employment contract, in that they will work in the mine until they reach retirement age. During the retirement age, employees have final retirement plans to sustain their livelihoods. A notice of 60 days is not sufficient

for employees to create a sustainable livelihood for themselves, which defeats the intention and purpose of the LRA and has unforeseen negative social impacts on communities.

## 3.9 BASIC CONDITIONS OF EMPLOYMENT ACT 75 OF 1997 (BCEA)

The Basic Conditions of Employment Act 97 of 1997 (BCEA), just like the Labour Relations Act ("LRA"), regulates the employment relationship between the employer and the employee. The BCEA's purpose is to advance economic development and social justice by fulfilling the primary objects of the act which are: to give effect to the right to fair labour practices referred to in section 23(1) of the Constitution; by establishing and making provisions for the regulation of basic condition of employment; and thereby to comply with the obligations of the Republic as a member state of the International Labour Organisations, and to provide for matters connected in addition to that.

The BCEA states that companies may terminate employment contracts for operational requirements. During mine closure and retrenchment process, section 41(2) of the BCEA states that employees must be paid severance packages equal to at least one weeks' remuneration for each completed year of continuous service.

According to the BCEA, during mine closure, employees with fewer years of service will receive small packages compared to employees who have completed more years of service. This requirement is somewhat prejudicial and causes a disparity between employees. The mineworkers who had spent less time in the mining company are significantly affected, because they perceived the mining employment as the ticket from poverty. Once they sign an employment contract, they start making social and financial commitments, knowing that they will receive a salary for a more extended period and will be able to meet their obligations. So sudden mine closure affects their families and their dependencies, leading to devastating social issues for them and their families.

## 3.10 SKILLS DEVELOPMENT ACT NO. 97 OF 1998 (SDA)

The purpose of the Skills Development Act No. 97 of 1998 (SDA) is to improve the skills of the workforce, to improve the quality of life of workers, and their labour mobility, including to improve the ability of self-employment (section 2(1)(i & iii) of the SDA). The SDA encourages employers to

provide employees with opportunities to acquire new skills, and the act's purpose is to assist retrenched workers to re-enter the labour markets (section 2 (c) (ii) & (2)(g)(ii) of SDA). The Skills Development Act No. 97 of 1998 also seeks to develop the plan that will increase the workplace skills by ensuring that all established policies are incorporated in the broader National Qualification Framework, as envisioned in South African Qualifications.

The SDA forms part of the employment law in terms of the LRA (LRA definition of employment law). It will be an advantage that the skills provided in the mining sector during the operations, also include skills applicable to other industrial areas other than mining.

## 3.11 CONCLUSION

This chapter has provided information on how mine closure legislation requirements vary between countries. The South African constitution, which is the supreme law of the country, gave birth to many legislations and policies, which servers as oversight on mine closure.

***Table 3.1: South African mine and petroleum legislation and policies***

| NAME OF ACT / POLICY | ACT NO AND YEAR | PURPOSE OF ACT/POLICY |
|---|---|---|
| White Paper on Minerals and Mining | 1998 | The White Paper looks at issues regarding the conducive investment in mineral exploration; the participation in other disproportions in the industry; it which looks at health and safety, housing needs, migrant labour, industrial relations, downscaling and environmental. |
| The Broad-Based Black Socio-Economic Empowerment Charter for the South African Mining and Minerals Industry | 2018 | The mining charter's other objective is to ensure that historically marginalised citizens can participate meaningfully in the South African mineral resources industry, and it allows current and new shareholders of mining rights to meet certain requirements. |
| Mineral Petroleum Resource Development Act | Act 28 of 2002 | This Act aims to acknowledge the State's internationally recognised right to exercise independence and be the custodian of all mineral and petroleum resources within the Republic; to facilitate equal opportunities to the country's national mineral and petroleum resources for all South Africans, |

| | | |
|---|---|---|
| | | especially historically disadvantaged people, such as women; and to protect the environment. |
| The Social and Labour Plan guidelines | 2010 | The Social and Labour Plan is a systematic attempt to address economic growth and mineral and petroleum production, thereby improving the ground for job creation and strengthening the social and economic welfare of all South Africans. |
| The National Environmental Management Act (NEMA) | Act 107 of 1998 | NEMA establish guidelines for decision-makers on environmental issues that impact people to ensure cooperative environmental governance. |
| The Mine Health and Safety Act (MHSA) | Act 29 of 1996 | The MHSA was enacted to protect the health and safety of people working in mines and give effect to South Africa's public, international law obligations concerning mine health and safety. |
| The Labour Relations Act (LRA) | Act No. 66 of 1995 | LRA regulates the trade unions' right to exist, promote and facilitate collective bargaining at work, provide transparent processes for resolving disputes and create the Labour Court and Labour Appeal Court with exclusive jurisdiction over labour matters. |
| The Basic Conditions of Employment Act (BCEA), | Act 97 of 1997 | The act serves to regulates the employment relationship between the employer and the employees, including the advancement of economic development, social justice, labour peace, and the democratisation of the workplace. |
| The Skills Development Act (SDA) | Act No. 97 of 1998 | The purpose of the SDA is to stimulate the workforce's skills and employees' standard of living and labour supply. |

Table 3.2 above provide synopsis of South African mine and petroleum legislations and policies discussed under chapter three. The researcher discussed the following policies and legislation in this chapter: White Paper: A Minerals and Mining Policy for South Africa, of 1998, Mineral and Petroleum Resources Development Act No. 28 of 2002 (“MPRDA”) as amended Act No. 49 of 2008, which will incorporate the B-BBEE Mining Charter that will include the Social and Labour Plans (SLP), National Environmental Management Act No. 107 of 1998, as amended, NEMA, the Labour Relations Act (“LRA”), Basic Conditions of Employment Act (“BCEA”), Mine Health and Safety Act of 1996 (MHSA”) and lastly The Skills Development Act No. 97 of 1998.

Most of the legislation and their accompanying policies emphasise that the skills development of both mine employees and the community is an important issue to be addressed. Such regulations state that a mining company needs to ensure that adverse environmental effects are rehabilitated and managed

in all mining processes. However, though the act may not be perfect, it has sufficient means to regulate mines.

Mine closure and downscaling are unavoidable. As a result, South Africa developed legislation to regulate the process of mine closure and downscaling. The legislation intends to grant rights of protection to the people involved and affected by the mine closure and downscaling, including environmental protection to mitigate the adverse effects of mine closure and downscaling.
The MHSA regulates and protects the safety rights of the employer and the employees during the existing mining operations. The legislation further mandates that during the closure of the mine, the employer must ensure that such a process must be safe and creates a stable atmosphere after embarking on the closing process and that the mined area must be rehabilitable. The NEMA is a piece of legislation mandating the protection of the environment.

The White Paper requires that the employer informs employees of job insecurities and the parties must prepare for such instances. The employers, government and unions must make such preparations. The preparation envisaged by the White paper to circumvent the adverse consequences of mine closure and downscaling, is that the preparation must begin during the subsistence of the employment relationship. The employees must have skills and receive training during the employment relationship, such that they can secure employment after closure. The SDA regulates skills development.

The employer, government and the employees must prepare for the possible job insecurities, which emanate from mine closure and downscaling. Companies must notify employees of possible job loss. The MPRDA, LRA, and BCEA have provisions that employees must be given 60 days' notice before their retrenchment resulting from the mine closure and downscaling.

These pieces of legislations promote and secure the social development of the employees. The 60 days' notice to employees is not sufficient to enable an employee whose social sustenance has been reliant on his job, which he would expect to terminate at retirement age. As a result, despite the legislation, the consequences of mine closure are bound to be adverse to the employees. The following chapter will analyse data that the identified respondents provided. The next chapter

involves analysing the data gathered to determine patterns, correlations, or trends by applying quantitative and practical considerations.

# CHAPTER 4 :
# RESEARCH FINDINGS

## 4.1 INTRODUCTION

The preceding chapter discussed the mining policy in South Africa and outlined the closure guidelines. Chapter 3 also discussed the significant changes regarding the South African government in terms of mining policies, ranging from the development of the White Paper on Minerals and Mining, leading to the enactment of the MPRDA. This chapter analyses the data obtained by identifying patterns, relationships, or trends. Analysis of data is the most critical aspect of any research. It includes interpreting the data collected through the application of quantitative and logical reasoning to determine patterns, associations, or trends. Below are the two main semi-structured questions posed on the respondents.

***Question 1:*** *"*Tell us the story of being employed at a mine *(Briefly explain how you initially got a mining job, how long you worked in mining, when did you lose the mining job and how you lost that job? What were the consequences for you and your family after losing this mining job?"*

***Question 2:*** *"*Tell us your story after losing your job at a mine (*Did you apply for other jobs? Discuss the various applications and levels of success. How easy was it to find another job? What various activities did you undertake to provide? How successful have you been in finding an alternative livelihood after your mining job? How easy or difficult was it to make a living after mining?)"*

Figure 4.1 An outline of the chapter.

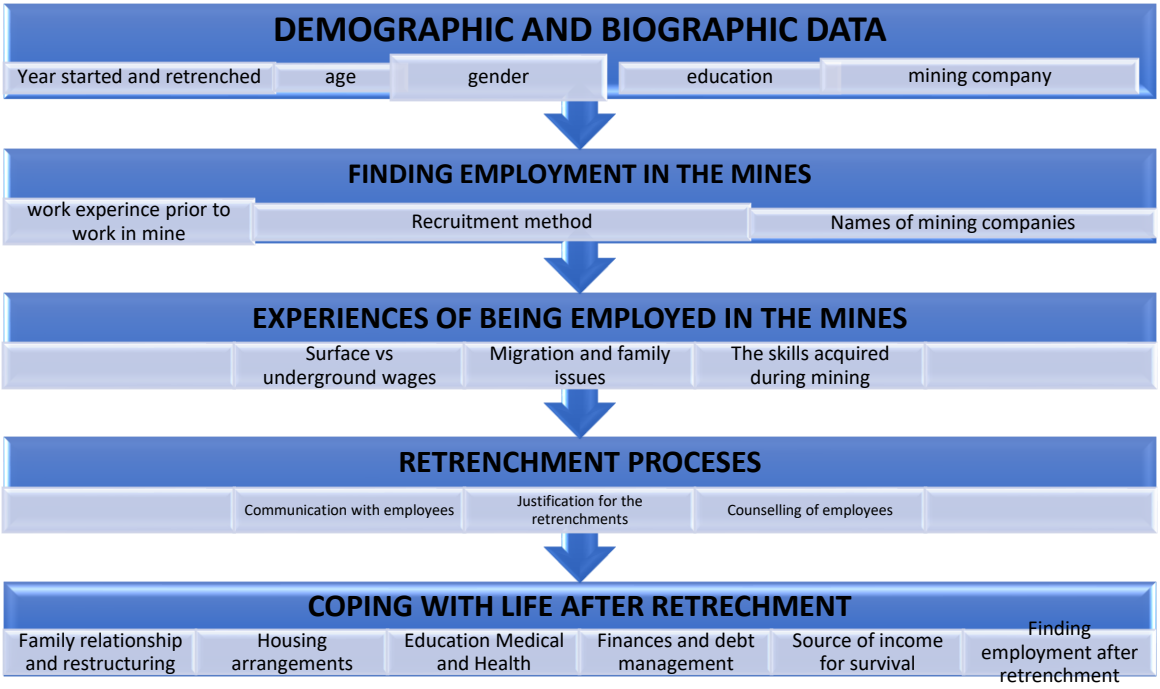


*Figure 4.1: A summary outlining the research findings*

## 4.2 RESPONDENTS' DEMOGRAPHIC AND BIOGRAPHICAL DATA

Table 4.1 contains the demographic and biographic information for the research participants. This information is critical to understand the context in which the research took place. Fourteen of the participants resided in the Free State Goldfields after retrenchment, and only one relocated back home to the Eastern Cape, while still looking for work in Rustenburg mines and often come to the Free State looking for a job opportunity.

*Table 4.1: Demographic information of the research participants*

| Nu | Year started | Year retrenched | Years of service | Age | Place of origin | Gender | Education | Recruitment methods | Name of mine at retrenchment | Education and skills training during employment | Nature of work when employment started | Nature of work when retrenched |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1990 | 1st 2004<br>2nd 2019 | 29 | 50 | QwaQwa, Free State | Male | Grade 12 | Learnership | Harmony Merriespruit | shift boss training<br>mine overseer | Underground | Underground |
| 2 | 1982 | 1st 1997<br>2nd 2019 | 37 | 59 | Eastern Cape | Male | Grade 11 | TEBA | Free gold Beatrix | Grade 12 | Underground | Surface |
| 3 | 1983 | 1995 | 12 | 59 | Farms, Free State | Male | Primary | TEBA | Western Holdings Gold Mine | Shift boss training | Underground | Surface and underground |
| 4 | 1968 | 1998 | 30 | 65 | Eastern Cape | Male | Primary | TEBA | Western holding mines | N/A | Underground | underground |
| 5 | 1972 | 1st 2000<br>2nd 2005<br>3rd 2013 | 42 | 68 | Eastern Cape | Male | Primary | TEBA | Western holdings | winch certificate | Underground | underground |
| 6 | 1980 | 1998 | 18 | 65 | Farms, Free State | Female | None | Through husband | Western holdings | N/A | Surface | Surface |
| 7 | 1978 | 1997 | 19 | 67 | Eastern Cape | Male | Grade 12 | TEBA | Western holdings | N/A | Underground | Surface |
| 8 | 2014 | 2019 | 5 | 39 | KZN | Female | Grade 9 | Replaced deceased husband | Beatrix mine | ABET level 1,2 | Underground | Surface |
| 9 | 2015 | 2019 | 4 | 50 | Odendaalsrus (Kutlwanong) FS | Female | Grade 11 | Unemployment forum | Beatrix mine | N/A | Underground | Surface |
| 10 | 2015 | 2019 | 4 | 35 | EC | Female | Grade 11 | Replaced husband due to ill health | Beatrix mine | N/A | Underground | Surface |
| 11 | 2006 | 2019 | 13 | 36 | Virginia FS | Female | Grade 9 | Replaced sick family member (Cousin) | Beatrix mine | ABET 1,2,3,4 | Underground | Surface |
| 12 | 2012 | 2019 | 7 | 39 | EC | Male | Grade 10 | TEBA | Harmony mine | N/A | Underground | Surface |
| 13 | 1996 | 2019 | 23 | 46 | KZN | Male | Primary | n/a | Beatrix mine | N/A | Underground | Surface |
| 14 | 1977 | 1991 | 14 | 58 | Vredeford, FS | Male | Grade 12 | TEBA | Harmony mine | canteen supervisor course<br>kitchen management course | Underground | Surface |
| 15 | 1984 | 1st 1998<br>2nd 2019 | 14 | 61 | Odendaalsrus (Kutlwanong) FS | Male | Grade 12 | TEBA | Western Holding Target mine (Harmony) | Electrical engineering | Underground | Surface |

The average age of respondents was 53 years, with the average time of mine employment being 18 years. One respondent started employment in the mines as far back as 1968. Four of the 15 respondents had more than one stint of mining employment. Table 4.1 reveals that 10 out of 15 respondents who started working for the mines before 2000, have a long history of working for the mines. Four of the respondents who were employed before 2000 found mining work after being retrenched. Four respondents have been working in the mines for 20-30 years, five have worked between 10-20 years, whereas the remaining five respondents worked for less than 10 years. Furthermore, five of the 15 respondents were female, which is a high percentage considering that the industry average is 12% of women workforce in the South African mining industry (Mineral Council of South Africa, 2020). Eleven respondents migrated from outside the Free State Goldfield region and eight were from outside the Free State Province. Table 4.1 reveals the four respondents were re-employed in the mining industry after their first retrenchment; therefore, this scenario implies that it was easier to be hired again in the mining industry before 2000 than those currently and post 2000.

In Chapter 3 of this study, the legislative policy, from the White Paper to the Skill Development Act, indicated that mines should improve their workers' skill levels. Four respondents have entered mine employment with a Grade 12 qualification, while the remainder did not have a Grade 12 qualification. Five of the respondents had only primary education.

Table 4.1 also reveals that all 15 respondents first worked as underground workers. The large percentage of respondents starting to work underground is not surprising as, historically, the mining industry reserved surface work for white people. At the time of retrenchment, 12 were working on the surface.

## 4.3 FINDING A MINING JOB

Many of the respondents started working in the mines at a young age. All the respondents have never worked anywhere before joining the mining sector. From its inception, men dominated the mining sector. Women were permitted to perform so-called "easy work", but only started working underground when they were again allowed in 1996. In 2002, only 11 400 women were working in mines. By 2019, this number has risen to 56 700, representing 12% of women out of the total

employed population in the South African mining industry (Mineral Council of South Africa, 2020). TEBA is a mining recruitment agency with more than 100 years of experience recruiting mineworkers for the South African mining industry. TEBA's primary recruitment was in rural areas and Lesotho. Of our respondents, TEBA recruited eight men (see Table 4.1). One of our respondents explained the process in the following words:

> *"After listening to those people talking about their mines, I decided to go to TEBA, which is a mining recruitment agency. The next day I went to TEBA and at that time it was a long queue. The man who was registering people at TEBA knew my father and said to me, you are not going to work in the mines"* (Interview 2, 2020).

The above quote suggests that the TEBA recruitment agency representative didn't encourage the respondent to work in the mines as he was still a scholar and he also knew his father. In addition to the role played by TEBA in recruitment, the above quote also points to another critical aspect of recruitment – having family working in the mines. At least three of the respondents noted that they got a job, because a family member passed on or was unfit to work. This practice has been common in the mining industry. As recently as 2018, Sibanye Stillwater Mining Company (Beatrix mine before) offered such a service and on 21 June 2018 were quoted as follows "Sibanye Stillwater offers replacement jobs to families of dead miners" (Power987, 2018, pg.1). Furthermore, the women did not use TEBA as a recruitment agency. The following two quotes provide for the experiences in respect of finding work through a family member.

> *"I started working in the mine in 2014. I have three children. I worked in the mine to replace my deceased husband. At that time, I was living in KZN. My husband was working for Beatrix mine. My husband was sick, having tuberculosis. He was sent home when he was sick. He worked for the mine for 19 years"* (Interview 8, 2020).
>
> *"I started working in 2015 in Beatrix mine (now Sibanye Stillwater) when I was replacing my husband, who was laid off from work because of Tuberculosis disease (TB)"* (Interview 10, 2020).

Table 4.1 reveals that out of 15 respondents, the Sibanye-Stillwater Mining Company (Beatrix mine) was the dominant employer with six employees. Harmony Gold Mining Company Ltd followed the Sibanye-Stillwater Mining Company (Beatrix) at five, and lastly, Western Holding Gold Mine retrenched four respondents. Harmony Gold Mining Company Ltd later acquired the Western Holding Gold Mine under Anglo Gold mine.

## 4.4 EXPERIENCES OF BEING EMPLOYED AT A MINE

This section highlights some of the experiences of the mineworkers at the mines. This description is essential, because it provides the context against which the retrenchments have taken place. Simultaneously, it also emphasises what the respondents viewed as critical elements of working in the mining industry. Following the interviews, four themes appeared during the analysis: health and safety issues, wages with specific reference to underground and surface wages, migration, and family and skills development.

### 4.4.1 Health and safety

A prominent theme identified by the respondents was health and safety issues. Five respondents mentioned the stringent health test that served as a precondition to get employed in the industry. The reflection on these issues is probably a way of stating their strength and showing that they passed the strict criteria and the humiliation of these tests. One respondent summarised his experience in the following words.

> *"On our arrival, we were taken to a recruitment centre known as the Mzilikazi hostel in Welkom. The following morning after waking up in the hostels, we were woken up by a loud sound. We were told to carry our bags and take off all the clothes and stand naked as we queue to be tested by the nurses. That was early in the morning, around 4:00 a.m. there was also a police presence with sjamboks. The nurses were inspecting our bodies everything, that was in 1990"* (Interview 4, 2020).

The quote also reflects on the dominant position of mining companies and the link with the state through militarily, enforcing the medical tests with policing. The physical fitness level matters

significantly to mining operations, because of the work activity in hard labour. Mining firms understand excellent and healthy employees are stronger employees and more likely to prevent injuries.

A second prominent health and safety theme was the scare of tuberculosis (TB). The link between TB and mining is well-established (Lurie & Stuckler, 2010). The shock of this reality was not only a health scare, but it could also affect employment. There was already an earlier reference to mineworkers losing their employment because of TB. Two respondents were diagnosed with TB during their work, and one of the respondents was diagnosed with bone cancer. Two of the respondents explained their experiences in the following ways.

> ***"****I was diagnosed in Mzilikazi. I didn't feel anything was wrong with me at first. I just found out after the mine doctors gave me and explain the results. The mine said my TB is not going to pay. They indicated that my TB is curable. I was in TB treatment for six months. I was admitted to the Pikinini spetlele and received my treatment. After treatment, I was cured and ok. Since then, I have never had TB. Currently I still must test TB on a yearly base. But since I am still ok without any TB"* (Interview 5, 2020).
>
> *"It was after a while. I started being sick in the year 2018. At that time, I started being sick. I was about to go on leave. When I get to the Doctor, the Doctor said, hey, hey, hey, right now, you must be at ST Helena Hospital to make Ex ray. I then went, and they made x-rays. I took them to the Doctor. He said right now they must admit me. He said, let me call the Hospital. Matron indicated that I had a dangerous TB, which is NDR TB"* (Interview 9, 2020).

In addition to the experiences with TB, respondents also raised other concerns. A female respondent suffered pain in her feet but suspected that her neighbours were bewitching her. The responded said,

> *"I think my sickness was associated with some Sotho witchcraft. So, my feet started giving problems. They the mine started taking me to the oncological clinic/hospital in Bloemfontein. So that was the reason that I was moved from underground to the surface.*

*So, sir, I started struggling to work underground because of these ailing feet"* (Interview 10, 2020).

It is evident from the above statements, as provided by respondents that mining activities also cause many human diseases like TB. The World Bank (2017) states that one of the most common bacterial infections in the Southern African mining regions is TB. According to the World Bank (2017), the mine employees are prone to contracting tuberculosis, because of their prolonged contact with silica dust, exacerbated by poor living conditions. Sub-Saharan Africa and Southern Africa's mining industry are taking the lead regarding the infection rate of HIV / AIDS than any other country in the world (Parker, 2009). Interestingly, none of the respondents reflected on HIV/AIDS.

### 4.4.2 Surface vs underground wages

For many centuries, the South African mining sector has been active in recruiting unskilled labour nationally and in Southern Africa. Over the last two decades, the remuneration for underground work was higher than in similar unskilled work in other sectors. The wages for underground workers were also higher than for unskilled surface employees. One respondent summarised this in the following words.

*"The other reason that I wanted to go back, and work underground was that my salary when working underground was so much better than working on the surface. When I was working underground, I received about R8000 after deduction, and on the surface, I was receiving about R7000 after deduction. The surface salary was meagre, my colleague that I found working surface told me that her salary was R5000 per month*" (Interview 10, 2020).

Despite the danger underground, salaries are higher than unskilled work on the surface. This analysis's main point is the need for income from the respondents to look after the families. Yet, 12 of the 15 respondents in the sample moved from underground work to surface work. Surface work might be one reason why they became prone to retrenchments, as mining companies first look to retrench those not directly involved in mining.

### 4.4.3 Migration and family issues

The mining industry has been closely associated with migrant labour, although the nature and scale of migrant labour have changed over the past three decades. The nature of the migration is also visible in the place called Matjhabeng. The Sesotho word "Matjhabeng" means *"*where nations meet" and reflects the migrant labour from other parts of the country: Lesotho and Mozambique. The evidence from Table 4.1 shows that 40% of the respondents were initially from the Eastern Cape Province, and 27% are from other parts of the Free State. One of the respondents who joined the mine in 1990 spent three years without communicating and going home. The quote below confirms that people left their place of origin and families and did not communicate with them for an extended period. The following quote provides for some experiences associated with migrant labour.

> *Since I arrived in the mines in 1982 February, I never went home, never communicated with anyone in 1985 after three years then I went home for the first time. And the reason for me to go home - I had a bizarre and bad dream. I never communicated with anyone from home for the entire three years I never even sent any money to anyone since I left in 1982. when I reached home, I only found out that my mother has passed on"* (Interview 2, 2020).

Over the years, hundreds of thousands of men from rural areas of South Africa and neighboring nations have come in to work in the mining industry. They were not immigrants in the usual sense, because they were working in the mines for long periods of time, many got married, building their families and buying houses in the working area – especially as changing policies of the apartheid government made this possible, as from the mid-1980s.

### 4.4.4 The skills acquired during mining

Central to retrenchment is that employers should help workers build skills that increase their productivity and allow them to participate in other sectors of the economy. Chapter 3 referred to legislation and guidelines in this respect. The mining industry's problem has been the low levels of skills of mineworkers when they are employed.

For example, only four of the respondents in this study had a Grade 12 qualification when they started working in the mining industry. One respondent completed Grade 12 while being employed at the mine.

Eight of the 15 respondents said that they did attend skills-training courses. Doing Adult Basic Education (ABET) and completing school education were prominent skills enhancements. A range of mining-specific courses also contributed. These include managerial training (shift boss, mine overseer, canteen management, kitchen management) and technical training (winch certificate, electrical engineering). One respondent got employed through a mining learnership.

Four respondents had multiple retrenchments, which means that they got re-hired in the industry, because of their skills. The statement below provides evidence of the value of skills in finding new employment in the mining industry.

> *"I came back. I worked for diesel mine as a contractor as the shift boss, also N3 and mining house was diesel, which is in Odendaalsrus. Is located on the way to Odendaalsrus in 2005. I didn't last because I didn't like working for the contactors. In 2005 December started working for Beatrix mine. At that time it was known as Goldfields by that time as shift boss towards the end of 2006 and I left for Harmony because of a better offer at Joel mine. Joel mine, I was shift boss, and I was relieving as mine overseer on several occasions. I worked there until 2008 February because of the better offer at Beatrix again. They offered a position of mine overseer at Beatrix. I worked for Beatrix from 28 February 2008 as technical assistance. Technical assistance is a position created at Beatrix, it's like a super shift boss, is a position between the shift boss and the mine overseer. When mine overseer is not there, you relieve that position"* (Interview 1, 2020).

The quote suggests the value of skills to bridge retrenchment, but also allows for mobility between mines. However, finding employment outside the mining industry seems more difficult.

## 4.5 RETRENCHMENTS PROCESSES

Section 189 of the South African Labour Relations Act requires companies to begin a consultation process with the unions, representing workers (or directly with workers if they are not part of a recognised union) before retrenchment (see Chapter 3). In the consultation process, the company is obliged to clarify the organisational circumstances causing retrenchment, discuss potential solutions to retrenchments, negotiate on a severance package, and offer any support programmes that the company can provide to workers whom the mines retrenched.

According to the interview conducted, seven respondents indicated that the mines informed them about the retrenchment. However, the nature of these processes differed. The statements below are confirmation from four respondents.

> "*It was in 2006 when I was retrenched. The human resource waited for us to knock off from work and broke the bad news that we are in the list of people that the mine had decided to retrench*" (Interview 5, 2020).
>
> *"We received letters, but before the letters, we will experience hearsay that the mines will be retrenching a certain number of people. The meeting will be called in halls by mine officials to inform by the coming retrenchments"* (Interview 6, 2020).
>
> *"We were informed that the number one shaft was closing. I was working on the number one shaft. I was one of the people who was pirated. I went and look for my name at human resources and found that my name is also listed on workers to be retrenched. That was a sad moment in my life. I just heard that the mine is retrenching"* (Interview 6, 2020).
>
> *"HR called us and paraded us, and she told us that Phongola is here, and our numbers are chosen as people going home. I indicated that I am still a patient, and I am about to finish my treatment"* (Interview 9, 2020).

The above four quotes provided the experiences and communication associated with the retrenchment process at the mines. Although any retrenchment process is an emotional process, the methods described above show how the mineworkers experienced it. The last quote also shows

how the immediate pressure of dealing with a health-related issue was a central concern for one of the mineworkers at retrenchment.

Reasons provided for retrenchment primarily included the financial viability of the mining operations. The following quote gives a good overview of how a mine communicated the reason for retrenchments.

> *"They told us that the mine is not making enough money to pay us anymore. They indicated that the mine would pay us the pension fund according to the years we completed working for the mine. Again, they will also pay us for retrenching the bus as a thank you bonus for working in the mines. They informed us that they would again parade us in groups to come and sign off and prepare papers that will make them pay off our monies"* (Interview 5, 2020).

The mining companies did offer most of the respondents a justification for the retrenchments. Some respondents indicated that before being informed about it, they heard a rumour regarding retrenchment. Some respondents confirmed that the mining company showed them the information about the numbers of employees who faced retrenchment.

One respondent had the option of working elsewhere. Two of the respondents reflected on this possibility provided by the mining companies.

> *"Then there was section 189 and our shaft were affected. They wanted to close the shaft. The whole shaft all. There were opportunities to either take voluntarily of be forcefully retrenched, so I volunteered, I was allowed to work in other operation in Gauteng, and I did not want to leave home again because I am a family man"* (Interview 1, 2020).
>
> "*Around the retrenchment time, we were informed that the laboratory would be closed, and it will be in Gauteng. So, we were expected to register our names. They did not even provide us with an option to work underground. They just indicated that our department was closing, and we were about 40, and they only need five"* (Interview 13, 2020).

For these two respondents, an alternative was possible. However, the one respondent preferred an offer for an underground job at the same mine.

## 4.6 COPING WITH LIFE AFTER RETRENCHMENT

### 4.6.1 Family relationship and restructuring

Retrenchment, which may have varied consequences on one's financial well-being, inevitably causes economic deprivation, which eventually creates the root cause of human distress, such as the inability to provide financial support to the family. Retrenchments cause significant systemic disarray in the family structure, bringing about a transition in the family's everyday life.

The evidence from the interviews shows that families of the retrenched mineworkers had to change their way of life to adjust to their recently reduced family incomes. All 15 interviewed respondents have extended family members to support financially, besides their immediate families. Eight respondents cited that their living standard degraded so severely after retrenchment, because they could no longer provide for their family and their children. One case involves a divorce during the retrenchment periods. Six of the respondents had to rely on their spouses' income to deal with the family's financial responsibilities. Some claimed that getting retrenched pushed them into poverty. The explanations below from the interviewee confirm the circumstance at home.

> *"I stayed home, not working for three years. It was a difficult encounter without working. My wife must take all the responsibilities of my debts because she was the only one working. It was difficult for the kids because some of the things we used to buy for them must be limited or cut. This was the time when I felt poverty"* (Interview 2, 2020).
>
> *"My first retrenchments were in 1998, and at that time, I already bought a house, and my wife was a teacher, so she had to take over and pay the mortgage bond."* (Interview 15, 2020).
>
> *"The retrenchment was very severe to my family as I was new in a marriage. With no income and so much more of the time in those days left us poor and weak. Whenever it gets down to the purchasing grocery, that is where you get the hard blow and ashamed*

> *as the man and head of the family. Everyone understands that the standard of living has been incredibly high these days. I was therefore forced to leave my wife and children behind and went back to Welkom to search for work"* (Interview 10, 2020).

The three quotes above show how diversity in income (income from a spouse not involved in the mining industry) helped address the consequences of retrenchments. Secondly, the quoted reference to children suggests how mine retrenchments have intergenerational impacts. Thirdly, scaling-down and the reference to being dumped into poverty is vital to note. Fourthly, the reference to the consequences for one of the respondent's marriage is further evidence of the consequences for family structure. Finally, there is evidence of the importance of securing assets that are still under financial obligations (the payment of the mortgage).

The South African mining industry is renowned for its institutionalisation of migrant labour. Although this has become less prominent over the last two to three decades, the evidence from our interviews shows that getting retrenched also reinforces migration. Of the 15 interviewees, 11 were originally from outside the Free State Province. On retrenchment six responded had to leave their family to find work elsewhere. A further two left their families in the Free State Goldfields to go work in the original labour-sending area. The following quote captures the family disruption, caused by retrenchment well.

> *"I am also missing to raise my family as they are far away in the Eastern Cape. I cannot carry them along because I am moving from one place to another, searching for work in the mines"* (Interview 12, 2020).

The evidence above is proof that mine retrenchment leads to a downscaling of living standards, increased poverty, increased migration, family disruption and in one case to divorce.

### 4.6.2 Housing arrangements

A house is often the most critical asset that a household owns. Although original mine housing policies emphasised rental housing provided by the mines more recently, there has been a move towards homeownership. However, for most mineworkers, getting retrenched had severe implications for their housing situation. The first observation about housing was that retrenchment meant securing their house or reinvest to have a secure asset.

Six respondents mentioned that they either paid part of their mortgage, bought houses, bought sites, or even building material to construct homes, but did not manage to build the planned houses due to financial difficulties. The following quotes summarise the need for securing a place to stay after being retrenched.

> *"We bought a site with the intension of building us our house. Unfortunately, there is no income anymore. Instead, we bought some zincs to build shelter"* (Interview 10, 2020).
> *"We used the money from retrenchment to buy our house because we were paying rent to the mines. During our retrenchment, the mines decided to sell the homes that we have been renting all along"* (Interview 6, 2020).
> *"I bought the house, needed some renovation, fixed the house, and told myself that even if the money could be finished, at least I would know that I did not waste the money, my kids would have a place they called home. I put the house in a state I wished it for it to be. In December 2019, we occupied the house"* (Interview 9, 2020).

These three quotes all emphasise the importance of securing a decent living environment after retrenchment. Once again, the importance of providing stability to the children came to the fore. However, one case in which retrenchment meant that the respondent had to forfeit the house after a divorce took place at the same time as the retrenchment. Below is the response.

> *"The challenges are the family that I have now is my second family. I was married before got house in the process there was a divorce and I must lose the house. So, with the retrenchment, I have to buy a new house to secure it for my family*. (Interview 1, 2020).

### 4.6.3 Education

The education issues relate to the households' access to education. Children faced learning difficulties and lacked motivation, since they had to deal with their families' unfamiliar financial situation. There were instances in which children left school due to unpaid fees. In three cases, the respondents had to take their children out of private schools and enrol them with government schools. Six of the respondents mentioned that they could not send their children to the tertiary institution, because they couldn't afford it after the retrenchment, as there was no income to pay the tuition fees. The following quotes summarise the situation well.

> *"Out of these children, which my grandmother is taking care of, I was planning to pay for tuition in tertiary for one student; now, I cannot do it anymore because I am also struggling with my two children at the university"* (Interview 2, 2020).
> *"And one of my siblings completed matric. I was responsible for him also. So, he could go to school. I informed him that he couldn't go to school because I don't have an income due to retrenchment*" (Interview 8, 2020).

One of the respondents mentioned that his children did not attend school, because they had to relocate with him when he found odd jobs on the farms. He believed that the were no proper schools on the farms, and if he was still working for the mines; he could have provided his children with education. The following quote reflects the view of this respondent.

> *"Probably I could have provided them and to them to a better school than schools in the farms. Poverty will push anyone to look for work so are my children who left school at a younger age and worked in the farms"* (Interview 3, 2020).

One respondent worked as a human resource officer. He thought his educational background as a human resource practitioner would enable him to procure a job quickly, either back in the mine or elsewhere. During his first retrenched period, he could not procure another job in the mines and other industries with his human resource qualification. It became apparent after his retrenchment that his human resource qualification was relevant for the position in the human resource

department before his first retrenchment. He realised that the human resource qualification he obtained during his employment in the mines was a common qualification outside the mining environment, and it is highly competed by many qualified people outside the mining industry. As a result of his retrenchment, he studied further for an underground mine course. After obtaining an underground mining qualification, he managed to secure a job in the mine. The statement below from the responded confirms his experience.

> *"In these three years I was looking for employment without any success. During this time, after searching for work for a very long time without succeeding, I realised that I am not educated at all. One day when reading a newspaper, I saw an article about training for miners. I have a vehicle which I bought for cash when I was working, so it was not a problem. I registered with this institution and paid R400, as I remember well, my mother in law is the one who gave me R2000 to attend this training. Then that was the start of the new life. I completed the miner course training and started to look for employment again. That was the hardest time for my whole family. Some of the insurances have lapsed; not enough money. My wife must take care of municipal service accounts. We decided with my wife that she apply for mine house to rent out our house to make extra income. She agreed, and we managed to move out of our house and occupy the mining house"* (Interview 2, 2020).

### 4.6.4 Medical and Health

Most of the respondents did not qualify for the medical aid scheme when they were still working for the mines. Nevertheless, their income (salaries) assisted them a lot to receive proper medication. One respondent indicated that the mine did not subsidise them for medical care. The statement confirms the respondent's words as quoted below.

> *"I have been blessed that there was no need for medical attention for the family, and the mine never provided any subsidy for medical aid."* (Interview 1, 2020).

Two respondents who lost their spouses, due to ill health, felt that the condition could have been different if they were still working, because they could have afforded the medical cost for their spouses. Two of the respondents revealed that they found out they had some underlying health conditions after being retrenched. One of the respondents mentioned that he was diagnosed with silicosis after leaving employment.

> *"I have just realised after leaving the mine that I was affected by silicosis. I realised that I am influenced by silicosis about a year ago now. I was tested in Bongani hospital in Thabong (Welkom)"* (Interview 15, 2020).

Two respondents were diagnosed with TB while working for the mine and received treatment. After retrenchment, both had to attend the annual TB screening, and this screening caused some anxiety to them and their families.

> *"The main problem that I have now that I never have before working for the mine is tuberculosis. I need to do checkups every year. I am still attending the treatment of TB. When I was working, I could afford adequate healthcare to my family and myself because I was earning a decent income, so I must pay for some underlying problems on my own for my family. This yearly checkup for tuberculosis (TB) render us exposed to stigma among fellow friends and family and friends. If the results can reveal that I do have it again, my friends and family, wife, or children get infected. They will not have as much access to healthcare and cannot follow treatment or get used to it. I am going through the screening treatment program that includes better screening and treatment for mineworkers who have been at risk of TB in the mines and those previously affected by this disease" (*Interview 5, 2020)

The statement above illustrates anxiety and fear from the respondents, which is corroborated by the findings done by Roberts (2009), who found out that that less than a third of the former miners who had had TB since leaving the mine, indicated that every other family member had TB at any time. This example shows that TB can lead to reinfection after a long time, and TB can be diagnosed with individuals after some time when it is not expected.

### 4.6.5 Finances and debt management

The critical impact of closing a mine in the Free State Goldfield Region was a substantial financial loss. It shifted the urgency of the family's priorities, and it certainly forced a reconfiguration of interests, preferences, and needs. The best chance of financial survival is to ensure you have a carefully devised plan of action. The respondents had to draw up a budget representing the current financial status and had to start dealing with it on the first day. Most of the respondents used the money that they received after the retrenchment to cover their debts. The following quotes provide evidence in this respect.

> *"The total package that I received from the mines lasted only two years because I must pay some outstanding debts. The money was used to pay the debts that one accumulated during the working time. I have to pay all my accounts as there was no income anymore, and I was the only one supporting my family as the head of the house"* (Interview 4, 2020).

Six respondents stated that they paid their debts with the retrenchment package. Four of the respondents were assisted by their spouses or even family members to pay the debts.

> *"Now, this debt will fall under my wife because she is still working. She now needs to pay for services in Virginia and the other house in Doorn"* (Interview 4, 2020).

The financial plan is essential no matter your economic situation, so this becomes even more essential at retrenchment. Debt obligations will also be due after retrenched.

Some respondents mentioned that the mining companies provided them with retrenchment letters that they could submit to their creditors, showing that they were struggling to keep up with their contractual obligation, because of retrenchment. The urgent appropriate action was to inform all of their credit providers about their changed circumstances. Most of the respondents felt that the mining companies' retrenchment letters that were provided to creditors did not assist them, because they still had to pay their creditors.

*"The retrenchment letter given to us is not working when you even produce it to these stores" (*Interview 10, 2020).

*"Concerning my creditors, the mine provided me with the retrenchment letter. In any case, the retrenchments letters serve to advise your creditors that you are not working so you cannot pay your debts. This letter serves a temporary arrangement when one is not working, but you need to pay your debts when you start working"* (Interview 11, 2020).

*"For my debt, they provided us with a letter to negotiate with the debtors"* (Interview 11, 2020).

It seems that the respondents had the impression that the retrenchment letters that they received from mine companies would write off their debt. They then realised that these letters were of no assistance to relieve them from their debt. In retrenchment instances, the retrenchment letters serve to alert the banks and creditors about one's current financial situation. Ordinarily, banks and creditors may cooperate, mainly where clients interact with them proactively about their changed economic status. It was important for the retrenched workers to approach the banks and creditors before another withdrawal transaction or instalment return. In this instance, the clients may negotiate with the banks and creditors for reasonable and affordable instalments until the financial circumstances change for the better. However, the respondents stated how they were struggling to get employment in the mines and even outside the mines. Therefore, the arrangements with the banks and creditors might have been unsustainable.

### 4.6.6 Source of income for survival

The respondents provided information regarding the other sources of income in the context of formal jobs, informal employment and any income-generating practices. Most respondents said that searching for employment after retrenchment was a considerable challenge. Some mentioned that they tried to engage in small businesses by buying and selling women's clothes. Still, this business could not sustain them, because it was slow, people bought clothes on credit and failed to make payments as agreed, and some cited that they became lazy to have to go after the people

who owned them money. Two of the respondents provided the following statements as crafted in the quotation below.

> *"I tried to do business, selling clothes, the problem is that people will take clothes with credit, but you struggle when they have to pay. So, it was not good business"* (Interview 11, 2020).
> *"We opened a fruit and vegetable spaza shop together with a friend. Even though it is not giving us enough money to survive"* (Interview 13, 2020).

Two men started brick-making projects, but both collapsed. One respondent mentioned that their brick-making cooperative collapsed, because of their inadequate marketing strategy. The other respondent said that their brick-making business collapsed, because of the mismanagement of finances and supplying bricks to a single client. The statements confirm the response received from the interviewees as quoted below.

> *"Our project could not go further as hoped because the marketing strategy was inferior. This business was brick-making business in which we supplied the bricks for the construction company. Our brick company consisted of other examines works. We were, in fact, not making enough money from this company"* (Interview 7, 2020).
> *"There was a fight among yourself concerning the management of funds. We invested our money in this company, but I did not see any returns from the business. Other members were so lazy as they were always not working or attending meetings late and making it difficult for the project to succeed. As our main client was the company, which was constructing some houses in Skoolplas, our brick-making business collapsed after the house's construction completed their work"* (Interview 4, 2020).

Three respondents mentioned that they had to depend on their spouse's income and found themselves fortunate in this regard. Five of the respondents depended on government social grants, including children's social grants for their children's upbringing. Some of the respondents mentioned their basic income being from government social grants, and subsequently supporting their children from the Child Support Grant. The social grants are the primary means of reliable support for many individuals of low-

income families in South Africa in order to fulfil their fundamental needs. One respondent provided the statement below, as crafted in a quotation.

> *"Truly we are so struggling. So, I just depend on social grants from two children, because the elder one who completed grade twelve is not qualifying anymore".*
> (Interview 10, 2020)

### 4.6.7 Finding employment after retrenchment

Since the retrenchment debacle, most of the respondents tried some businesses, as discussed in the above paragraph (4.6.6 source of income for survival). As their endeavour for their business failed, some began searching for new work. When their businesses struggled to make the anticipated profit, the owners got out of it and searched for new employment opportunities. Those looking for employment targeted work in the mining sector. The majority seemed to search for employment and hoped that the mining sector will employ them again. Many of the respondents wished to go back to the mines and never searched for jobs elsewhere. Jobs in the mining sector was no longer assured as it has been in the past. If they were unable to find jobs in the mining industry, they contracted with subcontractors in the mining sector. One respondent searching for work for a very long time stated that,

> *"I tried to find some jobs, but unfortunately, I was always unsuccessful, I feel I was not lucky"* (Interview 4, 2020).

In cases where finding a job takes longer than most people plan, the person would not have enough money to meet basic needs, such as providing food and shelter for his / her family. Throughout many cases, retired workers have experienced nothing else beyond the mine, and they planned to continue working as miners throughout their lives. It was also almost too difficult to find a replacement job.

## 4.7 CONCLUSION

This chapter identified the findings of the lives of workers after retrenchment. This chapter started with a brief overview of the demographic and biographic information for the research participants. The mine recruitment agency, TEBA, recruited young men from the particularly Eastern Cape and Lesotho. Women joined the mines most recently, replacing their family members who got sick or passed on. There was a prevalence incidence of TB of some employees when still working for the mines, and others were required to undertake screening after retrenchment. The respondents did not acquire many skills and educational courses under the Social and Labour plan, the MPRDA, and the SDA requirements. Section 189 of the South African Labour Relations Act, regarding the process of retrenchment and, in particular, the consultation with the affected parties, seemed to have been flawed because most of the respondents indicated how shocked they were after finding their names on the list of people earmarked for retrenchment. The was also no mention of any counselling provided to the respondents before or post-retrenchment.

The evidence shows that respondents did not manage to cope well with the post-retrenchment phenomenon. There was often family dysfunctionality because of the lack of income. Four families failed to provide for their children to enrol in the planned higher education institutions after retrenchment. This halting of education aspiration will have long term intergenerational implications. There were issues regarding housing as some could not pay the mortgages they took out during the subsistence of their work in the mines. Others who planned to build their homes also found their plan deterred because they were laid off from work. Concerning the source of income, some tried some business that they did not know about and found themselves losing part of their money in the business they engaged in failing, whereas others tried their luck to find work, but most relied on minework. Former workers have done nothing else outside of the mines in many cases, and they intended to continue in their roles as mineworkers. In some instances, workers were clearly and unable to properly handle their retrenchment benefits.

# CHAPTER 5 :
# CONCLUSION AND RECOMMENDATIONS

## 5.1 INTRODUCTION

This chapter presents the conclusion and recommendations of the study results. This study investigated the experiences of former mineworkers who lost their jobs due to mine closure in Matjhabeng Local Municipality (Free State Goldfields). The Free State Goldfields has experienced mine closures and related employment reductions, resulting in workers' ongoing retrenchment over the past three decades. The study used a qualitative methodology approach in which the interviews were conducted with the selected respondents to narrate their stories relating to post-retrenchment. The main reason for choosing qualitative research over other methods is that the topic, problem statement, aim, and objectives understand respondents' views concerning mine closure. The chapter begins with a brief review of the various chapters, followed by discussions of the main findings. Finally, the chapter ends with recommendations and suggestions for further research.

## 5.2 AN OVERVIEW OF THE MAIN STUDY CHAPTERS

The purpose of the section is to provide a summary of the three literature chapters in the study. The summary highlights some of the main findings of the study. Chapter 2 discussed the socio-economic issues of downscaling and closure of mines in great depth. Mineral production has generated wealth and promoted social development by providing raw materials for infrastructure and technology. Besides benefiting from mining operations, the mine's operations would downscale or close, and its consequences are undoubtingly disturbing.

The mine's closure resulted in social impacts on mining communities in terms of basic income and livelihoods. Mining closure directly impacted the broader population, but the most substantial pressure of mine downscaling and closure started to fall on those who lose their jobs. As the mine closure renders people unemployed, most of these mineworkers cannot find an alternative job because their skills are mining related. Unemployment creates societal and family instabilities.

The mine closure further resulted in demographic changes in the mining region, causing outmigration that subsequently led to the population decline in the mining region. The mine's closure also presented a health threat for employees and the environments surrounding them from accidents and illnesses during operational times and even more after the mines' closure and non-operations.

In Chapter 3, the focus shifted toward the Mine Closure Legislation requirements in South Africa. Therefore, SA's mining policy revealed significant changes regarding mining policies, including mine closure management. The White Paper on Minerals and Mining (1998) indicates that job opportunities have declined in mining and mining-related industries. It, therefore, calls for the government to support businesses, staff, business vendors, and mining-related populations to predict and mitigate the effects of large-scale employment reductions. It also suggests the notifications of employees regarding the Industrial Relations and Employment Conditions for the possible employment insecurity and preparation.

The MPRDA was approved and enacted by the South African Legislature in 2002. Therefore, Section 38(1)(d) of the MPRDA emphasises that mining companies should always consider systematic and reasonable land rehabilitation during and after mining activities. Section 41(5) of the MPRDA allows for retaining the financial obligation if the rehabilitation process is not complete or not done at all. The proper land rehabilitation should issue a closure certificate as prescribed in Section 43 of the MPRDA. Section 25 (f) of the MPRDA provides a directive to all mining rights' holders to submit the Social and Labour Plans (SLP) as a condition for granting the mining rights. Therefore, the Social and Labour Plans (SLP) make provision for implementing processes to manage downscaling and retrenchments. The SLP guidelines procedure that deals with downscaling and retrenchment should be in line with Section 52 (1) of the MPRDA, National Social Plan Guideline of the Department of Labour (DoL) and Section 189 of the LRA. The mines are also required to develop comprehensive training programs for self-employment and re-employment programs, inclusive portable skills development plans, and outline the projects identified for workers affected by the retrenchments. The chapter discussed the LRA, which deals explicitly with the issue of industrial relations and employment conditions. The NEMA discusses the environmental aspects of mine closure and decline. The NEMA's implementation and purpose

are to assure people's collaborative environmental governance by establishing products for decision-makers on environmental issues affecting people.

The chapter introduced the Skills Development Act No. 97 of 1998 (SDA), whose primary purpose is to improve the workforce's skills. Workplace skills development depends on the SDA. The chapter incorporated the Mine Health and Safety Act (29 of 1996), which has the objective to ensure individuals' health and safety in mining operations and give legitimacy to the commitments of South Africa under international law concerning health and safety in mines. The legislative framework discussed in this study complement each other in one way or the other.

Chapter 4 discussed the empirical evidence gathered during the interviews with the 15 participants. Four main topics received attention: finding work in the mine, experiences as mineworkers, the retrenchment processes, and coping with life after retrenchment. Most mineworkers originated from outside the Free State Province and used TEBA as a recruitment agency. All the interviewees started working underground, with about half working on the surface at the retrenchment time. Working on the mine meant that they had to deal with mining's health and safety risks. Contracting TB is a constant risk, which three of the mineworkers contracted during work on the mine. Mine closure has resulted in severe implications for the respondents.

Retrenchments resulted in family relationship restructuring by bringing significant systemic disarray in the family structure transition in the family's everyday life. The retrenched mineworkers' families had to change their way of life to adjust to their recently reduced family incomes. The post-retrenchment resulted in changed housing arrangements as respondents paid only part of their mortgages. In contrast, others bought sites or even building material to construct homes but did not manage to build the planned houses due to financial difficulties. In one case, the respondent had to forfeit a house after the retrenchment coincided with a divorce.

Regarding education, there were instances in which children dropped out of school due to unpaid fees. In other cases, they could not send their children to a tertiary institution because they could not afford it. After all, there was no income to pay the tuition fees. In one case, children did not attend school because they had to relocate with the father when he found odd jobs on the farms.

Two respondents were diagnosed with TB while working for the mine and received treatment. After retrenchment, both had to attend the annual TB screening, and this screening caused some anxiety to them and their families. Because there was no more income source for survival, some mentioned that they tried to engage in small businesses, but these businesses could not sustain them and therefore failed. Others depended on government social grants, including children's social grants for their children's upbringing. When trying to find employment after retrenchment, hoping that the mining sector will employ them, they wished to go back to the mines and never searched for jobs elsewhere.

## 5.3 MAIN FINDINGS OF THE STUDY

In this section, five main findings are identified and discussed: the retrenchment process, financial loss, health and wellness, skills development, and employment findings after retrenchment. The main findings were motivated by the evidence derived from chapters 2, 3 and 4.

### 5.3.1 The retrenchment processes

The international experience shows that one of the main consequences of mine closure is people losing jobs, resulting in higher unemployment (see Chapter 2). The White Paper on Minerals and Mining (1998) requires employers, employees in conjunction with the government to prepare for mine closure (see Chapter 3). The research shows that the retrenchment process is not known and well understood by the employees and the research could not find an agreed plan of action between the mines, unions and government. The notice period given to the respondents in this study is not sufficient for them to prepare for lives after retrenchment. The government does not participate in the programs designed for retrenched employees prescribed by the White Paper in Mining, the SLP and the MPRDA. Once retrenchment occurs, employees fall under the category of unemployed members of the communities. They compete at the same level as other community members who have never worked in their lives.

### 5.3.2 Financial losses for mineworkers

Chapter 2 of this study discussed how mine closure directly impacts the broader community with less money being circulated. Chapter 4 showed how the loss of a mining job impacts families. Mine closure resulted in substantial financial losses for the households of the retrenched mineworkers. It transforms the family preferences, and it undoubtedly pressures a readjustment of interests, priorities, and needs. The respondents had to construct a budget designed to represent their financial position and began dealing with its new expenditure pattern with no or less income. Most of the respondents have used retrenchment packages to pay off debts accrued during their working time. Because they used their retrenchment package to pay their accounts, there was no future income. These retrenched individuals who were lucky enough to have working spouses received assistance from their spouses or even their family members are paying their debts. However, the mining companies provided them with retrenchment letters. One way of dealing with creditors was to use their retrenchment letters to show that they were struggling to meet their contractual obligations due to retrenchment. It appears that the respondents had the impression that the retrenchment letters received from the mine companies would write off their debt.

The respondents stated how they were struggling to get employment in or outside the mines (see Section 5.2.5). Therefore, the arrangements with the banks and creditors might be unsustainable. This study discovered that one respondent lost his house in a divorce matter, and the other two respondents had their house payment taken over by their wives. The other two respondents bought building material during their working contracts with the plan of building their homes. The whole retrenchment process derailed their plan, as they failed to execute their endeavours due to financial constraints.

### 5.3.3 Health and Wellness

Mine closure has the consequence that a mine's health infrastructure might not be available while mineworkers are likely to lose access to health care (see Chapter 2). Most of the respondents did not have medical insurance linked to their employment at the mines, but their income helped them, and their families obtain the right medical care. Furthermore, the mineworkers had access to the mine hospitals. As mineworkers, none of the respondents was dependent on state medical services.

Chapter 4 has shown that contracting TB is a real risk of working in the mining sector. Two respondents contracted TB while working at the mine, and they are required to undergo annual tuberculosis testing. They were both going through a screening process that was fully funded by their respective mines, which retrenched them. They claim that they were at that moment clear of TB. One respondent was diagnosed with silicosis post-retrenchment after going through the tests in Bongani hospital in Thabong (Welkom). The interviewee responded that the case is still pending under the government processes and waiting for the outcome.

This study's observation indicates that the people diagnosed with TB before working for the mines had the most probability of being infected again. Therefore, these people are vulnerable and must be screened frequently. This TB screening excises also causes so much discomfort to these individuals and their families.

Adequate diagnose or screening of TB provides an opportunity to treat it effectively when timely diagnosed by individuals. The periodic TB screening improves health outcomes compared to not diagnosing and treating the disease.

### 5.3.4 Skills Development

Chapter 2 emphasised the problem of unemployment that mine closure creates. The situation in the industry is that it has limited transferable skills. Chapter 3 reflected on the Mining Charter and SDA, the White Paper, and the SLP, which requires employees to be equipped with skills and training to secure employment post mine closure. However, the interview results show that the process of skills development prescribed by the regulators seldom occurs.

The SDA requires the employees to be able to operate with the skills and training they ought to have received during their employment contracts. The respondents received training in various mining environments, such as the shift boss training, mine-overseer, winch-training, kitchen management, and Abet 1,2,3 and 5.

Furthermore, for those employees who have received some training, such skills are typically related to the mining discipline, which means the skills they receive are only relevant in the mining industries and have little attraction outside the mining industry. This reality means that an

employee who received such skills and training post mine closure will only compete for a mining industry job. Finding a job once retrenched was difficult.

The findings show non-compliance regarding the mining charter, which calls for further promoting employees' skills development. They can be employable by other mining industries post-closure of the mine.

### 5.3.5 Finding employment after retrenchment

Closely linked to the skills issue discussed above was whether it was possible to find a job after retrenchment. Retrenchments affect the South African economy by adding to the current high unemployment rate. The negative effect of retrenchment of employees was catastrophic, mainly when regular incomes ceased, or the mineworkers used the severance packages. In some instances, former mineworkers had done little else outside the mine, and they expected to continue to work as miners throughout their lives. Retrenched workers have experienced nothing else beyond the mine throughout many cases, and they planned to continue working as miners throughout their lives. It was also difficult to find a replacement job.

Since the retrenchment, five of the respondents tried some businesses, and as their endeavour for their business failed, some began searching for new work. When their businesses struggled to make the anticipated profit, the owners got out of it and searched for new employment opportunities. Those looking for employment targeted work in the mining sector. Eight of the respondents searched for employment and hoped that the mining sector would employ them again. Many of the respondents wished to go back to the mines and never searched for jobs elsewhere. Jobs in the mining sector is no longer assured as it has been in the past. If they were unable to find jobs in the mining industry, they found employment with the subcontractors in the mining sector in which they were unhappy with contract conditions.

### 5.3.6 Financial Effects

Retrenchment, which may have varied consequences on one's financial well-being, inevitably causes economic deprivation, which eventually creates the root cause of human distress, such as the inability to provide financial support to the family. Retrenchments cause significant systemic disarray in the family structure, bringing about a transition in the family's everyday life. The South African mining industry is renowned for its institutionalisation of migrant labour. Although this has panned out over the last two to three decades, the evidence from our interviews shows that getting retrenched also reinforces migration. Most of the respondents were initially from outside the Free State Province.

## 5.4 RECOMMENDATIONS

The following study recommendations follow from the research.

### 5.4.1 Information sharing with victims of retrenchment

Retrenchments occur worldwide, are likely to persist for years, and may never be eliminated. The SLP guidelines require the mining companies to develop a standing procedure that deals with downscaling and retrenchment. These guidelines originate from Section 52 (1) of the MPRDA, National Social Plan Guideline of the Department of Labour (DoL) and Section 189 of the LRA. Mining companies should communicate better about both the retrenchment process and the process of selecting individuals to be retrenched. In this study, some interviewees indicated that they did not receive prior notice of their retrenchment. Therefore, they considered the process unfair. Thus, it is recommended that education and training organisations exercise, through interaction, to make sure that each employee is fully aware of what is happening.

The mining company's human resource department should organise a unique capacity-building workshop for the group that is due for retrenchment. The mining company takes them along regarding all the processes that will unfold. The mining company may develop fair selection criteria, followed by implementing the selection process to each employee concerned, then providing substantive and procedural justification for possible retrenchment, including the

possible redeployment. The mining companies should share information with the retrenchment victims and reduce their reliance on the mine's labour union to share this crucial information with the affected employees.

### 5.4.2 Retrenchment procedures

The LRA primarily governs retrenchment procedures in South Africa, and therefore, the appropriate processes and procedures are needed to inform and oversee retrenchment. Workers must receive training in pertinent company policies, as well as retrenchment procedures. Policy engagement is about awareness-raising. This training would provide them with a better understanding of the retrenchment process and what they need. Policies offer some confirmation that frequent issues require attention with a certain measure of consistency across the organisation. It is appropriate to stress the importance of policy-coaching as the mining companies' human resource department must do it before retrenchments occur.

The employees need to be aware of the policies on mine redeployment and retrenchment. These policies enforce specific responsibilities to the employees, which they may not have and educate them about what they should anticipate from their mining company and what external assistance is available to them and their employers. Accountable mine and well-informed employees can go a long way to creating a knowledgeable workforce.

### 5.4.3 Financial aspects

Mining companies discuss the financial aspects of retrenchment without understanding the human dimension. Thus, mining companies need to prepare human notions to discuss the financial aspect that may affect retrenchment victims. The mining company should provide affected individuals with adequate support. Providing support can give the affected workers a feeling of comfort and understanding of their company's care.

### 5.4.4 Counselling for the victims of retrenchment

Most of the respondents mentioned that they were very shocked after discovering that the human resource department has included their names in the list of people earmarked for retrenchment. There is no doubt that retrenchment brought along psychological consequences. The researcher discovered the respondents' expression of emotion during the interview process, as the respondents were narrating their stories and these expressions vary from one respondent to the other.

In all interviews, no single respondent mentioned that the mining companies provided them with counselling before or after the retrenchments. The social workers' unique skills can help address the needs related to work-related matters and possible unemployment.

Unfortunately, social workers may offer limited assistance, considering that more retrenchments are still coming due to mine downscaling and closure around the Free State Goldfield region.

### 5.4.5 The socio-economic status of retrenched employees

The well-being of the employee's lives is in their mental state and conscious experience, which resulted in them feeling the comfort of working, earning a salary, supporting their families, and realising their effectiveness. When these values and beliefs disappear, the person may not be in harmony with himself, the family, and the social structure. In mitigating this phenomenon, the researcher suggests that the retrenched employees must not regress in socio-economic status. They fall under the category of ordinary members of the communities who have never worked. The mining companies and government must develop a strategy as per the SLP directive; under the housing development plan that reduces the likelihood of retrenched employees finding themselves losing their houses. Thus, they must negotiate with the banks to shorten the bond repayment instalments and years of payment. The bond recipient should pay the bond's balance in an agreed reasonable portion between the government, mining company, and the employee to secure the house for the retrenched mine employee. The agreement should then state that, where a retrenched employee gets re-hired and makes an income above the minimum threshold as per the BCEA, the retrenched employee must pay back the government's money. This above-suggested housing strategy complies with the Mining Charter policy, which emphasises that a proper housing

development strategy for mineworkers should entail post-mining closure in such a way that an employee might not see himself or his family on the street.

### 5.4.6 Entrepreneurship after retrenchment

The occurrence of the retrenchment disrupted the respondents' plans. More often than not, the thought of attempting to enter into entrepreneurship is becoming an opportunity for some respondents, because they received their retrenchment packages as a lump sum, and they knew that they are not going to receive a consistent income anymore. Most retrenched individuals tried to engage in small businesses as entrepreneurs.

The DMR guidelines regarding the Social and Labour Plan, as required by regulation 46 of the MPRDA, need all mining companies to develop the Human Resource Development Plan. Subsequently, the Human Resource Development Plan should incorporate portable skills to contribute to life beyond the mining environment. Mining companies must provide business management training to their employees. They should be developing skills development in business management and financial management course for the employees facing the retrenchment process.

## 5.5 FURTHER RESEARCH

This study aimed to re-examine the experiences of former mineworkers who lost their jobs due to mine closure in Matjhabeng Local Municipality (Free State Goldfields). The lack of counselling of workers before retrenchments remains a problem. None of the respondents mentioned that they received any form of counselling before or post retrenchments. It is against this backdrop that the researcher recommends future research as follows.

***"An investigation regarding workers' counselling before or after retrenchment in the mining industry."***

The above suggested future research topic is essential because it may lead to new research on retrenched mineworkers.

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# ANNEXURES

# ANNEXURE 1: ETHICS APPROVAL LETTER


**GENERAL/HUMAN RESEARCH ETHICS COMMITTEE (GHREC)**

01-Jul-2020

Dear Mr Jan Cloete

**Application Approved**

Research Project Title:
**Mine closure narratives in South Africa**

Ethical Clearance number:
**UFS-HSD2020/0653/3006**

We are pleased to inform you that your application for ethical clearance has been approved. Your ethical clearance is valid for twelve (12) months from the date of issue. We request that any changes that may take place during the course of your study/research project be submitted to the ethics office to ensure ethical transparency. furthermore, you are requested to submit the final report of your study/research project to the ethics office. Should you require more time to complete this research, please apply for an extension. Thank you for submitting your proposal for ethical clearance; we wish you the best of luck and success with your research.

Yours sincerely

**Dr Adri Du Plessis**
**Chairperson: General/Human Research Ethics Committee**

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## ANNEXURE 2: INFORMED CONSENT FORM

UNIVERSITY OF THE FREE STATE
UNIVERSITEIT VAN DIE VRYSTAAT
YUNIVESITHI YA FREISTATA
UFS UV

**RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM**

**DATE**

June 2020

**TITLE OF THE RESEARCH PROJECT**

Mine closure narratives in South Africa

**RESEARCHERS' NAMES AND CONTACT NUMBERS:**

| | | |
|---|---|---|
| Boitumelo Joy Alec | 0836379759 | Contact number |
| Mmboneni Steven Magadzu | 2016345080 | Contact number |

**FACULTY AND DEPARTMENT:**

Faculty of Economic and Management Sciences
Centre for Development Support

**STUDY LEADERS' NAME AND CONTACT NUMBER:**

| | |
|---|---|
| Prof Lochner Marais (0404707) | 051 401 2978 |
| Mr Jan Cloete (0851348) | 051 401 3599 |

**WHAT IS THE AIM/PURPOSE OF THE STUDY?**

To gather stories on how former mineworkers manage to sustain their livelihoods after losing jobs in the mining industry

**WHO IS DOING THE RESEARCH?**

Two students who are doing research for the degree Master of Development Studies.

**HAS THE STUDY RECEIVED ETHICAL APPROVAL?**

This study has received approval from the Research Ethics Committee of UFS. A copy of the approval letter can be obtained from the researcher.

**Approval number:** Insert approval number

**WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?**

We have been referred to you by someone else who has lost their job in the mining industry and taken part in the study. As someone who has experience in working in the industry and losing your job, we would like to hear your story.

**WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?**

Participation will be in the form of two interviews. The first will be for one hour, telling us your story. After we have had time to write up your story, we will return to ask some more questions to clarify some information. The second interview should only take about 20 minutes

**CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?**

Participation in the study is voluntary, there is no penalty for non-participation, and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You are free to withdraw at any time and without providing a reason, and upon your request, the information you have provided will be destroyed.

**WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?**

Unfortunately, we cannot provide you with any benefits, material or otherwise, for your participation in the project. Your story will, however, help us understand the impact of job losses in the mining industry.

**WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?**

Beyond the 80 minutes it will take to take part in the two interviews, we do not foresee any inconvenience or risk.

**WILL WHAT I SAY BE KEPT CONFIDENTIAL?**

Your name will not be recorded, anywhere and no one will be able to connect you to the answers you give. Your responses will be given a pseudonym, and you will be referred to in this way in the data, any publications, or other research reporting methods such as conference proceedings. Your answers will only be viewed by the interviewer and their supervisors. Your responses may be reviewed by people responsible for making sure that research is done correctly, such as members of the Research Ethics Committee. Otherwise, records that identify you will be available only to people working on the study, unless you give permission for other people to see the records.

**HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?**

All electronic information will be stored on a password-protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. The information will be deleted after five years have passed.

**HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?**

If you would like to be informed of the final research findings, please contact the interviewer. Should you require any further information or you have concerns about how the research has been conducted, please contact the supervisors.

**Thank you for taking the time to read this information sheet and for participating in this study.**

**CONSENT TO PARTICIPATE IN THIS STUDY**

I, _____ (participant name), confirm that the person asking my consent to take part in this research has told me about the nature, procedure, potential benefits and anticipated inconvenience of participation.

I have read (or had explained to me) and understood the study as explained in the information sheet. I have had sufficient opportunity to ask questions and am prepared to participate in the study. I understand that my participation is voluntary and that I am free to withdraw at any time without penalty. I am aware that the findings of this study will be anonymously processed into a research report, journal publications and/or conference proceedings.

I agree to the recording of the interview.

I have received a signed copy of the informed consent agreement.

Full Name of Participant: _____

Signature of Participant: _____ Date: _____

Full Name(s) of Researcher(s): _____

Signature of Researcher: _____ Date: _____

## ANNEXURE 3: INTERVIEW SCHEDULE

**Phase 1:**

*Question 1* (20 min): Tell us the story of being employed at a mine *(Briefly explain how you initially got a mining job, how long you worked in mining, when did you lose the mining job and how you lost that job? What were the consequences for you and your family after losing this mining job?*

Answer these questions by making a trying to allocate time frames to the main activities.

*Question 2* (40 min): Tell us your story after losing your job at a mine (*Did you apply for other jobs? (Discuss the various applications and levels of success). How easy was it to find another job? What various activities did you undertake to provide? How successful have you been in finding an alternative livelihood after your mining job? How easy or difficult was it to make a living after mining?)*

Answer these questions by trying to allocate time frames to the main activities.

**Phase 2:**

All interviews will be transcribed and follow-up questions will be clarified with the participants

*Questions (20 min):*

1. How prepared were you to make a living after mining?
2. What helped you to make a living after mining?
3. What skills did you not have to make a living after mining
4. Document the following:
   - The age of the worker
   - Where the interview was conducted
   - Gender
   - Is the person married?
   - Is there evidence of having been or still is a migrant worker?

**ANNEXURE 4: LETTER FROM LANGUAGE EDITOR**

Michelle Woolley

WRITER EDITOR PROOFREADER TRANSLATOR

Associate Member of Professional EDITORS' Guild (PEG)

# CERTIFICATE OF EDITING

This letter certifies that I have edited the research proposal detailed below.

Title:

MINE CLOSURE NARRATIVES IN THE FREE STATE GOLDFIELDS, SOUTH AFRICA

Author:

BOITUMELO JOY ALEC

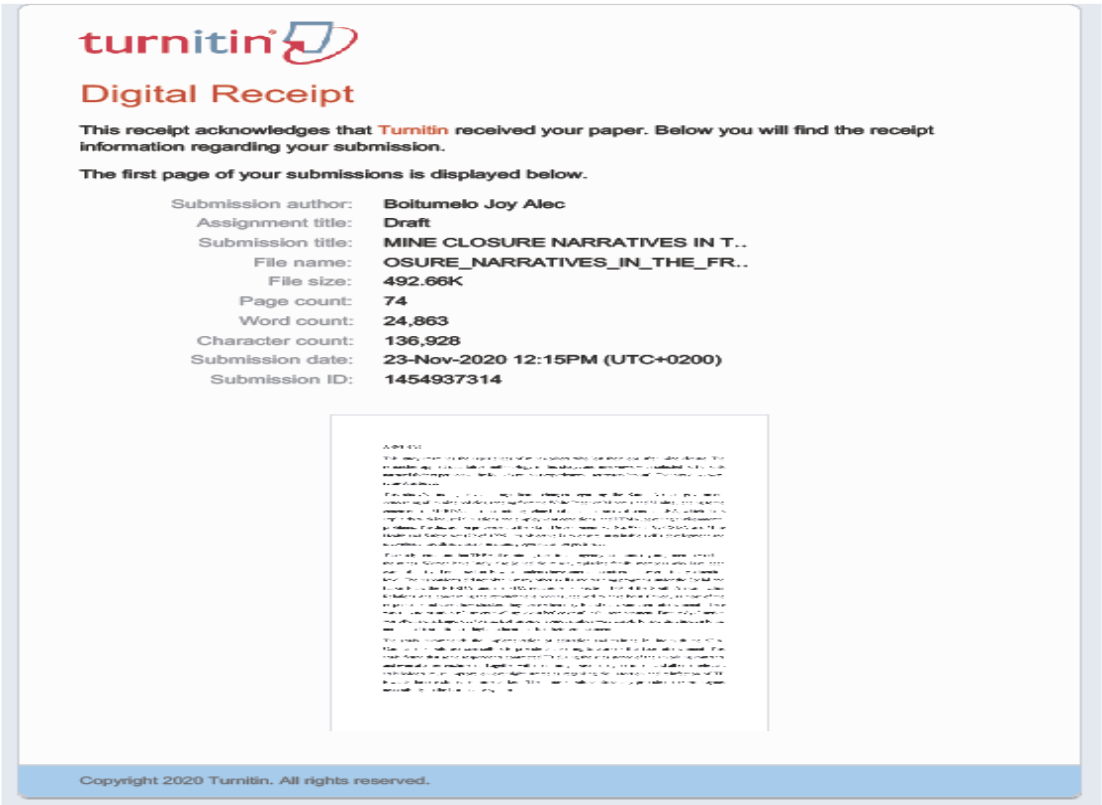
Regards
Michelle Woolley

Date: 14/11/2020

michellewoolley12@gmail.com
083 298 2077

Professional EDITORS' Guild

## ANNEXURE 5: PLAGIARISM RECEIPT AND REPORT



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