

# Community perceptions of sustainable development: implications for an approach to closure mining

TM Nell

24329649

Mini-dissertation submitted in *partial* fulfillment of the requirements for the *Magister Degree* in Management and Development: Corporate Social Responsibility at the Potchefstroom Campus of the North-West University

Supervisor: Prof JF Cronjé

August 2015

## ABSTRACT

The closure of a mine is an inevitable event in the lifecycle of a mining operation and one that can have massive environmental, social and economic consequences for mining communities in particular. The ultimate goal of mine closure should be sustainable development and, while adequate planning, risk assessment and goal setting influence the mine closure process, the relationships between stakeholders, especially those between mining companies and communities, lie at the heart of implementing sustainable closure.

Mining communities are affected by nearby mining operations and, although they can enjoy the economic benefits of the industry, they also bear the brunt of the negative social and environmental impacts. The focus on sustainable development and corporate social responsibility in addition to the increased power of communities in recent years has forced mining companies to consider the interests of this stakeholder group. The community's perceptions and expectations of sustainable development can, however, differ from those of the mining company and have an influence on the stakeholder engagement process.

The current study investigates the mining community of Kagiso's perceptions of sustainable development and the implications of these perceptions for the implementation of Mintails Mogale Gold Mine's approach to mine closure. Stakeholder engagement issues are brought to the fore and recommendations for improving the engagement between the mine and the community are proposed.

**Keywords:** Corporate Social Responsibility (CSR); mine closure; mining; mining communities; people-centred approach; stakeholder engagement; sustainable development

## OPSOMMING

Die sluiting van 'n myn is 'n onafwendbare gebeurtenis in die lewensiklus van 'n mynbouonderneming en kan massiewe omgewings-, maatskaplike en ekonomiese gevolge, vir myngemeenskappe in die besonder, inhou. Die uiteindelige doelwit van mynsluiting is volhoubare ontwikkeling en hoewel toereikende beplanning, evaluering en doelwitstelling die mynsluitingsproses beïnvloed, is dit die verhouding tussen belanghebbendes, en veral tussen mynmaatskappye en gemeenskappe, wat van kernbelang vir die implementering van suksesvolle sluiting is.

Myngemeenskappe word deur nabygeleë mynbedrywighede geraak en hoewel hulle die ekonomiese voordele van die bedryf kan geniet, kom die grootste deel van die las van negatiewe maatskaplike en omgewingsimpakte ook op hulle neer. Die fokus op volhoubare ontwikkeling en korporatiewe maatskaplike verantwoordelikheid, tesame met die verhoogde mag van gemeenskappe die afgelope aantal jare, het mynmaatskappye gedwing om die belange van hierdie groep belanghebbendes in aanmerking te neem. Die gemeenskap se persepsies en verwagtinge wat betref volhoubare ontwikkeling kan egter van dié van die mynmaatskappy verskil, en het 'n invloed op die proses van belanghebbersraadpleging.

Hierdie studie ondersoek die myngemeenskap van Kagiso se persepsies van volhoubare ontwikkeling en die implikasies van hierdie persepsies vir Mintails Mogale Gold Mine se benadering tot mynsluiting. Kwessies wat betref belanghebbersraadpleging word na vore gebring en aanbevelings ter verbetering van raadpleging tussen die myn en die gemeenskap word voorgestel.

**Sleutelwoorde:** Korporatiewe Maatskaplike Verantwoordelikheid (KMV); mynsluiting; mynbou; myngemeenskappe; mensgesentreerde benadering; belanghebbersraadpleging; volhoubare ontwikkeling

## DECLARATION

I, Tarryn Nell, hereby declare that the work in this report is my own, that it is based on original research work conducted by me and that it has not been submitted elsewhere for the purpose of obtaining a degree or diploma, either in part or in full.

A handwritten signature in dark ink, appearing to read 'Tarryn Nell', is written in a cursive style.

Signature of student

Date: 30 April 2015

## **ACKNOWLEDGEMENTS**

I am grateful for everyone who inspired, supported and assisted me throughout this process and would like to take this opportunity to acknowledge the following people:

- My family, friends and colleagues for your continual encouragement, your interest in my study and belief in my abilities.
- Prof. Freek Cronjé for your guidance and input.
- The community members of Kagiso for sharing your stories with me so openly and for making me feel so welcome in your community.
- The management of Mintails Mogale Gold Mine; a special thanks to Prof. Anthony Turton and Mr. Kabelo Mphake.
- The members of the Mogale City Mining Forum for your assistance.
- The language editor, Michelle Coetzee.

## LIST OF ABBREVIATIONS

AMD	Acid mine drainage
ASM	Artisanal and small-scale mining
BBBEE	Broad Based Black Economic Empowerment
CC	Corporate citizenship
CSI	Corporate social investment
CSMI	Centre for Sustainability in Mining and Industry
CSR	Corporate Social Responsibility
EEA	European Economic Area
EMF	Environmental Management Forum
FPIC	Free, prior and informed consent
FSE	Federation for a Sustainable Environment
GMI	Global Mining Initiative
ICMMI	International Council on Mining and Metals
IISD	International Institute for Sustainable Development
MMSD	Mining, Minerals and Sustainable Development Project
MPRDA	Mineral and Petroleum Resources Development Act
MRA	Mine residual area
NEMA	National Environmental Management Act
NOAMI	National Orphaned/Abandoned Mines Initiative
NWU	North-West University
SD	Sustainable development
SE	Stakeholder engagement

SLO	Social License to Operate
SLP	Social and Labour Plan
TBL	Triple bottom line
UNIDO	United Nations Industrial Development Organization
WCED	World Commission on Environment and Development

# TABLE OF CONTENTS

<b>ABSTRACT .....</b>	<b>i</b>
<b>OPSOMMING .....</b>	<b>ii</b>
<b>DECLARATION .....</b>	<b>iii</b>
<b>ACKNOWLEDGEMENTS .....</b>	<b>iv</b>
<b>LIST OF ABBREVIATIONS .....</b>	<b>v</b>
<b>TABLE OF CONTENTS.....</b>	<b>vii</b>
<b>LIST OF PHOTOS .....</b>	<b>x</b>
<b>CHAPTER ONE: INTRODUCTION AND PROBLEM STATEMENT .....</b>	<b>1</b>
<b>1.1 Introduction .....</b>	<b>1</b>
<b>1.2 Background and Problem Statement .....</b>	<b>3</b>
<b>1.3 Research Objectives .....</b>	<b>4</b>
<b>1.4 Central Theoretical Argument .....</b>	<b>5</b>
<b>1.5 Research Methodology .....</b>	<b>6</b>
1.5.1 Literature Review.....	6
1.5.2 Empirical Study.....	6
<b>1.6 Ethical Considerations.....</b>	<b>9</b>
<b>1.7 Limitations .....</b>	<b>10</b>
<b>1.8 Significance of Study .....</b>	<b>10</b>
<b>1.9 Chapter outline .....</b>	<b>11</b>
<b>CHAPTER TWO: MINE CLOSURE: A CONCEPTUALISATION.....</b>	<b>12</b>
<b>2.1 Introduction .....</b>	<b>12</b>
<b>2.2 Sustainable Development (SD).....</b>	<b>12</b>



2.2.1	Conceptual Overview of SD.....	13
2.2.2	Dimensions of SD.....	14
2.2.3	Sustainable Development in the Mining Sector.....	16
2.2.4	People-Centred Approach to Development.....	20
<b>2.3</b>	<b>Corporate Social Responsibility (CSR).....</b>	<b>22</b>
2.3.1	Defining and Conceptualising CSR.....	22
2.3.2	Dimensions of CSR .....	23
2.3.3	CSR in South Africa.....	26
2.3.4	CSR in the South African Mining Sector .....	28
<b>2.4</b>	<b>Stakeholder Engagement (SE).....</b>	<b>29</b>
2.4.1	Conceptual Overview of SE .....	30
2.4.2	Stakeholder Theory .....	31
2.4.3	Stakeholder Engagement in Mining .....	32
<b>2.5</b>	<b>Mine Closure.....</b>	<b>33</b>
2.5.1	Definition and Scope of Mine Closure.....	34
2.5.2	Principles of Mine Closure .....	35
2.5.3	Legislative Framework for Mine Closure in South Africa.....	37
2.5.4	Successful Mine Closure Projects: A Global Picture.....	38
2.5.5	Introduction of Mintails Mogale Gold.....	41
<b>2.6</b>	<b>Conclusion.....</b>	<b>42</b>
<b>CHAPTER THREE: EMPIRICAL RESEARCH FINDINGS: MINE CLOSURE AND A PEOPLE-CENTRED APPROACH TO SD, CSR AND SE.....</b>		<b>43</b>
<b>3.1</b>	<b>Introduction .....</b>	<b>43</b>

<b>3.2</b>	<b>Findings .....</b>	<b>43</b>
3.2.1	Sustainable Development.....	43
3.2.2	Corporate Social Responsibility .....	49
3.2.3	Stakeholder Engagement .....	50
3.2.4	Mine Closure .....	54
<b>3.3</b>	<b>Conclusion.....</b>	<b>56</b>
<b>CHAPTER FOUR: CONCLUSION AND RECOMMENDATIONS.....</b>		<b>57</b>
<b>4.1</b>	<b>Introduction .....</b>	<b>57</b>
<b>4.2</b>	<b>Research Objectives .....</b>	<b>57</b>
4.2.1	Research Objective 1: Define and conceptualise the closure mining approach and its association with sustainable development, corporate social responsibility and stakeholder engagement .....	58
4.2.2	Research Objective 2: Assess the community’s perceptions of sustainable development.....	58
4.2.3	Research Objective 3: Identify key issues in stakeholder engagement between the mine and community, and explore the importance of a people-centred approach to development.....	59
4.2.4	Research Objective 4: Make recommendations for improving the engagement between the mine and the community, based on a people-centred approach to development.....	59
<b>4.3</b>	<b>Areas for Future Research.....</b>	<b>61</b>
<b>4.4</b>	<b>Final Remarks.....</b>	<b>61</b>
<b>BIBLIOGRAPHY.....</b>		<b>63</b>
<b>ANNEXURE 1 – INTERVIEW CONSENT FORM.....</b>		<b>72</b>
<b>ANNEXURE 2 – FOCUS GROUP CONSENT FORM .....</b>		<b>73</b>

## LIST OF PHOTOS

Photo 3.1: Kagiso Community, Ward 14.....	45
Photo 3.2: Adit allowing access to shallow underground workings .....	45

# CHAPTER ONE

## INTRODUCTION AND PROBLEM STATEMENT

### 1.1 INTRODUCTION

“The truth is that sustainability implies something quite different depending on which side of the bulldozer you are on,” as Andy Whitmore (2006:309) comments. Whitmore is referring to the fact that the many human activities that bring advancement and “development” to an area can also be environmentally and socially disruptive (Ololade & Annegarn, 2013:568).

The concept of sustainable development, while not new, has consequently been vigorously promoted in recent years, and the relationship between the benefits and detrimental effects of perceived growth activities has been strongly emphasised. Sustainable development has been defined as “[d]evelopment that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development, 1987:15). This form of bringing about change is intended to establish harmony between the environment, society and the economy – the “triple bottom line”. Historically, the goals of sustainable development were not taken into account in the majority of cases when South African mining operations were begun. In particular, the long-term impacts on communities in mining areas long after the mines would be closed were not considered.

Mining is an integral part of South Africa’s economy and history, and constitutes one of the country’s most contentious contemporary issues. Despite the economic contributions of the industry, mining has had profoundly negative impacts on the environment and social fabric of the country.

Moreover, the perceived benefits of mining can last only as long as the mine is in operation. Mining is a temporary activity and, although the closure of a mine might be planned, mine closure is more often than not premature, as Laurence (2006:285) notes. Mines close for a number of reasons, the most common being economic, geological and geotechnical ones, equipment or mechanical failure, regulatory pressures or community opposition. The closure of a mine can have profound consequences: an environment that has been stripped of resources and is not able to support ecosystems, unemployment, the disintegration of communities, the escalation of social ills, the collapse of the local business community and a loss of support for welfare organisations that relied on Corporate Social Responsibility (CSR) funding (Laurence, 2006:285). The closure of a mine therefore has social, environmental and economic consequences, and thus impacts on the pursuit of sustainable development.

To mitigate the consequences of mine closure, and to protect communities and the State from having to bear the costs of the impacts of mining, the South African government has put legislation in place to regulate the mining industry. Section 24 of the Constitution (1996) states in this regard that all South Africans have the right to an environment that is not harmful to their health or well-being. In line with this Constitutional right, the Mineral and Petroleum Resources Development (MPRD) Act 28 of 2002 is aimed at ensuring that South Africa's mineral and petroleum resources are mined in a sustainable manner and in such a way as to promote social and economic development. Regulation 62 of the Act requires – as a prerequisite for the granting of mining rights – mining companies to prepare a detailed closure plan describing how environmental and social high risk activities will be avoided, and how unavoidable impacts will be minimised. The Act also specifies the submission of a Social and Labour Plan (SLP), in which a mine closure plan and local economic development targets in the area have to be key elements.

Sutton and Weiersbye (2007:94) are of the opinion that the practical implementation of the closure plan is achievable only through consultation with local planning authorities, as well as through public participation and engagement. Michell and McManus (2013:438) support the advancement of the involvement of local communities as this enables development that is well informed and applicable. In terms of this perspective, stakeholder engagement is key to the success of a mine closure plan and sustainable development initiatives. An effort by mining companies to respond to stakeholder needs and expectations is further promoted through the obtaining and maintenance of a Social License to Operate (SLO); this is routine practice in the mining industry. A SLO has been described as a meaningful relationship between stakeholders that is based on trust and a set of demands, expectations or guidelines regarding how a mining company should operate on a range of societal levels (Gunningham *et al.*, 2004:307; Moffat & Zhang, 2014:61). In the process of obtaining a SLO, stakeholder groups will give or withhold their consent for mining practices that affect the social, economic and environmental aspects of their lives. Free, prior and informed consent (FPIC) is the term given to the right of indigenous peoples to give or withhold this consent (Mahanty & McDermott, 2013:406).

In short, the above overview introduces the concept of sustainable development and CSR, as well as the necessity of preserving resources for future generations. Mining, a key economic activity in South Africa, can be detrimental to the sustainability of social, economic and environmental structures of affected communities if not managed responsibly. In particular, the closure of a mine can have dire consequences for sustainable development. Regulations have been put in place to mitigate this. They include social and labour plans and the key to the success of these plans is stakeholder engagement. This engagement is also promoted through a SLO.

To create a context for the research, some important considerations are briefly outlined before proceeding to the problem statement.

## **1.2 BACKGROUND AND PROBLEM STATEMENT**

Australian company Mintails bought Mogale Gold mine out of liquidation in 2005. The mine, now known as Mintails Mogale Gold, is situated on the Witwatersrand goldfields near Krugersdorp, an area in which mining has taken place since 1886. The environment and the inhabitants of this area have therefore been impacted by the mining industry for more than a century (Mintails Mining South Africa, 2014:1-23). Mintails is consequently faced with the following issues:

- A landscape dominated by tailings dams (mine dumps) that are rich in uranium;
- The presence of mine voids that fill with water, which seeps to the surface as acid mine drainage (AMD);
- The geotechnical instability of the area due to mining operations;
- The presence of illegal artisanal miners who sell to criminal syndicates;
- The presence of human settlements, specifically the Kagiso and Tudor communities, on or in close proximity to the land owned by the mine and mine residue area (MRA); and
- The pressure to create and maintain jobs in an already failing economy and industry.

The mine proposes to manage the above-mentioned risks through a new approach to mine closure, namely closure mining, which is distinct from the traditional approach that favours short-term profits over sustainability. Closure mining aims to establish and nurture partnerships with key stakeholders, including government, the local community and non-governmental organisations (NGOs), and to rehabilitate the landscape and ecosystem in support of sustainable ecological development.

Mintails has identified three constraints to the rehabilitation process. These are set out in their closure mining plan (Mintails Mining South Africa, 2014:1-23) and include the following:

- The lack of a scientific, engineering and technological basis for rehabilitation;
- The lack of a common vision and cooperation between stakeholders; and
- The lack of clarity on the definition of a post-closure landscape.

To address the lack of a common vision and cooperation between stakeholders, the mine established an environmental management forum (EMF) in 2013 to drive stakeholder engagement, but the forum failed due to conflict between the parties concerned. The Mogale

City Mining Forum was subsequently formed. In January 2014 the community of Kagiso embarked on a series of protests, citing environmental, safety and health violations by the mine and blaming the mine for structural damage to their houses. It appeared that the relationship between the mine and the community was antagonistic and did not offer an enabling environment for the success of closure mining.

The specific issue that was investigated in this study was the community's perceptions of sustainability and the implications of these for the closure mining approach. It was likely that the mine and the community had conflicting viewpoints of sustainability and that these created stumbling blocks for meaningful partnerships and engagement towards achieving the goal of closure mining, namely sustainable development.

The study was guided by the following research questions:

- What is mining for closure and how does it link to sustainable development and CSR?
- What are the perceptions of the community on sustainable development and what role does the community play in the mining for closure approach?
- What are the current issues in stakeholder engagement at the research setting in terms of mine closure?
- What role can a people-centred approach to development play in the area in terms of mine closure?
- How can a common vision for sustainable development – in line with a human-centred approach – be achieved?

### **1.3 RESEARCH OBJECTIVES**

The objectives of this study were to:

- Define and conceptualise the closure mining approach and its association with sustainable development, CSR and stakeholder engagement;
- Assess the community's perceptions of sustainable development;
- Identify the key issues in stakeholder engagement between the mine and the community, and explore the importance of a people-centred approach to development in terms of mine closure; and
- Make recommendations for improving the engagement between the mine and the community, based on a people-centred approach to development.

## 1.4 CENTRAL THEORETICAL ARGUMENT

Development can be approached from different perspectives, through the lens of both macro- and micro-development theories. A micro-development perspective, which is the people-centred approach, is distinct in that it defines development as not only the satisfaction of basic needs but also in terms of the right of individuals to lead a meaningful life (Coetzee, 2001:118). Development is also defined by people who find themselves in a state of underdevelopment and the basic assumption is that all people value respect and want to be treated as worthy individuals (Coetzee, 2001:118). The micro-development perspective offers a new discourse on development that is marked by keywords such as: shareholder, accountability, transparency, human rights, environment, civil society, participation, empowerment, diversity, well-being and ownership. Actions aimed at sustainable development, following a people-centred approach, therefore encourage and value the participation and engagement of individual community members (Cronjé & Chenga, 2009:417).

The use of the word “stakeholder” is typically associated with the people-centred approach. This concept is understood, within the business context, to denote those who might be affected by any given business activities or those who might influence the development and profits of an enterprise. Stakeholders therefore have a level of power over the business when they are in a position to withhold or threaten to withhold resources that are required by the business (Thorne *et al.*, 2008:63-64). Stakeholder theory, originally formulated by R. Edward Freeman, is concerned with the issues of value creation and trade, working from the premise that “business can be understood as a set of relationships among groups which have a stake in the activities that make up the business” (Freeman *et al.*, 2010:4). According to Andriof *et al.* (cited by Blowfield & Murray, 2008:162), contemporary stakeholder theory involves the “interactive, mutually engaged and responsive relationships” that “establish the very context of doing business and create the groundwork for transparency and accountability”. Stakeholder engagement, in the mining context, is further defined as a process of continual communication between the mine and the community; a relationship that leads to the community being informed about plans as well as being empowered to be able to modify the plans (Whitmore, 2006:313). The acknowledgment of the importance of stakeholder engagement has also resulted in the promulgation of cultivating a SLO and obtaining FPIC in today’s developmental discourse.

Stakeholder theory and the people-centred approach to development complement each other and, in the student’s view, offer valuable principles that, if incorporated into Mintail’s action plan, will enable the mining company to develop meaningful partnerships and engagement with the surrounding communities. This will, in turn, bring Mintails one step closer to its goal of achieving



sustainable closure mining. The researcher therefore approached Mintails' difficulties from the perspective of stakeholder theory and the people-centred approach.

## **1.5 RESEARCH METHODOLOGY**

Research methodology is defined by Fouché and Delport (2005:71) as the way in which to solve problems or, more specifically, the research process to be followed in order to solve the problem(s). In order to answer the research questions a qualitative research design was followed. This design determined the selection of respondents, the collection of data, the analysis of data and the communication of the findings (Kumar, 2014:123). Qualitative research aims to “understand, explain, explore, discover, clarify situations, feelings, perceptions, attitudes, values, beliefs and experiences of a group of people” (Kumar, 2014:132-133), and was well-suited to the study under question.

The research methodology for this study involved two research procedures, namely a literature review and an empirical study.

### **1.5.1 Literature Review**

A comprehensive literature study was conducted to gain a clearer understanding of the research problem under investigation. The literature review focused on defining and conceptualising the closure mining approach, sustainable development, corporate social responsibility, the people-centred approach to development and stakeholder engagement.

The researcher consulted the following databases in the research review:

- Catalogue of theses and dissertations of South African Universities;
- Catalogue of books: Ferdinand Postma Library, North-West University;
- Journal articles retrieved from databases, including EBSCO, JSTOR and ScienceDirect;
- The Internet;
- Documents by Mintails Mogale Gold Company;
- Publications by government; and
- Documents regarding other related and relevant research (for example conference proceedings and policy documents).

### **1.5.2 Empirical Study**

Data was also sourced through an empirical study.

### **1.5.2.1 Empirical Research Design**

The research was conducted in and around the community of Kagiso and Mintails Mine. It was expected that the respondents would have varying literacy levels and understandings of key concepts. For those reasons a qualitative research method was chosen. The data collection techniques of semi-structured interviews, focus groups and personal observation were used.

The qualitative method was well suited to this study as it allowed the respondents to give richer explanations of their views, it made follow-up questions possible and provided the opportunity to bridge language barriers by requesting that points be clarified.

In keeping with the qualitative approach, inductive reasoning was mainly used to draw conclusions and make recommendations. Core theoretical concepts were, however, introduced through a deductive approach, with the literature review as the point of departure.

### **1.5.2.2 Data Collection**

To determine the community's perceptions of sustainable development using a qualitative approach, focus groups were assembled and the participant' observations were sourced. The aim of the techniques employed was to encourage the participants to describe the world in which they lived, including the current state of development in their community and the developmental state they envisioned (focusing on social, economic and environmental aspects). The role and contribution of the mine was explored in semi-structured interviews with members of Mintails' management team, while the view of an environmental activist (CEO of the NGO the Federation for a Sustainable Environment) was also captured using this method. These data collection techniques were used to arrive at an understanding of the characteristics of the current relationship between the mine and the community. They encouraged the participants to share their expectations regarding stakeholder engagement.

The theoretical rationale for the use of the above-mentioned techniques included the following: focus group discussions hold the potential to enable a researcher to gain insight into what community members think, feel and experience, in this case about sustainable development. Focus groups offer a less threatening environment than one-on-one interviews. Due to the fact that the researcher was foreign to the community, the members could have felt uncomfortable sharing their thoughts privately, while the safety of the group setting would encourage engagement. They were therefore expected to be more forthcoming about their personal experiences in the group context. This did indeed turn out to be the case. Semi-structured interviews were held with management members from Mintails Mine and an environmental activist because, as Greeff (2005:296) indicates, semi-structured interviews allow the

researcher to gain a detailed picture of a participant's beliefs and perceptions of phenomena. This technique also offers flexibility and was therefore well suited to the study as it focused on issues that could be classified as controversial.

The technique of participant observation allowed the researcher to observe the activities of the mine and the community, as well as the physical setting in which such activities took place (Strydom, 2005:275). Patton (2002:21) is of the opinion that direct participation in and observation of the phenomenon of interest may be the best research method to understand the complexities of situations. Site visits were made to Kagiso community, Mintails Mine and surrounding areas that have been impacted by mining. Furthermore, the researcher attended two mining forum meetings. The above allowed the researcher to gain insight into the lived experiences and the life world of the participants, and to validate the information gathered through other data collection methods. This technique was therefore well suited to researching the environmental component of sustainable development within the context of this research question.

Two focus group sessions were held; the purpose of the group discussions was to determine the community's perceptions of sustainable development and to hear their views on stakeholder engagement, CSR and mine closure. The group discussions took place in the Kagiso community in Ward 14 and Ward 19 respectively. Ward 14 is situated closest to Mintails Mine and nine community members from this ward took part in the focus group discussions, while seven members from Ward 19 participated. Participants were recruited with the help of a community representative who serves on the mining forum and a councillor from the local government structure. Additional focus group sessions would have been beneficial to the study but failed attempts, time constraints and logistical challenges made it impossible to assemble more participants. The contributions of the group members enabled the researcher to gain an understanding of their experiences of living in a mining community, their development priorities and views on sustainable development.

Focus group discussions and interviews were conducted in English. Field notes and observations were taken by the researcher, and all the interviews and discussions were recorded, with the consent of the participants.

### **1.5.2.3 Data Analysis**

The interviews and discussions with the participants were transcribed. The resultant data was then analysed and interpreted using the guidelines for the process of qualitative data analysis suggested by De Vos (2005:334):

1. Planning for recording of data;
2. Data collection and preliminary analysis;
3. Managing or organising the data;
4. Reading and writing memos;
5. Generating categories, themes and patterns;
6. Coding the data;
7. Testing the emergent understandings;
8. Searching for alternative explanations; and
9. Report writing.

Whitley and Kite (2002:391-392) suggest two strategies for analysing qualitative data: pattern matching and explanation building. Explanation building was well suited to this study and required that the researcher identify trends in the data. The data was examined for key categories of information or central themes around which the data set was structured, such as personal experiences and ideas on sustainable development, corporate social responsibility, stakeholder engagement and mine closure. These categories were then used to determine patterns. Consistencies in behaviour and responses to questions were also taken into account. The researcher then drew on the insights gained in the literature review and re-contextualised the data (information gained from the patterns) using the people-centred approach, thus giving meaning to the patterns.

## **1.6 ETHICAL CONSIDERATIONS**

The North-West University (NWU) has an active and rigorous process of scrutiny of the ethical implications of individual research projects. As part of this process a Research Ethical Application Form was submitted to and approved by the Ethical Committee. The research was conducted within the parameters of the ethical code of conduct prescribed by this committee.

Ethical approval was sought from all the participants; the study objective was explained, the expectations of the participants clarified, and anonymity and confidentiality were assured. Consent forms (see A 1 & 2) were completed by the respondents and participation was entirely voluntary, and the option of withdrawing from the study at any time was made known to them.

Furthermore, the Mogale City Mining Forum that is composed of representatives from the mine and the communities under study served as gatekeepers for the groups from whom the data was collected. In line with ethical guidelines, the mining forum was approached to assist in

establishing contact with the groups under study but could not give consent for the respondents' participation in the study because this was the prerogative of each participant.

## **1.7 LIMITATIONS**

The following were identified as limitations of the study. Mintails Mogale Gold Mine's closure mining approach is currently being developed and, due to the evolving nature of the approach, it could not be fully documented. Furthermore, the researcher had to rely on the assistance of community leaders and representatives to secure participants for the focus group discussions. This dependence restricted the scope of the study.

## **1.8 SIGNIFICANCE OF STUDY**

The ever increasing awareness of the damaging effects of mines on the environment and social fabric is resulting in pressure from residents and advocacy groups. These advocates fight for mines to accept accountability for their actions and bring about sustainable development. The protests in the Kagiso community, which featured prominently in news footage in January 2014, are illustrative of this trend. The community, as a stakeholder group, holds a certain amount of power and the survival of the mining industry depends on the nature of engagement between the mines and stakeholders.

This study facilitated the formulation of recommendations that could contribute to an improvement in the stakeholder engagement between Mintails and the community of Kagiso. In particular, pointers are provided regarding strategies to facilitate a working relationship and partnership that will enable Mintails and the community to work together towards sustainable development. This in turn means that, if these recommendations are embraced, the mine's new approach to closure mining would be more likely to succeed than is the case at present. Furthermore, the findings of this study will contribute towards a better understanding of the complexity of stakeholder engagement and how the diverse perceptions of development impact on engagement for the mining industry. This study also draws attention to the value of the relatively new concept of "closure mining" and assesses, to some extent, the potential that it holds for sustainable development.

## 1.9 CHAPTER OUTLINE

The chapter outline for this study is as follows:

**Chapter One:** Introduction and problem statement

**Chapter Two:** Mine closure: a conceptualisation

**Chapter Three:** Empirical research findings: mine closure and a people-centred approach to sustainable development, corporate social responsibility and stakeholder engagement

**Chapter Four:** Conclusion and recommendations

# CHAPTER TWO

## MINE CLOSURE: A CONCEPTUALISATION

### 2.1 INTRODUCTION

Explore, develop, operate, close and remediate; the lifecycle of a mine can appear to be a clear-cut process. Mine closure, however, is a complex, multi-dimensional and significant phenomenon bearing social, environmental and economic consequences. Mine closure planning should feature during every phase of the lifecycle of a mine, while corporate social responsibility should be embedded in all phases of the mining project. The relationship between stakeholders, and especially host communities and the mining companies, lies at the heart of implementing sustainable closure. Mine closure in South Africa has to contend with diverse mining and socio-economic contextual factors: legacy issues, inconsistent legislation in relation to responsibilities and varying degrees of stakeholders' ability to engage in the process of finding solutions (CSMI, 2010:3). Therefore, in line with the first objective as indicated in Chapter One, the purpose of the current chapter is to provide the reader with an overview of the related concepts of **sustainable development (SD)**, **corporate social responsibility (CSR)**, **stakeholder engagement (SE)** and **mine closure**.

This chapter begins with a description of sustainable development to provide an understanding of the concept and its relevance to the mining sector. The pursuit of sustainable development from a people-centred approach is captured in six principles that are intended to underpin the active participation of individuals in development processes. Following this, corporate social responsibility is defined and conceptualised by focusing on its economic, legal, ethical and philanthropic dimensions. An investigation into stakeholder engagement includes an overview of stakeholder theory and the role of SE in the mining sector. This is followed by a section on mine closure that focuses on the definition and scope of the term, followed by the principles of mine closure. To gain an understanding of mine closure in South Africa, a picture of the relevant legislative framework is sketched. Lastly, an introduction to Mintails Mogale Gold Company follows, with a few comments about their approach to mine closure.

### 2.2 SUSTAINABLE DEVELOPMENT (SD)

"Sustainable development" is a buzzword of our times and the popularity of the concept can be attributed to the fact that it offers an alternative to the traditional concept of development, which focussed on growth as the ultimate end and considered the means to achieve this end to be irrelevant (Khator & Fairchild, cited by Cronjé & Chenga, 2009:415). Sustainable development

recognises inter-generational equity and satisfies environmentalists as well as those concerned with social and economic development (Bezuidenhout *et al.*, 2007:41). In today's world, business issues and sustainability issues are inextricably linked. The prominence of SD in the mining sector has resulted in the ongoing transformation of mining practices.

### **2.2.1 Conceptual Overview of SD**

The most widely accepted definition of sustainable development, namely “development which meets the needs of the present without compromising the ability of future generations to meet their own needs”, first appeared in the United Nations World Commission on Environment and Development (WCED) Report, *Our Common Future* (WCED, 1987:15). The roots of this concept can, however, be traced back to the 1972 Stockholm Conference on the Human Environment; it was during this conference that the conflicts between the environment and development were first acknowledged (Kates *et al.*, 2005:10).

The term SD includes the notion of development (to make better) and sustainability (to maintain) and represents the urgency to consider the impact that our actions have on the environment, economy and society (Bell & Morse, 2003:3; Strange & Bayley, 2008:24). SD requires that we consider the impacts of our actions not only on the present and the future but also beyond the borders of our own neighbourhood, workplace, city and country (Strange & Bayley, 2008:24). Although SD is considered to be a buzzword today, many claim that it is ambiguous. Kates *et al.* (2005:20), however, argue that its malleability as a concept allows for it to remain an open, dynamic and evolving idea that can be adapted to fit diverse contexts and situations. Bossel (1999:3) is of the opinion that the SD concept we adopt and our interpretation of this concept has consequences for the development we achieve.

Strange and Bayley (2008:30) offer an all-encompassing definition of SD:

- A conceptual framework: a holistic and balanced view of development;
- A process: a way of applying principles to guide human activity and development; and
- An end goal: identifying and finding solutions to the economic, environmental and social problems in our world.

The term SD has been adopted and adapted across a variety of sectors, from institutions of governance to civil society. It is claimed that in the corporate world sustainability is widely accepted as a pre-condition for doing business (Dyllick & Hockerts, 2002:131). A definition of corporate sustainability is as follows (IISD, 1992):



“For business enterprise, sustainable development means adopting business strategies and activities that meet the needs of the enterprise and its stakeholders today while protecting, sustaining and enhancing the human and natural resources that will be needed in the future”.

According to Kates *et al.* (2005:19), the success of the adoption of the concept of SD can be attributed to its ability to serve as a grand compromise between those who are concerned with the environment, those who value economic development and those who dedicate their efforts to improving the human condition.

## **2.2.2 Dimensions of SD**

The SD concept comprises many different elements and is usually portrayed as the interface between environmental, economic and social dimensions. Each dimension has a specific function (EEA Grants, 2006:3):

- The environment is the necessary basis for SD;
- The economy is the tool to achieve SD; and
- A good life for all (the social dimension) is the target of SD.

### **2.2.2.1 Environmental dimension**

The environmental dimension of sustainability focuses on the preservation of ‘natural capital’ and includes natural resources and ecosystem services. Natural resources can include both renewable components (e.g. plants and animals) and non-renewable components (e.g. fossil fuel, minerals and soil quality). Examples of ecosystem services include biodiversity, climate stability and water purification (Dyllick & Hockerts, 2002:133). To strike a balance between protecting the environment and using the natural resources to sustain life, Cronjé (2007:18), as well as Blowfield and Murray (2008:315), suggest(s) the following principles: protect the earth’s life-support systems (air, water, soil); use renewable resources no faster than nature can replenish them; minimise the use of non-renewable resources through the three R’s (Reduce, Reuse and Recycle); manage waste and prevent pollution; and instil environmental awareness in society and a respect for the load capacity of ecosystems.

Consequently, environmentally sustainable companies, as defined by Dyllick and Hockerts (2002:133), use natural resources at a rate below the natural reproduction. They take care not to cause and expel harmful emissions at a rate beyond the capacity of the natural system to absorb the emissions. Thus companies committed to SD do not engage in activities that degrade ecosystem services.

### **2.2.2.2 Economic dimension**

An economically sustainable system is one that supports sustainable livelihoods, and facilitates the equitable access to resources and opportunities, including the equal sharing of finite ecologically productive space and the establishment of viable businesses and industries based on sound ethical principles (Van Wyk, 2011:53). To achieve economic sustainability the following principles need to be followed: promote equity within countries, between nations and between generations; encourage ethical business practices such as fair trade; encourage socially and environmentally responsible business practices and policies; promote equitable distribution of true costs and benefits; support local economies and job creation; and base business success on the level of social and environmental responsibility achieved (Cronjé, 2007:21).

Despite broader sustainability, economic sustainability in business also requires companies to manage financial capital (e.g. equity and debt), tangible capital (land, stocks and assets) and intangible capital (reputation, innovation and know-how). Economically sustainable companies therefore have sufficient cash-flow to produce a consistent above-average return on behalf of their shareholders (Dyllick & Hockerts, 2002:133).

### **2.2.2.3 Social dimension**

Sustainable social development refers to improvement in the wellbeing of individuals and society at large. The goals of distribution equity, the provision of social services, gender equality, and political accountability and participation are pursued to achieve social sustainability (Cronjé, 2007:2).

Lehtonen (2004:202) is of the opinion that there is little consensus regarding the definition of the social dimension of SD and proposes that the most common framework for addressing social sustainability is that of social capital. Social capital refers to the networks of social relations characterised by norms of trust and reciprocity that facilitate collective action. The outcomes of social capital might include the wellbeing of an individual or society; a vibrant community; and political and economic wellbeing (Lehtonen, 2004:205). The quantity and quality of these social interactions, the level of mutual trust and the extent of the shared social norms can be used to measure social capital. Principles in support of social sustainability include: the promotion of social equality among people by discouraging all forms of discrimination; encouraging community participation, cooperation and ownership of decision-making, governance and development; the provision of opportunities for self-improvement; the improvement of human health through food security, access to health services and the creation of healthy human settlements; encouraging individual responsibility for the community; the preservation of cultural

capital and diversity; and encouraging creative expression and the development of the inherent potential in individuals (Cronjé, 2007:20).

A socially sustainable company is defined by Dyllick and Hockerts (2002:134) as a company that “adds value to the communities within which they operate by increasing the human capital of individual partners, as well as furthering the societal capital of these communities. They manage social capital in such a way that stakeholders can understand its motivations and can broadly agree with the company’s value system”.

In its purest form, SD is therefore the equal interaction of environmental, economic and social dimensions and these three dimensions are of equal importance, interdependent and mutually reinforcing. Achieving a balance and harmony between the three dimensions is known as the ‘triple bottom line’ (TBL).

### **2.2.3 Sustainable Development in the Mining Sector**

The discovery, extraction and processing of mineral resources is regarded by many as one of the most environmentally and socially disruptive business activities (Ololade & Annegarn, 2013:568; Jenkins & Yakovleva, 2006:271; Mining, Minerals and Sustainable Development Project, 2002a:24). The potential adverse effects of mining can include the production of waste material, water and air pollution, deforestation and environmental destruction. Minerals are a non-renewable natural resource and mining therefore threatens to cause resource depletion; the mining and processing of minerals also uses vast amounts of energy and this causes concern about climate change. Moreover, as many of South Africa’s mines are located in rural areas, the prospects for employment attract migrant workers from far, and the influx of workers causes changes to the indigenous lifestyle and often translates into an increase in various social ills (e.g. prostitution, crime, family disorganisation, substance abuse, etc.). Due to the nature of the work on a mine, workers face health and safety risks and can fall victim to accidents and ill-health. Local communities are often among the most severely affected; human settlements are often displaced to make room for excavations, while those who live in close proximity to mines have been known to complain about the cracking and collapse of buildings (Kitula, 2006:411; MMSD, 2002a:17; Cronjé & Chenga, 2009:414).

However, a counter argument can be put forward pertaining to the potential benefits of mining. The mining industry offers opportunities for development, and many countries and communities depend on the production of minerals as a source of income. Mining creates jobs, opportunities for skills development, improvements in technology and the development of local infrastructure and services (MMSD, 2002a:17). Jenkins and Yakovleva (2006:271-272) are of the opinion that SD can be achieved in the mining industry through: economic development by investing

revenue to ensure the future development of communities; environmental preservation through minimising the exploitation of natural resources and the rehabilitation of land; and social cohesion by minimising the social and cultural disruption to communities through maintaining good stakeholder relationships and transparency. It would appear that the mining sector has the potential to foster SD but, according to the MMSD (2002a:17), a lack of capacity, knowledge and incentives are often barriers to achieving this.

The Global Mining Initiative (GMI) was established by several large multinational mining companies in 1998, the aim being to investigate the possible contribution of mining towards SD. It was during this time that the term 'sustainable mining' was coined that subsequently featured in the action plan that evolved from the 2002 World Summit on Sustainable Development, held in Johannesburg (Whitmore, 2006:310; Oloade & Annegarn, 2013:569). Following this, the GMI launched a two-year research and dialogue initiative known as the Mining, Minerals and Sustainable Development (MMSD) project that was followed by a global conference and the formation of the International Council of Mining and Metals (ICMM) (Whitmore, 2006:310). The MMSD report examined the principles of SD and applied them to key challenges in the mining sector to demonstrate how the sector could best contribute to SD. These key areas offer insight into the most pressing issues facing the sector and how they relate to SD. Here follows a summary of the MMSD's recommendations pertaining to SD (MMSD, 2002a:25-28):

- Viability of the minerals industry

The minerals industry has a role to play in assisting the sector to adopt a SD approach to mining. This can be achieved by internalising costs over time, rewarding good practice, enforcing standards and guidelines and providing incentives for compliance and innovative market-based solutions. In addition, the fundamentals of SD must become embodied in the culture of mining companies and in so doing have a cumulative effect on all aspects of company life, from the health and safety of workers to skills development programmes.

- The control, use and management of land

Land is a contentious issue at the best of times and many stakeholders have vested interests in the ownership and use of land. The report recommends that land use decisions be taken according to the principles of free, prior and informed consent (FPIC) accounting for the rights and interests of all stakeholders. Decisions regarding whether or not to undertake exploration and mining activities should be based on an integrated assessment of ecological, environmental, economic and social impacts.

- National economic and social development

Mining has the potential to bring economic and social development to a country and this wealth should be harnessed at a national level to sustain the benefits. It is recommended that a portion of the rents of minerals be reinvested in order to ensure a sustainable income when the resource is depleted. Revenues should be shared equitably between the public and private sectors and at regional and local levels in mining areas. A transparent national financial management system should be in place with adequate capacity to manage project-generated revenues effectively.

- Community development

A challenge exists to maximise the benefits and mitigate the negative impacts of mining at community level. To maximise benefits processes of participation, involvement and inclusivity with stakeholders should be followed, while these relationships should be built on collaboration, trust, respect, transparency and accountability; priority should be given to ensuring that the rights of marginalised individuals and groups are protected; the economic benefits of mining should be shared equitably with communities and a portion of the capital should be reinvested in trust funds, skills training or social infrastructure. In addition, mining activities should refrain from leaving negative environmental or social legacies and public-private partnerships should be encouraged.

- Environmental management

Mining activities have a considerable impact on the environment and an effort must be made to minimise the negative effects. Long-term damage to the environment should be avoided; management should strive for resource and energy efficiency, and the use of modern technologies to decrease the mine's environmental footprint. Mine closure and post-mine closure should be planned for including the rehabilitation of land, while natural ecosystems should be restored and replenished as far as possible.

- The use of minerals

The use of minerals is essential for modern-day living; however, concerns have been raised pertaining to the risks involved in the use of certain minerals, as well as the need for waste minimisation. A more equitable share in the use of minerals in industrial and developing countries is also on the agenda. The efficient use of minerals should be encouraged to reduce waste through remanufacture, re-use and recycling. The responsible stewardship of minerals ought to be promoted and consumers (manufacturers and contractors) must be prepared to pay more to mineral producers who behave in a responsible manner.

- Information flow

The process by which information is generated and communicated plays a key role in the establishment of trust between stakeholders. Information should come from authoritative, independent sources to ensure that it is relevant and unbiased; information should be collected and disseminated in an equitable manner; all role-players ought to have access to information and knowledge sharing is to be valued.

- Artisanal and small-scale mining

Artisanal and small-scale mining (ASM) activities remain attractive as a source of income for poverty-stricken communities but these activities are known to have high environmental costs and a poor health and safety record. The Mining, Minerals and Sustainable Development Project (MMSD, 2002a:28) suggests that ASM activities be incorporated into broader local development planning so that local economic development can be optimised through the investment of revenue in education and alternative income-producing opportunities. The collective capacity of artisanal and small-scale miners should be developed to enable them to better contribute to SD, while the development of fair trade markets for ASM products should be encouraged so that they can get a fair return when they adhere to the principles of SD.

- Roles, responsibilities and instruments of change

To ensure that the interests of stakeholders are safeguarded, the following can be regarded as best practice under the topic of roles, responsibilities and instruments of change: the formation of participatory and democratic decision-making structures; the development of an institutional culture, resources and skills in support of SD; engagement that is characterised by equal concern and respect while recognising unequal power relationships and vulnerabilities; and establishing alliances between the private sector, public sector, civil society and other partners to translate into mutually agreed upon objectives, shared responsibility, accountability and reciprocal obligations for SD.

It is evident that SD is only possible in the mining sector if there is a strong commitment to continuous environmental and socio-economic improvement in all the stages of the lifecycle of a mine, from exploration through operation to closure (Jenkins & Yakovleva, 2006:272). SD can be pursued through the application of a number of development theories and methodologies, including the people-centred approach.

## 2.2.4 People-Centred Approach to Development

The micro-foundation people-centred approach to development allows individuals to participate actively in various processes in order to stimulate SD.

Most theories' definitions of development include action plans, strategies and programmes aimed at improving the situation of the poor, backward, rural and traditional countries. The micro-foundation people-centred approach defines development as the right to live a meaningful life and not just the mere satisfaction of the material needs of people (Coetzee, 2001:119).

The following six principles, as presented by Coetzee (2001:122-126), reveal the essence of the people-centred approach to development:

- People can be more than they are

Development, from the micro foundation point of view, does not merely aim to bring about material improvement but to increase the level of human wellbeing or 'humanness'. Development should therefore provide the mechanism for people to become more than they are. An increase in humanness can be achieved through the following: social justice, joint decision-making, the satisfaction of basic needs, respect for the eco-system and indigenous lifestyle, freedom of expression and the advancement of people through their own initiatives.

- Meaning

The people-centred approach to development regards the meanings that people give to their lives as central to the SD imperative. For development projects to be successful and sustainable, the following should be present: a desire (in individuals or groups) to work towards a desired state; the utilisation of the existing economic and social structures to ensure an improvement in all three dimensions of SD; and an emphasis on the equal sharing of the benefits of innovation, knowledge, resources and initiatives between members.

- The emphasis on the experience of the life-world

Development is more likely to take place when people incorporate the meanings they give to their world into their desire to improve their situation. The experience of the life-world is directly related to the concept of culture.

- Desirable direction

According to the notion of desirable direction, the point of departure for development initiatives is individual decisions and processes of interaction. A bottom-up approach is therefore

suggested. The starting point for development will be to uncover people's definitions of wellbeing and the verbalisation of their desired state.

No development is possible without participation, which implies the opportunity for shared decision-making, involvement, collaboration, co-creation and equal power.

- Consciousness

People concerned with development must be involved in the development process; they have the right to make decisions for themselves. Development studies that are 'grounded in consciousness' are built on an awareness of the relationship between an individual and society.

- Participation and self-reliance

Participation and self-reliance can be viewed as two of the most important principles of wellbeing. These concepts imply the involvement of people in development initiatives. The following questions can be asked to determine the levels of participation and self-reliance:

- What meaning must be attached to the notion of conscious participation at different levels?
- What does participation mean for the individuals or group under study?
- What kinds of decisions must be taken through participation and by what means?
- Do certain activities lend themselves better to participation than others?
- What are the characteristics of self-reliance?
- At what levels should self-reliance be sought?
- Is self-reliance at national level compatible with self-reliance on an international level?
- In what ways can self-reliance lead to reduced dependence on 'outside forces'?

The micro-foundation people-centred approach to development makes the claim that 'development is for people'. This approach therefore values the subjective meanings that people associate with development.

In short, the above section provided an overview of sustainable development by defining the term, examining the dimensions of SD and analysing the role of the mining industry in bringing about development that can be sustained. Furthermore a people-centred approach to development was conceptualised. The contribution of business to the sustainable development agenda is known as corporate social responsibility (CSR). The adoption of this agenda by business has led to a shift in the way business is perceived and executed. The following section consequently offers an investigation of corporate social responsibility.



## 2.3 CORPORATE SOCIAL RESPONSIBILITY (CSR)

CSR has been described as “one of the most important issues and developments of the 21<sup>st</sup> century” (Horrigan, 2010:3). The author makes this claim because the world of the 21<sup>st</sup> century faces challenges for which CSR is part of the answer. Climate change, resource depletion, inequalities in wealth distribution, corruption and human rights violations are among the world’s most challenging crises, and corporations are increasingly expected to play a role in finding solutions to these problems. To respond to these demands in a meaningful way the corporation must act in a socially responsible manner, in other words, practise corporate social responsibility (Dillard & Murray, 2013:10-13).

The field of corporate social responsibility is associated with the global agendas of sustainable development, business ethics, community investment, corporate governance and human rights (Dillard & Murray, 2013:10). The next section is dedicated to defining and conceptualising the term, explaining the dimensions of CSR and discussing the current state of CSR in South Africa and the mining sector.

### 2.3.1 Defining and Conceptualising CSR

The conceptualisation of CSR remains a contested topic and there is little consensus on a definitive definition of this term (Dillard & Murray, 2013:11; Horrigan, 2010:34; Carroll, 1991:39; Blowfield & Murray, 2008:12; Crowther & Rayman-Bacchus, 2004:2). CSR is readily redefined by its stakeholders to suit their own viewpoints and purposes, companies being the primary dictators.

Crowther and Rayman-Bacchus (2004:2) offer the broadest definition of CSR, describing it as “*The relationship between the global corporation, governments of countries and individual citizens*”. The World Business Council for Sustainable Development (WBCSD) defines CSR in the following way: “*Corporate social responsibility is the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life* (Holme & Watts, 2000:10). The United Nations Industrial Development Organization (UNIDO, 2007) suggests the following definition: “*Corporate Social Responsibility is a management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders*”. A definition from a South African organisation, the Bench Marks Foundation (2003) is: “*CSR involves a commitment to contribute to the economic, environmental and social sustainability of communities through the ongoing engagement of stakeholders, the active participation of communities impacted by company activities and the public reporting of company policies and performance in the economic, environmental and social arenas.*”

Despite the diverse definitions of and approaches to CSR, the Commission of the European Communities (2002) reports that there is consensus that the following are the main features of CSR:

- CSR is a voluntary behaviour by business over and above legal requirements because it is in their best long-term interest;
- CSR is intrinsically linked to the concept of sustainable development and calls for business to consider its social, environmental and economic impacts; and
- CSR is not an optional add-on to business core activities but about the way in which businesses are managed.

Considering the above definitions of CSR, the following can be deduced: there is a strong association between CSR and SD; stakeholders play a key role in CSR; a relationship has to exist; and CSR is integrated into business activities.

Terms used synonymously with CSR are 'corporate social investment (CSI)' and 'corporate citizenship (CC)'. CSI, or 'corporate giving', is defined as an organisation's contributions to society and communities that are extraneous to its regular business activities. This investment can be monetary or in the form of other corporate resources or time. Corporate citizenship can simply mean compliance with the law but in a broader sense it refers to the rights and responsibilities of organisations within society. Corporate citizenship is concerned with the contribution that an organisation makes through its social and environmental impacts, including economic contribution (Rochlin & Googins, 2005:1).

To further understand the topic of CSR, the dimensions of this concept are discussed below.

### **2.3.2 Dimensions of CSR**

Carroll (1998:2-6) suggests a framework for understanding the aspects of CSR. He identifies four types of social responsibilities, namely: economic, legal, ethical and philanthropic. These four dimensions of CSR are interrelated and interdependent and can be individually described as follows:

#### **2.3.2.1 Economic dimension**

The primary role of business is to produce goods and services in order to satisfy the needs and wants of consumers, and to make an acceptable profit in the process. Business therefore has the economic responsibility of to make a profit. Society expects business to generate sufficient returns on investments and the assurance of the continuity of the business, including the flow of products, services, jobs and/or other benefits (Carroll, 1998:2 & 1991:41).

According to Kanji and Chopra (2010:125), a business has economic responsibilities to its direct stakeholders – its investors, employees and customers. The four economic responsibilities of a business are:

- *Profitability*: profit is created when a business sells products or services that are more valuable than the materials and labour it used to create them. Business therefore creates profit by adding value.
- *Transparency*: a transparent business provides direct stakeholders with as much information as possible about its practices, strategies and financial situation.
- *Non-discrimination*: in an economic sense, non-discrimination refers to the consistent application of financial criteria to all customers, suppliers and employees.
- *Sustainability*: by developing secure, long-lasting relationships with suppliers and customers, businesses ensure the sustainability of their operations.

The economic responsibilities of business form the foundation upon which the other three dimensions rest. A company's ability to invest in CSR initiatives depends mainly on the economic status of the company.

### **2.3.2.2 Legal dimension**

Blowfield and Murray (2008:25) believe the two basic expectations of business are to make a profit and stay within the law. Local, national and international laws and regulations prescribe what companies can and cannot do with regard to issues such as employment, environmental protection, corruption, human rights and product safety. These legal responsibilities can be regarded as 'codified ethics' because they represent the basic principles of fair operations as established by lawmakers. The fulfilment of the economic mission of business within the framework of the law contributes towards the fulfilment of the SLO between society and business (Carroll, 1991:41).

It has to be stated that CSR is more than legal compliance. Since the 19<sup>th</sup> century companies have sought to do more good than to merely meet the statutory regulations. Davis (1973:313) rightly states that "CSR begins where the law ends". Blowfield and Murray (2008:25) believe that the subsequent social benefits of CSR pre-empted further legislation in this field.

Carroll (1991:40) suggests the following as some of the responsibilities within the legal dimension: performing in a manner that is consistent with government and legal expectations; complying with federal, state and local regulations; being a law-abiding corporate citizen; fulfilling all legal obligations; and providing goods and services that meet the minimum legal requirements.

### **2.3.2.3 Ethical dimension**

Business ethics is about conducting business ethically. As defined by Carroll (1991:41), “ethical responsibilities represent standards, norms, or expectations that reflect a concern for what consumers, employees, shareholders and the community regard as fair, just, or in keeping with the respect or protection of stakeholders’ moral rights”. Ethical responsibilities are embodied in the economic and legal dimensions of CSR but are not codified into laws; these responsibilities represent society’s expectations of practices and behaviour.

As previously stated, CSR is more than mere compliance with the law; compliance is inadequate for the following reasons: laws and regulations often reflect the minimum requirements and these may not be up to the standard that is required; laws do not keep up to date and reflect current thinking, norms, trends and standards; and laws might not be able to address all the pressing social issues that need attention. In short, laws tend to lag behind ethical thinking (Carroll, 1998:4).

Many believe that within the business context, ethical behaviour is synonymous with moral behaviour and that an ethical manager is therefore a moral manager. Managers need sound morals to be able to best serve their own interests and the interests of their organisations. Managers are role models to their peers and subordinates and their behaviour and decisions shape the character and culture of their companies (Carroll, 1998:4).

The ethical responsibilities of business can include: meeting societal expectations regarding ethical norms and values; recognising and respecting new or evolving societal norms and values; refusing to compromise ethical norms in order to achieve corporate goals; being a good corporate citizen by fulfilling ethical and moral expectations; and recognising that corporate integrity and ethical behaviour go beyond compliance with laws and regulations (Carroll, 1991:41). Kanji and Chopra (2010:125) translate the ethical responsibilities of business into activities such as having in-house ethical training to guide the decisions of employees; meeting the environmental concerns of consumers; having transparent systems in place; taking steps against labour exploitation; ensuring safe and hygienic working conditions; having a zero tolerance for any form of discrimination; and the involvement of staff in activities such as community volunteering and fundraising.

### **2.3.2.4 Philanthropic dimension**

Philanthropy is commonly defined as a desire to help humankind through acts of charity. The philanthropic dimension of CSR, or corporate philanthropy, is based on the idea of ‘giving back’ to society through activities and programmes that promote human welfare or goodwill. A

distinguishing characteristic of this dimension is that it is not expected, as with the ethical dimension; philanthropy is voluntary on the part of the business. It is, however, important to note that society desires business to make a contribution towards the community but will not regard the business as unethical if they do not provide the desired contribution (Carroll, 1991:42). According to Cohen (cited by Van Wyk, 2011:86) corporate philanthropy can have certain advantages for the business practising it, including: connecting a corporation with the community in which it operates; creating an internal culture that promotes retention and recruitment; employees have a greater sense of pride in the organisation; the promotion of leadership skills and stronger relationships between colleagues; customers feel that the organisation cares about their community's needs and this promotes customer loyalty; suppliers can serve as more than simply a contractually bound provider of a product; and stakeholders, such as the media might take philanthropy into account when reporting on the company.

Blowfield and Murray (2008:26) report that companies became more strategic in their philanthropy since the 1990s by seeking to support causes that were aligned with their business goals and thus creating a win-win situation. The investment in social causes that complement business brands is known as cause-related or affinity marketing. CSR has received criticism for the participation of business in cause-related marketing because it has been viewed as a mere public relations exercise by a company to build its reputation as a good corporate citizen.

Kanji and Chopra (2010:124) suggest that the philanthropic activities of business can include the establishment of social infrastructure and the contribution to communities through the transfer of technology, skills and education with the aim of creating sustainability.

### **2.3.3 CSR in South Africa**

In South Africa CSR is not only a frequent topic of discussion and debate but also a tangible effort by many companies (Flores-Araoz, 2011). The CSI Handbook (2013:36) reports that total corporate social investment expenditure in the country rose to R7.8 billion in 2013, indicating a growth rate of 8% when adjusted for inflation, and the expenditure of CSI departments alone totalled R6.4 billion. South African business's interest in and motivation to partake in CSR activities can be attributed to the following (Bezuidenhout *et al.*, 2007:68): the need to compensate for state inaction in addressing social problems that impacted on business during and since *apartheid*; feared sanctions, de-listings and other potential barriers to business activities; the need to conform to international norms or to local initiatives striving to emulate global norms; and the maintenance or enhancement of the business brand and marketing position.

CSR in South Africa is largely voluntary and discretionary. The South African Companies Act 61 of 1973 does not make CSR obligatory for companies. However, the well-known and respected King II and King III reports explicitly address the need for and the relevance of the adoption of a triple bottom line approach to business activities. The King reports contain corporate governance guidelines and standards for business in South Africa; these guidelines are regarded as state-of-the-art and are highly recommended in the business sphere, both nationally and internationally (Flores-Araoz, 2011). The King III report, a rewrite of the King II report, was released in 2009 and includes the overarching themes of: the board directors (composed of executive and non-executive members) as the focal point of governance, corporate citizenship, sustainability, stakeholder inclusivity and integrated reporting.

In terms of the *corporate citizenship* theme, the report argues that a company is a legal citizen and therefore has rights and obligations to the larger context within which it exists. The report chooses to highlight the link between the environment, society and economy, and uses the term 'triple context' rather than the 'triple bottom line' for fear of suggesting the notion of three separate bottom lines. Under the *sustainability* theme the report rightly states that responsible corporate citizenship is a prerequisite for SD and further argues that business is expected to play a role in health and safety, transformation, ethics, socio-economic and environmental prospects. The report's take on *stakeholder inclusivity* is a progressive one; it states that stakeholder interests should be taken into account whether they are of benefit to the shareholders or not. The above themes are factors that companies need to report on to their investors and other stakeholders. The King III report acknowledges that in order to provide a holistic view of the company's performance, both financial and sustainability factors need to be reported on. This is referred to as *integrated reporting* (Ramalho, 2012:235-245).

A less voluntary form of CSR is compliance with the Broad-Based Black Economic Empowerment (BBBEE) Act 53 of 2003. The BBBEE Act aims to correct the racial imbalances of the past but also to promote social investment and the empowerment of communities. Included in the Act's objectives is the promotion of investment programmes that lead to broad-based and meaningful participation in the economy by black people in order to achieve sustainable development and general prosperity. The BBBEE Act contains Codes of Good Practice that include a framework for measuring progress on the implementation of BBBEE. A significant component of the Code is the generic scorecard that contains the seven elements of BBBEE that are weighted, of which the empowerment actions make up 40%. The ultimate result of the Act and the Codes is that companies that comply with the Act will be given BBBEE status. This status will determine the extent to which the company can function in the public and private sectors. The BBBEE Act therefore plays an increasing role in the enforcement of CSR policies.

All BBBEE measures will qualify as socially responsible conduct, while all socially responsible conduct will not necessarily qualify as BBBEE conduct (Esser & Dekker, 2008:157-166).

CSR is of utmost importance in South Africa as it can help to overcome the economic, social and environmental challenges that are facing the country. For CSR to be successful and meaningful, it requires business to have a relationship with society and an involvement in the problems that are nationally significant.

#### **2.3.4 CSR in the South African Mining Sector**

In response to the widespread awareness of sustainable development, the mining industry has been forced to pay serious attention to its environmental and social impacts. This has manifested itself in the formulation of CSR policies and strategies. CSR in the mining industry has become increasingly high profile due to the disruptive nature of mining activities (Jenkins & Yakovleva, 2006:272). "For the mining industry CSR is about balancing the diverse demands of communities and the imperative to protect the environment with the ever present need to make a profit", according to Jenkins (2004:24). Due to the destructive activities of the past, mining companies have had to remodel themselves as good corporate citizens and have done so through implementing CSR. Walker and Howard (cited by Jenkins and Yakovleva, 2006:272) offer reasons for which CSR is important for mining companies:

- The public opinion of the sector is poor due to the environmental and social impacts of mining;
- The legitimacy of the industry is questioned by environmental, community and indigenous pressure groups who oppose the development of mines;
- The screening of socially responsible investment funds has resulted in the exclusion of mining companies; and
- Securing a social licence to operate is more and more of a challenge.

Hamann (2004:280) provides the background to the development of CSR in the South African mining industry and reports that mining companies were at the forefront of philanthropic and lobbying efforts to improve social conditions for South Africans in the 1970s. However, because mining activities were linked with *apartheid* policies through the migrant labour system these philanthropic efforts were viewed by unions and anti-apartheid activists as a smokescreen. The transition to democracy in the 1990s initiated changes in institutions and consequently influenced the development of CSR. The first change came about with the reintegration of the capital market into the international market, causing mining houses to have either their primary or secondary listing on one of the main stock exchanges. This had a significant effect on the companies' policies and management structures related to CSR. The South African stock

exchange also adopted a corporate governance code that included CSR requirements. The second category of change was driven by the State with the passing of the Mines Health and Safety Act of 1996 and the Mineral and Petroleum Resources Development Act (MPRDA) 28 of 2002 (*discussed in more detail under 2.5.3.1*). These Acts require all mining companies to renew their mining licenses in support of the implementation of the BBBEE Act (then known as black economic empowerment or BEE). To ensure the socio-economic empowerment aims of the BBBEE Act, transformation charters were drafted. One such a charter was the Broad-Based Socio-Economic Empowerment Charter for the South African Mining Industry (referred to as the Mining Charter from here onwards). This Charter was designed as a government directive to “facilitate sustainable transformation, growth and development of the mining industry” (Department of Mineral Resources, 2010:ii).

Mining companies have responded to the government imperative for socio-economic development by applying the rules. The rules related to community development are set out in the social and labour plans developed by the mines and approved by regulatory authorities. These plans include a list of community projects that mines agree to fund and unvaryingly these obligations are met (Rockey, 2013:81).

The Mining Charter has succeeded in putting issues of CSR and SD on the agenda of mining companies at a national policy level. However, what is lacking is the implementation of the policy in practical terms. The measurement and monitoring of the implementation of CSR actions, in accordance with the legislation, is also sorely lacking (Cronjé & Chenga, 2009:418; Rockey, 2013:82). The transfer of resources from the mine to the community is not adequate and should not be regarded as CSR; Rockey (2013:82) suggests that constructive engagement between community structures, government and business will lead to the meaningful participation of stakeholders and a more realistic sharing of responsibilities, resulting in a greater chance of meaningful and sustained development due to CSR.

## **2.4 STAKEHOLDER ENGAGEMENT (SE)**

Over the past two decades industries, and especially the mining industry, have realised and witnessed the need for stakeholder engagement under the rubric of sustainable development and corporate social responsibility (Kemp & Owen, 2013:523). In addition, organisations are under increasing pressure from stakeholder groups such as regulators, employees, activist groups, customers, investors and community groups to reduce their negative social and environmental impacts. Stakeholders are thus playing a bigger role in business and the



corporate world has to adjust to practices that relate to a social license, benefit sharing, community participation and partnerships for development (Kemp & Owen, 2013:523).

#### **2.4.1 Conceptual Overview of SE**

The term 'stakeholder' was used for the first time in management literature in an internal memorandum at the Stanford Research Institute in 1963. The term was meant to generalise the notion that the stockholders were the only group to whom management needed to be held responsible; the concept of 'stakeholder' was therefore first defined as the "groups without whose support the organisation would cease to exist" (Freeman *et al.*, 2010:31). Since that time the definition of the term has evolved. For Cooper (2004:3) stakeholders are groups within society that are affected by an organisation's activities. Crane *et al.* (2008:63) define stakeholders as groups and individuals who benefit from or are harmed by corporate actions. The definition of Freeman is widely used: "A stakeholder in an organisation is any group or individual who can affect or is affected by the achievement of the organisation's objectives (cited by Freeman *et al.*, 2010:207). Stakeholders in business can therefore include: shareholders, employees, consumers, suppliers, the environment, competitors, governments, special interest groups, the media and the community.

Stakeholder engagement is defined as:

[...] a process used by an organisation to engage relevant stakeholders for a clear purpose to achieve accepted outcomes. It is now also recognised as a fundamental accountability mechanism, since it obliges organisations to involve stakeholders in identifying, understanding and responding to sustainability issues and concerns, and to report, explain and be answerable to stakeholders for decisions, actions and performance (AccountAbility, 2011:6).

Andriof *et al.* (as cited in Blowfield & Murray, 2008:162) describe today's ideal stakeholder relationships as interactive, mutually engaged and responsive ones that establish the context for doing business and which create transparency and accountability. Furthermore, AccountAbility (2011:8) is of the opinion that once stakeholder engagement is used as a preventative measure instead of a reactionary mechanism, the organisation will grow to have a better understanding of their stakeholders and this will create an easier and more receptive operating environment, and the performance of the company will consequently improve.

The AA1000 Stakeholder Engagement Standard 2011 (AccountAbility, 2011:7) provides guidance on designing, implementing, communicating and assuring stakeholder engagement. The Standard suggests the benefits of stakeholder engagement to be the following:

- More equitable and sustainable social development by giving those who have a right to be heard the opportunity to take part in decision-making processes;
- Better management of risk and reputation;
- Pooling of resources to solve problems and reach joint objectives;
- Understanding of complex operating environments;
- Mutual learning between stakeholders;
- The opportunity to inform, educate and influence stakeholders to improve their decisions and actions that have an impact on the organisation and society; and
- Contributing to the development of trust-based and transparent stakeholder relationships.

One challenge in practising stakeholder engagement in everyday management is that stakeholders include groups with different expectations. It is therefore difficult to determine what priority to give to whose expectations and which stakeholders have the greatest need or strongest entitlement rather than the loudest voice or most power (Blowfield & Murray, 2008:164). Stakeholder theory aims to present methods for the recognition of the interests of different stakeholders.

#### **2.4.2 Stakeholder Theory**

Stakeholder theory takes into account the individuals or groups with a 'stake' in or a claim on the business; those who benefit from or are harmed by corporate actions (Crane *et al.*, 2008:63). The stakeholder approach to business is about creating as much value as possible for these stakeholders without resorting to trade-offs. Stakeholder interests are regarded as joint and inherently tied together. No stakeholder group can create value in isolation. This does not mean that representatives from all stakeholder groups must sit on governing boards but that value is created by focusing on the interests of each stakeholder (Freeman *et al.*, 2010:9).

More recent stakeholder theory sees the firm as an organism that is embedded in a complex web of relationships. Management is to see these other organisms as subjects with their own objectives and purposes. In terms of this stakeholder management model, therefore, the company should be aware of and responsive to the demands of stakeholder groups. Shareholders are therefore no longer regarded as the most important stakeholder group (Blowfield & Murray, 2008:161).

To make the stakeholder theory practical, The Clarkson Center for Business Ethics (as cited in Crane *et al.*, 2008:65-66) proposes seven principles for managers:

1. Managers should acknowledge and actively monitor the concerns of all legitimate stakeholders while taking their interests into account in decision-making and operations.
2. Managers should listen to and openly communicate with stakeholders about their respective concerns and contributions, and about the risks that they assume due to their involvement with the company.
3. Managers should adopt processes and modes of behaviour that are sensitive to the concerns and capabilities of each stakeholder group.
4. Managers should recognise the interdependence of efforts and rewards among stakeholders, and should attempt to achieve a fair distribution of the benefits and burdens of corporate activity among them, taking their respective risks and vulnerabilities into account.
5. Managers should work cooperatively with entities, both public and private, to insure that risks and harms arising for company operations are minimised, and where these risks cannot be totally avoided that stakeholders are compensated accordingly.
6. Managers should avoid any activities that might jeopardise human rights.
7. Managers should acknowledge the potential conflicts between their own role as corporate stakeholders and their legal and moral responsibilities towards the interests of stakeholders. These conflicts should be addressed through open communication, appropriate reporting and incentive systems and, where necessary, third party review.

The above principles can be regarded as a set of guidelines to facilitate active respect for stakeholder interests and rights. Due to the environmental, social and economic impacts of mining operations on key stakeholder groups, the mining industry is a sector that has to take great care to respect stakeholder interests and rights.

### **2.4.3 Stakeholder Engagement in Mining**

A mining community is defined by Veiga *et al.* (2001:192) as “a population that is significantly affected by a nearby mining operation”. Mining communities vary greatly in culture, political orientation, economic wellbeing, degree of cohesiveness, environmental characteristics, attitudes towards development and their expectations of what a mining project can and will deliver (Kemp *et al.*, 2006:393; Veiga *et al.*, 2001:192). Mining communities therefore vary in their profile and perceptions about mining. Jenkins (2004:32) writes that because of the diversity of worldviews, it is likely that many communities and individuals will disagree with the mining industry’s perception of SD. Communities involved in poor relationships with mines tend to share common perceptions that the mining operation is intruding into their environment, culture

and history. These perceptions are then further strengthened when there is no previous mining tradition and where benefits have not been equitably shared or the community has not been invited to participate in decision-making processes (Veiga *et al.*, 2001:192).

Complex relationships between communities and mining companies are thus nothing new, and with the increased power of communities and pressure groups, mining companies have had to take the interests of stakeholder groups into consideration. The consideration of the interests of stakeholders is known as CSR (Esser & Dekker, 2008:157). The pressure on mining companies to curb the impacts of mining and to meet the expectations of societies has also led to the adoption of a social licence to operate. This licence is not based on legal requirements but “on the degree to which a corporation and its activities meet the expectations of local communities, the wider society and various constituent groups” (Gunningham *et al.*, 2004:313). Adhering to the social licence to operate therefore enables mines to maintain a good reputation with the surrounding communities.

To maintain the social licence to operate and build a good reputation with communities, Veiga *et al.* (2001:192) suggest the following for mining companies:

- Environmental impacts must not pose any unacceptable risk to communities;
- Communication between the company and the community must be done in an honest and transparent manner. Community members should be involved in the decision-making processes regarding matters that affect their lives; and
- Mining developments should be of benefit to the community and not focus on the mere mitigation of impacts. Community diversification must be part of mine planning, development, operation, closure and post-closure.

To make the above a reality, mining companies need to partake in stakeholder engagement. There is a particular need for SE between mining companies and key stakeholders for determining post-mining issues that are incorporated into mine closure plans.

## **2.5 MINE CLOSURE**

Mining operations are finite and the closure of a mine is an inevitable event in the lifecycle of a mine. The closing of a mine is, however, not a discrete event but a process, a plan that is designed from the inception of the development of a mine. It is evident from the following section focusing on the definition and scope of mine closure, principles of closure and relevant legislation that mine closure is not a straightforward process. Successful international mine

closure projects will be discussed, followed by Mintails Mogale Gold Mine's closure mining approach.

### **2.5.1 Definition and Scope of Mine Closure**

A mine is closed when the designated government authority issues a closure certificate releasing the owner of the mine from any obligations to operate the mine, and from all liabilities and responsibilities related to the social, environmental and economic impacts of the mine (Centre for Sustainability in Mining and Industry, 2010:6; Fourie & Brent, 2006:1087).

Mines close for various reasons. Laurence (2006:286-287) suggests that in a perfect world mines would close when their resources were depleted; other motives for closure include: economic, geological and structural considerations. Mines can also be forced to close because they do not meet legislation requirements or because of community opposition, or in other words, an absence of a SLO.

As noted in the introduction, the closure of a mine can have massive environmental, social and economic implications. The environmental impacts of mine closure relate to physical stability, chemical stability and land use (MMSD, 2002b:10-15). According to Moller *et al.* (2007:199) the societal expectations around mine closure have changed significantly in the last two decades. Mine closure was originally seen as something that focused on rehabilitation and pollution prevention but has evolved into a growing recognition of the social impacts and the importance of recognising the effect on neighbouring communities. The social and economic implications of mine closure are far-reaching. The economic decline of the local business community is inevitable. Not only are employees and contractors faced with having to find alternate job opportunities, but those indirectly employed, such as schoolteachers, are also affected. The resources provided by the mine to local initiatives such as schools, clinics and welfare organisations are lost (Laurence, 2006:285-286; Szwedzicki, 2001:353-354). Other impacts of mine closure include the illegal occupation of houses and the escalation of social ills. Taking the above into consideration, it is obvious why mine closure has been referred to as the most tangible indicator of sustainable development for the mining industry (Moller *et al.*, 2007:199).

In response to the impacts and implications of mine closure, legislation, guidelines and literature on the topic have been forthcoming but a major shortcoming is the lack of information on how requirements are to be met (Fourie & Brent, 2008:1087). The CSMI (2010:3) reports that the additional challenges experienced with mine closure include miscommunication over a number of issues pertaining to: community expectations, the ability of the mining company to deliver on these expectations, company plans, government policy expectations and the psychological

stressors associated with closure. Company-community relations are therefore critical to determining closure outcomes.

## **2.5.2 Principles of Mine Closure**

The CSMI (2010:9) proposes social closure principles relating to company practices around mine closure. These principles are based on international best practice perspectives.

- Building closure into the project lifecycle

The lifecycle of a mine is comprised of eight phases, namely: exploration, pre-feasibility, feasibility (including planning and design), construction, operation, decommissioning, closure and post-closure. Closure planning must be built into the early phases of project development, in the pre-feasibility and feasibility phases, for it to be effective (ICMM, 2008:17). The plan must furthermore be updated throughout the progression of phases.

- Setting of social goals

Social responsibility should be embedded in all the phases of the mining project cycle and social goals should focus on preventing ills rather than mitigating the impacts. The social goals of mines should be compatible with local economic development plans (CSMI, 2010:9).

- Stakeholder engagement, consultation and empowerment

Many of the environmental closure outcomes rely on the mining company's ability to conceptualise and deliver results, whereas the social closure outcomes have a lot to do with the role of stakeholders, including government and communities (ICMM, 2008:20). The objective of stakeholder engagement in mine closure is "to enable all stakeholders to have their interests considered during the mine closure process" (MMSD, 2002b:7).

Stakeholders involved in closure planning might hold conflicting views on what should be achieved and it is likely that expectations will vary. The International Council on Mining and Metals (ICMM) (2008:20) suggests that mining companies strive to understand the views and expectations of stakeholders and work with stakeholders to formulate balanced, realistic and achievable closure outcomes. The involvement of stakeholders in the closure planning will create stakeholder ownership of the outcomes and add to the success of the plan. Engagement with stakeholders, especially those in close proximity to the mine (the host community), must begin at the earliest planning stages of the mine and continue throughout the life of the mine (MMSD, 2002b:7; CSMI, 2010:9; Laurence, 2006:296).

The United Nations (2002:39-40) suggests that a socio-economic impact assessment be carried out to determine the outcome of the interaction between the mining project and the host environment. The following aspects should be considered in such an assessment:

- Demographic and settlement patterns;
- Utilisation of the land and natural resources;
- Cultural and social impacts, including business development, disruptive social influences and law and order;
- Health and wellbeing of the population;
- Contribution of the mining company to community development;
- Gender inequalities, traditional roles, children and existing social structures; and
- Degree of collaboration between stakeholders.

The socio-economic impact assessment is a useful tool for determining the socio-economic aspects that require consideration during planning for mine closure.

- Human rights

All stakeholders have the right to participate in decisions that affect their lives, including the right to self-determination in shaping their post-closure futures. Closure plans must therefore respect the human rights of stakeholders (CSMI, 2010:10).

- Assessing risks and opportunities

A structured risk/opportunity assessment aims to: minimise the negative consequences of closure; maximise the positive benefits of closure; minimise the likelihood of closure goals not being met; maximise the likelihood that opportunities for lasting benefits are captured (ICMM, 2008:25).

Six possible risks are the following:

- Health and safety risk
- Natural environment risk
- Social risk
- Reputational risk
- Legal risk
- Financial risk

Social risks can include conflict over land use and ownership, contamination of shared natural resources and interference with culturally valued landscape elements (CSMI, 2010:10).

- Resource provision

Providing adequate funding for closure is a vital part of the planning process (MMSD, 2002b:17). Provision for resources to meet closure requirements should be made from exploration and followed through to the depletion of the resource or at the point when the mine is forced to close due to other factors. This can only be achieved if clear goals and objectives are established for mine closure at the start of mine planning process and reviewed throughout the life of the mine (CSMI, 2010:10).

### **2.5.3 Legislative Framework for Mine Closure in South Africa**

Formal mining in South Africa is more than 100 years old and has left economic, social and environmental legacies. Early legislation focused on 'surface rehabilitation' and held mining companies to the absolute minimum requirements entailing a reactive approach (Swart, 2003:489).

Today, mining companies are held to the principles of sustainable development. There are various regulations and pieces of legislation that speak to mine closure in South Africa and the most important of these, the Mineral and Petroleum Resources Development Act 28 of 2002 and the National Environmental Management Act 107 of 1998 are outlined below.

#### **2.5.3.1 Mineral and Petroleum Resources Development Act (MPRDA) (Act 28 of 2002)**

The MPRDA is considered a milestone in the transformation of the mining industry as it considers the economic, environmental and social costs of achieving the sustainable development of mineral resources. Included in the preamble of the Act are the following statements:

“The State affirms its obligation to protect the environment for the benefit of the present and future generation, to ensure ecologically sustainable development of mineral and petroleum resources, and to promote economic and social development.”

“The State recognises the need to promote local and rural development and the social upliftment of communities affected by mining” (MPRDA 28 of 2002).

Section 43 provides for the issuing of a closure certificate by the Minister of Minerals and Energy and the transfer of environmental liabilities to a competent person. The application for mine closure must be accompanied by an environmental risk report. The supporting regulations for mine closure therefore prescribes: principles for mine closure; the application for mine closure; the application to transfer environmental liabilities to a competent person; the



qualifications of such a competent person; the content for an environmental risk report and the content of a closure plan (Swart, 2003:492).

In Chapter 6, section 25 addresses the rights and obligations of the holder of mining rights and stipulates the submission of a social and labour plan (SLP) as a prerequisite for the granting of production rights by the Department of Mineral Resources (Ackermann, 2013:39).

The objectives of the SLP are the following (Department of Mineral Resources, 2010:5):

1. To promote economic growth and the development of mineral and petroleum resources in the Republic.
2. To promote employment and advance the social and economic welfare of all South Africans.
3. To ensure that holders of mining and production rights contribute towards the socio-economic welfare of the areas in which they are operating, as well as the labour sending areas.
4. To utilise and expand the existing skills-base of mineworkers in order to empower historically disadvantaged South Africans (HDSA's) and to serve the community.

A SLP therefore speaks directly to sustainable development and the process of mine closure.

### **2.5.3.2 National Environmental Management Act (NEMA) (Act 107 of 1998)**

The NEMA was amended in 2014 with Regulations Pertaining to the Financial Provision for the Rehabilitation, Closure and Post Closure of Prospecting, Exploration, Mining or Production Operations. These regulations state that a mining operation must make financial provision for the rehabilitation and management of negative environmental impacts during all phases of the mining cycle. These include costs pertaining to: "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" (NEMA 107 of 1998). This legislation therefore holds mining companies accountable for liabilities created by both past and present mining activities.

Local and international mining houses have had to develop practices to meet the requirements of legislation and to address the issues of sustainable development. Examples of successful international mine closure projects are provided in the next section.

### **2.5.4 Successful Mine Closure Projects: A Global Picture**

Addressing the adverse consequences of mine closure is an international agenda; organisations across the globe are involved in promoting research, transferring technology,

coordinating information exchange and extending good practices in dealing with the challenges of closing a mine (Centre for Sustainability in Mining and Industry, 2010:8). The annual mine closure conference, hosted by International Mining, is one platform where this knowledge sharing takes place.

Three approaches to mine closure by international organisations are noted below, namely those of:

- The International Council of Mining and Metals (ICMM)
- The Post-Mining Alliance's Eden Project
- Canada's National Orphaned/Abandoned Mines Initiative

#### **2.5.4.1 International Council on Mining and Metals**

The International Council on Mining and Metals (ICMM) was established in 2001 to enhance the contribution of the mining and metals industry to sustainable development. The ICMM's membership consists of 22 mining and metals companies, and 34 national and regional mining associations and global commodity associations. The council aims to build meaningful relationships with a broad range of stakeholders, including governments, international organisations, investors, civil society and academia, in order to strengthen the contribution of mining to development (ICMM, 2012:3).

The ICMM has five values that guide members on doing the work of the organisation (ICMM, 2014):

- To care for the health, safety and wellbeing of mineworkers, contractors and host communities;
- To respect all people and the environment while the principles of sustainable development are upheld. Sensitivity and responsiveness towards the host communities surrounding the mining operations are encouraged;
- To consider integrity as the basis for engagement with employees, communities, governments and others;
- To maintain accountability at all times. In doing so, the mining companies do not take the social licence to operate for granted and uphold the commitments that were made by them; and
- To ensure that all mining activities and meetings are done in collaboration with all stakeholders in a transparent and inclusive manner when addressing the mutual challenges of mining operations and the possibility of a closure (ICMM, 2014).

The ICMM clearly specifies that mine closure requires attention from multiple stakeholders.

#### **2.5.4.2 The Eden Project**

The Post-Mining Alliance aims to promote good practice in post-mining regeneration and looks for ways to redevelop former mining sites for the benefit of the local community and natural environment. This independent, non-profit organisation is situated in Cornwall, United Kingdom and is based at the Eden Project, a former clay mining pit that was transformed into an environmental tourism attraction and educational charity (Eden Project, 2011). The organisation's mission is to: catalyse action on mining legacies by converting liabilities into opportunities, stimulate the uptake of good practice in integrated mining and encourage solutions by sharing risks, responsibilities and opportunities.

The success of the Eden Project can be attributed to partnerships and collaborations with industry partners, knowledge of good practice, creation of opportunities for the development of post-mining regeneration approaches, networking with regional centres of excellence and the delivery of inspirational education and public engagement (Eden Project, 2011).

The Eden Project is a prime example of the power of community involvement and multi-stakeholder commitment to sustainable development.

#### **2.5.4.3 National Orphaned/Abandoned Mines Initiative (NOAMI)**

“Orphaned and abandoned mines are mines for which the owner cannot be found or for which the owner is financially unable or unwilling to carry out the clean-up” (NOAMI, 2009:5). Due to the environmental, health and safety, and economic impacts and liabilities of these mines, a number of stakeholders in Canada established an initiative known as NOAMI to help clean up abandoned mines. The NOAMI is guided by an advisory committee that is made up of representatives from the Canadian mining industry, government, non-governmental organisations and Aboriginal Canadians. Together they assess issues and make recommendations for collaborative remediation projects for orphaned and abandoned mines. Five task groups function under the initiative and focus on: information gathering, community involvement, legislative and institutional barriers to collaboration, funding approaches and jurisdictional legislative reviews.

The mandate for the community involvement task team is “[to] foster community involvement in decision-making about closure and reclamation standards and to ensure that targeting end-use and remediation standards are acceptable to local communities” (NOAMI, 2009:7). The task team conducted a series of studies and found the benefits of community involvement to include an improvement in the quality of remediation decisions that could lead to a reduction in clean-up

costs. Community members as stakeholders provided local knowledge, information and insight that could not have been provided by experts. The participation from multiple stakeholders also allowed for a discussion of issues to take place that lead to the sharing of diverse information and concerns (NOAMI, 2009:39). To overcome barriers to community involvement the task team suggests the building of trust, communicating with the public and building capacity in the community.

NOAMI is a good example of the value of a collaborative approach to mining practices that advance sustainable development (NOAMI, 2009:39-40).

In short, the above investigation of mine closure offered an understanding of the implications of the closure of a mine, related guiding principles for mining practices, legislation pertaining to mine closure in SA and successful international projects. The chapter is concluded with an examination of Mintails Mogale Gold Mine's approach to mine closure.

## **2.5.5 Introduction of Mintails Mogale Gold**

Mintails Mogale Gold Mine's operations are located in one of the most environmentally impacted landscapes and ecosystems in South Africa. The company has therefore inherited a number of legacies that pose a threat to the wellbeing of stakeholders. The mining legacies pertain to the presence of mine dumps, AMD and the geotechnical instability of the land; these are aggravated by the presence of illegal artisanal miners, the close proximity of human settlements to the MRA and the pressure to contribute to local development.

### **2.5.5.1 Mintails Approach to Mine Closure**

Mintails recognises the imperative of sustainable development and aims to respond to the challenge posed by the legacy issues through a new approach to mine closure, namely closure mining. Mintails Mining South Africa (2014:3) defines closure mining as "the deliberate long-term planning to optimise all mining-related processes and operations with a view to aligning the final outcome with the broader interests of society, in collaboration with all key stakeholders in a post-mining future, guided by the triple bottom line of economy, society and environment".

The closure mining approach is currently being developed by Mintails as an adaptive response to changing circumstances. Through this approach the mine seeks to deal with the legacy issues through partnership with key stakeholders. The outcome of closure mining is "a rehabilitated landscape and functional ecosystem capable of supporting humans and other species while mitigating all legacy issues to the extent that they no longer act as constraints on future socio-economic development" (Mintails Mining South Africa, 2014:4). A key aspect of the

closure mining approach is that of partnership and the building and maintaining of stakeholder relationships.

Mintails identifies three constraints to the rehabilitation process:

- The lack of a scientific, engineering and technological basis for rehabilitation;
- The lack of a common vision and cooperation between stakeholders; and
- The lack of clarity on the definition of a post-closure landscape.

Mintails established an Environmental Management Forum (EMF) in 2013 to address the constraint of a lack of a common vision. The EMF failed but a new forum known as the Mogale City Mining Forum has been subsequently established. It is hoped that this Forum will evolve into an institutional structure that will coordinate the actions of other stakeholders and form the link between society and relevant contributors.

## **2.6 CONCLUSION**

It is evident that sustainable development, corporate social responsibility, stakeholder engagement and mine closure are interconnected and should be approached in a holistic manner. Sustainable development and corporate social responsibility agendas create a much needed and worthy challenge for all sectors and industries. It is a challenge for mining companies to achieve sustainable development because their fundamental activity, the excavation of minerals, depletes natural resources. The closure of a mine is an inevitable phase in the mining cycle and has implications for the wellbeing of stakeholders and the integrity of the environment. The challenge for a mining community is therefore to leave a lasting legacy of sustainability for the surrounding communities and natural habitat. Mine closure should therefore be a well-planned and managed process.

The exposition in this chapter achieved the first objective of the study, namely the definition and conceptualisation of mine closure and its association with sustainable development, corporate social responsibility and stakeholder engagement. Chapter Three will focus on the findings from the empirical study related to the community's perceptions of sustainability and issues in stakeholder engagement.

# CHAPTER THREE

## EMPIRICAL RESEARCH FINDINGS: MINE CLOSURE AND A PEOPLE-CENTRED APPROACH TO SD, CSR AND SE

### 3.1 INTRODUCTION

The literature study in *Chapter Two* contributed to a better understanding of the concepts of sustainable development, corporate social responsibility, stakeholder engagement and mine closure, while explaining the underpinning theory of the people-centred approach to development.

This chapter is divided into two sections. The first part aims to explain the research methodology that was used in the study to investigate the phenomena in question. Secondly, this chapter deals with the empirical findings of the research by answering the research questions (see 1.2), and is also aligned with *Objectives Two* and *Three* (see 1.3) of the study:

- What are the perceptions of the community on sustainable development?
- What are the current issues in stakeholder engagement at the research setting in terms of mine closure?
- What role can a people-centred approach to development play in the area in terms of mine closure?

### 3.2 FINDINGS

*Chapter Two* verified the relationship between sustainable development, corporate social responsibility, stakeholder engagement and mine closure. These concepts were identified as themes in the data and the findings are reflected accordingly in *Chapter Three*, aimed at addressing *Objective Two* and *Three* (see 1.3).

#### 3.2.1 Sustainable Development

The wellbeing of the environment, the economy and people is inextricably linked; development that takes all three of these dimensions into consideration is regarded as sustainable (Strange & Bayley, 2008:24).

During the empirical investigation it became apparent that mining legacies greatly impact on SD and the perceptions around SD. 'Mining legacies' has been used as an umbrella term that is defined as the "negative impacts of mining" including "abandoned, orphaned and derelict mine

sites” (Pepper *et al.*, 2014:450). Since gold was discovered on the Witwatersrand in 1886 it played a central role in the economy; from this time until 1994 the government reaped the benefits through taxes and levies and allowed the industry to be privileged in order to maximise profits. The absence of sufficient regulations led to an absence of responsibility and resulted in mines not being held accountable for their environmental, social and economic impacts, resulting in an accumulation of negative consequences. The mining industry was self-regulated, unsustainable and highly lucrative, and this led to negative mining legacies (Adler *et al.*, 2007:34; Turton, 2015).

The findings pertaining to sustainable development will now follow. An investigation into the verification of the environmental, social and economic impacts does not fall under the scope of this research. However, whether or not impacts are actually occurring is irrelevant; it is the perception of the locals that impacts are occurring that is important. “Perception can be just as important as chemistry” (Prno, 2013:580).

### **3.2.1.1 Environmental Dimension**

The environmental impacts of mining pertaining to the preservation of ‘natural capital’ came strongly to the fore during the empirical investigation.

Mintails has the rights and ownership of approximately 100 million tonnes of tailings disposal facilities collectively known as the Randfontein Cluster. Along with these tailings the mining company has inherited the mining legacies of the geotechnical instability of the land, the presence of large mine voids that fill with water that decants to the surface in the form of acid mine drainage (AMD) and mine residual areas (Mintails Mining South Africa, 2014:2-3). Mintails is a unique operation in that it is reclaiming remnant and redundant surface tailings and mining abandoned hard rock reefs. The environmental benefits of this form of mining are that very little ‘new’ harm is done to the environment while responsibility is taken for the rehabilitation of the site. “*So if you are allowed to mine old areas [...] you can’t help but improve the environmental situation*” (mine manager). According to management members, a good environmental practice by the operation is the use of AMD water instead of waters from the environment. The mine has its own water treatment plant that is used to neutralise acidic water. This process is therefore contributing to the rehabilitation of the environment.

At first glance, on a visit to the Kagiso community, evidence of years of mining is apparent as mine dumps dominate the terrain (*see photo 3.1*). There is no boundary between the Ward 14 settlement and the mine, and everyone is free to roam the land, while open adits to abandoned shafts result in a treacherous environment (*see photo 3.2*). Illegal artisanal miners are seen hard at work and children play in abandoned mine buildings unattended.

Photo 3.1: Kagiso Community, Ward 14



Photo 3.2: Adit allowing access to shallow underground workings





The respondents who took part in the focus groups discussions attested to the above-mentioned environmental impacts and were most concerned about: AMD, the grade of the soil, dust pollution and the state of the ecosystem. The following are some of the responses:

*“There is a stream over there [...] many years ago that stream was nice. We used to swim there. But now the water is very acidic and the animals that lived in the water are dead. There is nothing there. The acid from the mine comes into that stream. It’s very dangerous”.*

*“The vegetables which we are planting, we are planting on contaminated soil [...] even the water we use for irrigation is contaminated. Now chances are that the food that will be produced is likely to affect the foetus [...] this is likely to result in mental retardation.”*

*“Whatever we grow and buy is affected by the mine dust and the pollution from the water.”*

*“Most of the people around here, we are sick [...] we are not healthy because of the dust.”*

### **3.2.1.2 Economic Dimension**

As previously stated (see 2.2.2), the economy is the tool for achieving SD. The benefits of mining most often pertain to the economic dimension of development and can include the creation of jobs, opportunities for skills development, the improvement of local infrastructure and foreign investment (MMSD, 2002a:17).

The findings suggest that the community members were not aware of any economic benefits from the mine. As one community member put it: *“This mine never benefitted us.”* This can be attributed to the fact that none of the respondents were employed by the mine and the economic benefit desired most was that of employment. Great value was placed on employment as a source of income that would boost the economy of their community. The issue of employment also caused mistrust in the mine; the respondents were not aware of anyone from their community working at Mintails Mine and this created the perception that labour was acquired from Lesotho and Mozambique. *“They [the mine] should employ locally so that our community can benefit.”* The economic value of the mines in the area was also raised during the focus group discussions: *“The mines are playing an important role in Mogale City economy.”* The respondents, however, felt that the economic benefits were not filtering down to grassroots level and thus they were not profiting.

Interviews with mine management indicated that the mine employed 287 permanent staff members as well as 506 contractors, and that 90% of the labour force was sourced from the West Rand. Management acknowledged that the economic benefits of Mintails Mine for the Kagiso community were limited and attributed this to the size of the mining operation, the profit

turnover and the vastness of the community. *“Will Kagiso community benefit from Mintails mining operations? That is another difficult question to answer. You look at 200 000 people living in Kagiso and you look at Mintails Mine doing small turnovers comparatively (sic) to Anglo’s and Goldfields’ and those kinds of mines, and you think, ‘well what difference can we make?’”* (Mine manager)

### **3.2.1.3 Social Dimension**

The social dimension of SD refers to the long-term and continuous improvement of the livelihoods of people in a given social context (Cronjé & Chenga, 2009:416).

The community respondents, during interviews and focus group discussions, raised concerns pertaining to the aspects of:

- Health. *“You see how close we are to the mine dumps [...] these cause us dry skins, sometimes runny stomachs, headaches [...]”*
- Social unrest. *“Basically, mines are just causing problems.”*
- Safety. *“That mine is so near to where I am staying [...] and there is a hole there that they [the mine] didn’t even close. They don’t even have a fence there for the children. You see it’s very dangerous. It’s open there, it’s an open case mine.”*
- Loss of control. *“The victims are the community.”*
- Mistrust. *“It’s all about personal interests.”*
- Anxiety. *“Sometimes when you are sleeping and they [the miners] are working night shift the houses start shaking and then things fall and you wake up.”*

The above indicates that the social capital of the community is under threat and therefore the wellbeing of the people is at stake.

The concerns raised by the respondents can be regarded as their subjective experiences; the people-centred approach to development values the subjective meanings that people give to development.

### **3.2.1.4 People-Centred Approach to Development**

Mining companies and their various stakeholders invariably have different expectations about what development needs and priorities exist (Owen & Kemp, 2013:31), as well as different post-closure visions. If opportunities are not created to reconcile and understand these diverse visions, the ‘expectations gap’ can be exacerbated. A developmental approach with a strong people focus that aims to involve people in SD processes and to ‘hear the voices’ of different people can therefore be well-suited to initiatives aimed at SD. After ‘hearing the voices’ of

people, meaningful development projects can be planned, a joint post-closure vision achieved and the wellbeing of people improved through participation. The people-centred approach to development aims to enable people to live a meaningful life.

As revealed by the focus groups and interviews, the development needs and priorities of the community members were:

- Employment
- The ability to meet basic needs
- Education, acquisition of skills and personal-development
- Infrastructure and services (e.g. clinics, playgrounds and schools)

The above development priorities speak to the principle of ‘people can be more than they are’ (see 2.2.4); the community members desire an increased state of humanness. According to the people-centred approach, development is dependent on the will to create a meaningful life (Coetzee, 2001:123). The development priorities of the respondents indicate a desire to improve their living conditions through self-development (education) that will lead to employment opportunities; they therefore aspire to grow and develop. Their life-world refers to the micro-social reality in their community, a reality that is influenced by the presence of mines, while the consciousness of their life-world offers the starting point for development. Furthermore, the respondents were conscious that the closure of the mines might have a significant impact on their life-world and challenge them to find new pathways to development.

The researcher observed that it was challenging for the group members to voice their dreams for their community; it appeared that this was not a topic that they were often confronted with. The principle of desirable direction pertaining to the definition of wellbeing and the verbalisation of their desired end state was lacking.

The following respondent’s views, however, indicate a commitment to participation and self-reliance.

*“Now life is precious. We cannot buy another life when we are dead...”*

*“We are the people who are responsible for our lives.”*

*“We will stand up until they kill all of us.”*

These comments show that community members believe in a bottom-up approach to development; they recognise the importance of their participation in development processes and the value that involvement holds for achieving their desired direction.

These findings confirm the importance of a people-centred approach to development and CSR.

### **3.2.2 Corporate Social Responsibility**

As previously stated, CSR involves the contribution of business to economic, social and environmental sustainability. For Jenkins and Yakovleva (2006:272), CSR in the mining industry “is about balancing the diverse demands of communities and the imperative to protect the environment with the ever-present need to make a profit.”

The interviews with mine managers yielded information on the CSR projects implemented by the mine in the surrounding communities. These initiatives include a nursery project, an adult education programme, a food garden, the allocation of bursaries and in-house skills development and training. This mine is in a unique position in that it is surrounded by communities and informal settlements. Thus the scope for CSR is huge. It is therefore not surprising that none of the community members who took part in the focus groups knew of any of the mine’s CSR projects. A manager from the mine pointed out that mining attracts many different industries; these manufacturing companies are situated in and around the neighbouring communities, but they are not held accountable for their CSR projects.

*“The regulation has turned against mining and saying mining (sic) you need to do the following and everybody sits back and expects that to happen.”*

*“We can make small differences and eventually if we did 10 small differences (sic) it would become a bigger difference.”*

Additional views by respondents from the mining company included:

*“We can’t be heroes.”*

*“The mines cannot be viewed as having an infinite source of capital [...] the expectation is quite great on the mines.”*

The findings suggest that the mine is perceived as being responsible for the communities’ development and because this is not possible for the company it can lead to resentment between the community of Kagiso and Mintails Mine. Pascó-Font (2001:13) recommends that the responsibilities that pertain to development be clarified between government, mining corporations and the respective communities. An understanding of the responsibilities of the different role players in the development of the Kagiso community could lead to realistic expectations and this could be achieved through stakeholder engagement.

### 3.2.3 Stakeholder Engagement

Under the theme of stakeholder engagement, the sub-themes of stakeholder groups, trust, communication and transparency were identified in the information gathered in the interviews and focus groups. These sub-themes indicate the prominent issues related to engagement between stakeholders.

#### 3.2.3.1 Stakeholder Groups

The key stakeholder groups were identified as the community, the government, the Mogale City Mining Forum and the mining company (Mintails). The stakeholder group, the mining forum, is quite unique to this context as it representative of the different stakeholder groups and is therefore discussed below.

Mintails identified the absence of an institutional arrangement to support a common vision as a constraint to the closure mining process (Mintails Mining South Africa, 2014:17). As noted above (see 2.5.5.1), to resolve this issue they created an Environmental Management Forum (EMF). However, this forum did not last long and the collapse of the arrangement was attributed to instability in the political arena at the time of the national elections and disengagement among stakeholders. A lesson learnt from the failure of the forum was that they “*were not speaking to the right people*” (mine manager) and that they had to “*deal with the elected structures, in other words work very closely with the municipality and ward councillors*”. The Mogale City Mining Forum has subsequently been established, the key purpose being “[t]o involve community stakeholders to identify issues, concerns and possible solutions through frequent communication regarding Mintails SA (Pty) Ltd and its subsidiary mining operations” (Mogale City Mining Forum Constitution Draft, 2014:4). The forum aims: “To create a link between Mintails and the identified communities for purposes of enabling continuous engagement. The method of engagement will be to share and exchange information with, and from, the identified communities” (Mogale City Mining Forum Constitution Draft, 2014:6). The forum meets every two weeks and is made up of representatives from three stakeholder groups:

- Nominated management representatives and the community liaison officer from Mintails Mine;
- Two nominated representatives from Mogale City Local Municipality; and
- A maximum of five representatives from each of the communities surrounding the mine namely: Kagiso, Sinqobile, Soul City, Tudor West Village, Makhulugama, Khokhamoya, Boltonia and Mindalore.

It was evident during the focus groups and interviews that there was a great deal of expectation regarding stakeholder engagement resting on the success of the Mogale City Mining Forum.

*“I think the mining forum is representing the interests of the community and I think that’s the way to start.” (Community member)*

*“This forum came into being to address the issues that are affecting the communities.” (Community member)*

The Mining Forum can be regarded as a form of local governance and capacity building. Veiga et al. (2001:200-201) regard this local governance as positive and state that the development of a sense of control within the community leads to political, local and social stability. Possible positive spin-offs for the community can include active involvement in decision-making about their lives, fostering a broader concept of community governance and elevation of the objective of social development. An added benefit is that communities are empowered to be able to negotiate. Mining companies can also benefit through local governance structures in that they work with a consistent local policy that outlines what can be realistically expected from the mine, thus eluding unrealistic expectations.

Focus group respondents also raised concerns about the mining forum. One member felt that it was unfair that only certain wards were benefitting from it: *“It’s only three wards that are benefitting [...] Ward 14, Ward 15 and Ward 16 [...] Where I stay, I am a neighbour to Ward 14. There is a thin line between me and Ward 14 but I am not a part of the forum so there is a bit of discrimination in trying to help or in terms of people who should benefit from the mines.”* Another felt that the establishment of the forum was a delay tactic by the mine to address issues: *“With the implementation of this forum I truly believe that they are busy delaying progress, while they are busy mining gold on the other side.”* Furthermore, the researcher attended a mining forum meeting during which a group from one of the communities addressed the forum; concerns pertaining to the constitution of the forum, the lack of feedback regarding issues previously discussed and the successes of the forum thus far were raised with anger and aggression. It would appear that the community members do not always trust the company’s intentions with respect to the forum.

### **3.2.3.2 Trust**

Trust in this context is defined as having confidence that a stakeholder group will not exploit another group’s vulnerability and that the behaviour of the group will match the expectations of the trust holder (Moffat & Zhang, 2014:62). In the mining environment, trust is a key component in establishing a SLO and can lead to a decrease in conflict and an increase in acceptance. The

violation of trust can have severely negative consequences for relationships (Moffat & Zhang, 2014:62).

It was clear from the focus group discussions with the community that they did not trust the mine. The following quotations reflect the situation:

*“They [the mine] have never given us a reason to trust them.”*

*“We feel that this mine is coming with their divide and rule.”*

*“It’s actually hard to trust them [the mine] when the [former] minister [of mineral resources] is on their side and we thought the minister should be on the side of the communities but I don’t know if there is some kind of benefit that she gets [...] so it is hard to trust them.”*

A possible reason for this lack of trust is mining legacy issues (see 3.4.1) that speak to a lack of accountability by mines and irresponsible mining practices in the past, as confirmed by the following quote.

*“We don’t trust the mines because they don’t clean up their mess, they just leave it there.”*

Suggestions by community members regarding ways to establish trust between Mintails and the community included the provision of tangible benefits. Therefore CSR projects that are based on the communities’ needs could potentially contribute to establishing trust.

*“What I am thinking is that if Mintails wants us to trust them [...] they must come and build us a clinic.”*

### **3.2.3.3 Communication**

Communication remains the cornerstone of stakeholder engagement. It is only through open, honest communication that collaboration, joint decision making, partnership, mutual understanding and participation is possible.

Views on communication between stakeholders were voiced by community members and included the following:

*“There is a lack of communication between the community and mine. We tend to demand much whereas we don’t know whether their budget is able to do so.”*

*“No one from the government or from Mintails ever came to tell us: ‘Guys when you see our tractors, then don’t be surprised because then we are coming to do the mining.’”*

*“I think what made the people protest or want to close the mine was lack of consultation. We were not consulted as the community that they are opening the mine (sic), so my surprise to hear a loud noise every day (sic) and the earth shaking and all that. So I think it was the government who should have done the consulting because if there was consultation then we would raise some of the concerns that we see (sic).”*

Moreover, respondents stated that improved communication could hold value for stakeholder engagement.

*“We only need to be consulted and to understand what is happening...”* (Community member)

*“We need to communicate the true reality...”* (Mine employee)

*“The community messages that go out within the community need to change.”* (Mine manager)

*“You’ve really got to communicate honestly.”* (Mine manager)

It therefore appears that a lack of communication has contributed to community dissatisfaction and that there is consensus that communication needs to improve.

The mining forum is expected to play a pivotal role in facilitating communication between the mine, the community and government. Community members maintain that they would be aware of rehabilitation or CSR projects by the mine because the mine would communicate this to the forum and the forum would in turn communicate this to the community.

*“In order for the community to participate you should give them a platform and that platform should be the forum. Whenever as a community we want to raise issues or want to raise concerns, that forum will take it forward to the relevant people.”* (Community member)

*“Coming back to that issue of communication [...] the councillors [mining forum representatives] ensure that they sit on different forums, which ensure that the message gets through to different structures.”* (Mining forum representative)

Community members admitted to receiving their information on various health-related and environmental impacts from media coverage on comparable mining communities, including newspaper reports, programmes on television and deductions from personal observations. Consequently a communication challenge exists to reconcile different knowledge sources. Members from both focus groups realised the need for research and information specific to their context and suggested that the findings be communicated directly to them during community meetings.



#### 3.2.3.4 Transparency

Transparency may be defined as the “availability of firm-specific information to those outside [of the corporation]” (Bushman *et al.*, 2003:207). Gomes *et al.* (2014:90) found that transparency with stakeholders includes the disclosure of the economic, social and environmental performance of the mining company and the contribution to sustainable development. Jenkins and Yakovleva (2006:272) are of the opinion that the development of social cohesion can contribute towards achieving progress within SD and that a transparent mining operation is needed to establish this cohesion. Respondents agreed that transparency is a key principle of stakeholder engagement.

*“Both parties [mine and community] should be transparent.”* (Community member)

*“You’ve got to be prepared to put the time and effort into communication and to keep as honest as possible; never get caught in a lie and never make a promise you can’t keep.”* (Mine manager)

#### 3.2.4 Mine Closure

As an inevitable event in the life of a mine, mine closure should be planned for. A closure plan defines the vision of the end result of the mining process and provides a framework to guide all actions and decisions taken during the mine’s existence (Laurence, 2006:286).

Mintails’ closure mining plan aims to respond to the legacy issues and in so doing contribute to sustainable development. Key components of this process include:

- The re-mining of tailings dams and the removal of dumps to form super dumps in order to create land that can be used for development.
- The neutralisation of AMD.
- The removal of all surface striking reefs through open-cast operations. Pits will then be backfilled to start the re-stabilisation and rehabilitation process. This will result in the closure of entry points for artisanal miners, thus reducing illegal mining activity. The flow of AMD will be reduced as ingress points are restricted. Geotechnical stability will be restored (Mintails Mining South Africa, 2014:11-17).

Mintails, on a monthly basis, also contributes to environmental liability protection in the form of a trust fund. The money will be spent on remediation once the mine has closed. This resource provision is in line with the Centre for Sustainability in Mining and Industry’s<sup>1</sup> (2010:9) principles

---

<sup>1</sup> The Centre for Sustainability in Mining and Industry (CSMI) is a division of the School of Mining Engineering at the University of the Witwatersrand (WITS). The Centre is involved in education,

for mine closure (see 2.5.2). Mine management, however, realises the limitations of rehabilitation in an environment affected by mining legacies: *“The challenge is that you are not going to remediate 120 years in two years, and that’s a reality check.”* The biggest challenge to the successful implementation of Mintails’ closure plan was identified by a mine manager as *“making enough money from the business to be able to carry out the plans. Honestly, that’s it.”* The recent amendment to the National Environmental Management Act (107 of 1998) proposes that a mine take full responsibility for the rehabilitation and management of negative environmental impacts, which could destroy the business aspect of the mine (Turton, 2015). Should the mine be driven to insolvency, the closure plan will go to ruin and the communities will be left to face the consequences.

The community members’ perceptions of what the consequences will be when the mine closes are captured below:

*“It’s [the closure of the mine] not going to make any difference.”*

*“The community is going to bear the negative results [...] because we are going to exist after the mine.”*

*“People are going to starve.”*

*“Unemployment rates will increase.”*

*“We are just going to squat. It [the land] will not be safe but you know when you squat you don’t observe (sic), as long as we need shelter, whether there is a landmine in it or whatever, we just squat, then tomorrow we will complain again.”*

*“I think that Mintails came up with a plan for rehabilitation; that rehabilitation is going to help because they are going to take these dumps and re-mine them.”*

*“The mines, they must rehabilitate the land.”*

It is evident that the views of respondents differed; some felt that the closure of the mine would make no difference to their lives as they are currently not benefiting from mining activities while others realised the broader economic implications. The need for and expectation of rehabilitation is prominent.

### 3.3 CONCLUSION

This chapter dealt with the empirical investigation of the study on the Community Perceptions of Sustainable Development: Implications for an Approach to Closure Mining. A qualitative research method was chosen for the investigation and data was collected by means of a document study, focus groups, semi-structured interviews and by observation. The data was analysed according to the themes identified in the literature review. The findings highlighted the perceptions of sustainable development and in so doing identified key issues that need to be addressed in stakeholder engagement between Mintails Mine and the community of Kagiso. The chapter therefore addressed the objectives of the identifying the perceptions of the community on sustainable development; the current issues in stakeholder engagement at the research setting; and the role that a people-centred approach to development can play in the area.

The following key findings were reached:

- The community perceives the mine to cause them serious environmental, social and economic damage;
- Mining legacies are prominent and these contribute towards perceptions on sustainable development;
- Corporate social responsibility programmes, informed by a people-centred approach to development, can contribute to the establishment of trust and stakeholder engagement;
- The Mogale City Mining Forum is a key component of the stakeholder engagement process;
- More opportunities for communication and engagement between stakeholder groups need to be created;
- The role of the government as a contributor to development needs to be clarified;
- Legislation must be made relevant by being contextualised;
- The implementation of Mintails Mine's closure plan is integral to the rehabilitation process and the success of the plan rests on the participation of all stakeholders.

The fourth and final chapter draws conclusions from the research and posits recommendations for improving the engagement between the mine and the community, based on a people-centred approach to development so that the mine closure aims can be achieved.

## **CHAPTER FOUR**

### **CONCLUSION AND RECOMMENDATIONS**

#### **4.1 INTRODUCTION**

Mining is by its very nature an unsustainable practice. Consequently great care must be taken to maximise the benefits of the industry and to minimise the negative impacts during all phases of the mining cycle, including closure. The benefits of mining can be maximised through the implementation of corporate social responsibility programmes aimed at development that is informed by the participation and involvement of mining communities.

The purpose of this study was to determine the community's perceptions of sustainability and the implications of these for Mintails' closure mining approach. *Chapter One* highlighted the likelihood that the mine and the community members from Kagiso had conflicting viewpoints of sustainability and that these could potentially create stumbling blocks for development. The need for meaningful partnerships and engagement between stakeholders was emphasised as these are vital to achieving sustainable development. The micro-foundation people-centred approach, a perspective on development, was identified as being well-suited to the study as it values the participation of individuals in development processes.

*Chapter Two* comprised a conceptualisation of mine closure and the related concepts of sustainable development, corporate social responsibility and stakeholder engagement, and contextualised these within the mining sector.

*Chapter Three* reported on the findings of the empirical investigation, with special reference to an outline of the community's perceptions of sustainable development; highlighted the current issues in stakeholder engagement; and explored the role of the people-centred approach to development in relation to these findings.

In this *fourth and final chapter* the research objectives will be listed and an explanation offered regarding how this study has attained these objectives. Recommendations to improve the stakeholder engagement between Mintails Mine and the Kagiso community, based on a people-centred approach to development, will then be proposed.

#### **4.2 RESEARCH OBJECTIVES**

The problems addressed in this study relate to Mintails Mine's closure mining approach and the implications of stakeholder engagement issues. The relationship between stakeholders,

especially between host communities and the mining companies, lies at the heart of implementing sustainable closure. Mintails' approach to mine closure and the success of the closure mining plan will depend on the establishment of a common vision and cooperation between stakeholders. The community's perceptions of sustainable development influence the stakeholder engagement process. The research that was conducted addressed the objectives stated in *Chapter One* (see 1.3) as explained below.

#### **4.2.1 Research Objective 1: Define and conceptualise the closure mining approach and its association with sustainable development, corporate social responsibility and stakeholder engagement**

*Chapter Two* addressed the first objective. It was established that mining operations pose numerous challenges for sustainable development. The economic, social and environmental impacts are felt by mining communities in particular and the effects are often more severe after the closure of a mine. Although legislation, guidelines and literature on the management of the impacts of mine closure have been forthcoming, the minimisation of negative implications remains a challenge. Additional challenges to managing the consequences of mine closure include company-community relations in that the expectations of stakeholder groups often differ. To deal with the implications of mine closure, Mintails Mogale Gold Mine proposes the mining-for-closure approach that aims to respond to mining legacy issues through building partnerships with stakeholders and rehabilitating the landscape to a point that it will no longer constrain future socio-economic development once the mine has closed. The implementation of this plan, however, depends on the level of stakeholder engagement and the participation of the community. Furthermore, the people-centred approach to development can be applied to CSR programmes and SE to minimise the negative impacts of mine closure.

#### **4.2.2 Research Objective 2: Assess the community's perceptions of sustainable development**

The community's perceptions of sustainable development and the related concepts of mine closure, CSR and stakeholder engagement were documented in *Chapter Three*. It became clear that there is a gap between the community's expectations of the role that the mine should play in development and the mine's current contribution, which has led to the community's distrust of the mine. This highlights the need for improved communication and transparency.

#### **4.2.3 Research Objective 3: Identify key issues in stakeholder engagement between the mine and community, and explore the importance of a people-centred approach to development**

*Chapter Three* also identified the following key findings:

- The community members perceive the mine to be causing serious environmental, social and economic damage to their area;
- Mining legacies are prominent and these contribute towards perceptions of sustainable development;
- Corporate social responsibility programmes, informed by a people-centred approach to development, can contribute to the establishment of trust and stakeholder engagement;
- The Mogale City Mining Forum is a key component of the stakeholder engagement process;
- Opportunities for communication and engagement between stakeholder groups need to be created;
- The role of the government as a contributor to development needs to be clarified;
- Legislation must be made relevant by being contextualised; and
- The implementation of Mintails' closure plan is integral to the rehabilitation process and the success of the plan rests on the participation of stakeholders.

The key issues in stakeholder engagement that need to be addressed were therefore found to be:

- A lack of open and transparent communication between stakeholders;
- A lack of clarity regarding the roles and responsibilities of stakeholders regarding the development of the community;
- A lack of understanding of stakeholders' needs, desires, capacities and limitations; and
- A lack of participation and collaboration between stakeholders.

#### **4.2.4 Research Objective 4: Make recommendations for improving the engagement between the mine and the community, based on a people-centred approach to development**

These recommendations will now be posited. The findings of this study indicate vast differences between the expectations, perceptions and needs of the various stakeholder groups and indicate a need for improved engagement. The following recommendations are therefore posited with a view to achieving this goal:

- Mintails' management needs to recognise that when adopting the people-centred approach to development, community sustainability, stakeholder engagement and closure planning are not just a management problem but based on the concept of participation, understanding, shared decision making and shared responsibilities.
- A common vision for the development of Kagiso should be established through the people-centred approach, which involves the participation of all stakeholders. Closure plans must be aligned with the development plan in order to achieve this vision.
- Stakeholder groups, including the community, Mintails Mogale Gold Mine, Mogale City Mining Forum and the government, should clarify roles and responsibilities regarding the development of Kagiso community and hold each other accountable.
- Community expectations should be discussed in the relevant stakeholder forums. Such discussions will be a valuable component of stakeholder engagement because they will facilitate an understanding of where the company's motives differ from those of the community and what barriers exist.
- By acting on community concerns, through CSR programmes, trust can be gained or restored. Consultation with and the participation of community members in CSR projects is vital. Due to the high rates of unemployment in the Kagiso community and the limited capacity of Mintails Mine to offer employment opportunities, in addition to the inevitable closure of the mine, CSR projects should be focussed on income generation and skills development. CSR projects should furthermore aim to re-skill mine employees to ensure the sustainable development of the people.
- Frequent and open communication between stakeholders is vital. The Mogale City Mining Forum offers a platform for this communication and representatives must be held accountable for relaying what was communicated to their respective wards. Furthermore, the representatives serving on the Mogale City Mining Forum should be given the opportunity for capacity building in terms of leadership development, self-empowerment, conflict resolution and interpersonal communication due to the key role that they play in stakeholder engagement.
- The transparency of all stakeholder groups will contribute to a trust relationship and this can be achieved through the ongoing and honest disclosure of the performance, contribution of and challenges faced by stakeholder groups in relation to the goal of sustainable development.

### **4.3 AREAS FOR FUTURE RESEARCH**

Against the background and context of this study, the following are some suggestions for future research:

- The impact of current legislation on the business prospects for investment in mining in South Africa, particularly the re-mining of old mines. Policy states that existing mining companies have to assume responsibility for past and present environmental liabilities. The cost implications of this could result in the collapse of the industry and the responsibility of rehabilitation being left to the State.
- CSR endeavours have the potential to contribute to the development of communities. There is a need for coordinated and focused initiatives that contribute towards local development plans. The feasibility of a coordinating body or institutional structure to drive this initiative is a possible research topic.
- The investigation of the relationship between mines and local municipalities in terms of shared responsibilities and expectations for local economic development.
- Monitoring the evolution, role, value and success of the Mogale City Mining Forum in the stakeholder engagement process. This institutional arrangement has the potential to be a best practice and could offer valuable insight into stakeholder engagement issues.
- Unbiased, scientific and contextualised research on the health-related impacts of the mines on the mining communities. There was much speculation regarding the causes of the health-related ailments of the community members, which contributed to distrust of and anger towards the mine.

### **4.4 FINAL REMARKS**

This study investigated the mining community of Kagiso's perceptions of sustainable development and the implications of these for Mintails' closure mining approach. The study further confirmed the importance of working towards the sustainability of economic, social and environmental aspects while a mine is in operation and once it has closed. Moreover, the study highlighted the disparity in stakeholder expectations and the necessity for open and transparent engagement between mining companies and communities. Mining companies are faced with the challenge of formulating a mine closure plan that balances their commercial needs and capabilities with the communities' expectations and the State's policies. By directing stakeholder engagement and corporate social responsibility programmes in line with the people-centred approach to development, the development needs of communities can be better achieved.



In conclusion, it is in the best interest of mining companies, communities and the government to work together towards sustainable development through striving towards collaboration, mutual understanding, transparency, effective communication and shared responsibility.

## BIBLIOGRAPHY

Accountability. 2011. AA1000 stakeholder engagement standard 2011: final exposure draft. London. <http://www.accountability.org/images/content/3/6/362/AA1000SES%202010%20PRINT.pdf> Date of access: 19 September 2014.

Ackermann, M.E. 2013. Mine closure: a contingency plan to mitigate socio-economic disasters. Potchefstroom: North-West University. (Mini-dissertation - MA.)

Acts **see** South Africa

Adler, R.A., Classen, M., Godfrey, L. & Turton, A.R. 2007. Water, mining, and waste: an historical and economic perspective on conflict management in South Africa. *Economics of peace and security journal*, 2(2):33-41.

Bell, S. & Morse, S. 2003. Measuring sustainability: learning from doing. London: Earthscan.

Bench Marks Foundation. 2003. Principles for global corporate responsibility: bench marks for measuring business performance. <http://www.bench-marks.org/glossary.shtml> Date of access: 16 September 2014.

Bezuidenhout, A., Fig, D., Hamann, R. & Omar, R. 2007. Political economy. (In Fig, D., ed. Staking their claims: corporate social and environmental responsibility in South Africa. Scottsville: University of KwaZulu-Natal. p. 13-94.)

Blowfield, M. & Murray, A. 2008. Corporate responsibility: a critical introduction. New York: Oxford University Press.

Bossel, H. 1999. Indicators for sustainable development: theory, method, applications. Winnipeg, CA: International Institute for Sustainable Development (IISD).

Bushman, R.M., Piotroski, J.D. & Smith, A.J. 2003. What determines corporate transparency? *Journal of accounting research*, 42(2):207-252.

Carroll, A.B. 1991. The pyramid of corporate social responsibility: toward the moral management of organizational stakeholders. *Business horizons*, 34(4):39-48.

Carroll, A.B. 1998. The four faces of corporate citizenship. *Business and society review*, 100(1):1-7.

Coetzee, J.K. 2001. A micro-foundation for development thinking. (In Coetzee, J.K., Graaff, J., Hendricks, F. & Wood, G., eds. *Development: theory, policy and practice*. Cape Town: Oxford University Press. p. 118-139.)

Commission of the European Communities. 2002. Communication from the commission concerning corporate social responsibility: a business contribution to sustainable development. [http://trade.ec.europa.eu/doclib/docs/2006/february/tradoc\\_127374.pdf](http://trade.ec.europa.eu/doclib/docs/2006/february/tradoc_127374.pdf) Date of access: 10 June 2014.

Constitution **see** South Africa

Cooper, S. 2004. *Corporate social performance: a stakeholder approach*. Aldershot: Ashgate.

Crane, A., McWilliams, A., Matten, D., Moon, J. & Siegel, D.S. 2008. *The Oxford handbook of corporate social responsibility*. New York: Oxford University Press.

Cronjé, J.F. 2007. *Sustainable development: theoretical orientation*. Potchefstroom: North-West University, Potchefstroom Campus. (Study guide SOCL 811.)

Cronjé, J.F. & Chenga, C.S. 2009. Sustainable social development in the South African mining sector. *Development Southern Africa*, 26(3):413-427.

Crowther, D. & Rayman-Bacchus, L. 2004. Introduction: perspectives on corporate social responsibility. (In Crowther, D. & Rayman-Bacchus, L., eds. *Perspectives on corporate social responsibility*. Aldershot: Ashgate. p. 1-17.)

CSI Handbook. 2013. The state of CSI 2013. (In Matthews M., ed. *The CSI handbook: the authoritative guide to corporate social investment in South Africa*. 16<sup>th</sup> ed. Cape Town: Trialogue. p. 34-59.)

CSMI (Centre for Sustainability in Mining and Industry). 2010. The socio economic aspects of mine closure and sustainable development: literature overview and lessons for the socio-economic aspects of closure. Report 1 of 2. [http://www.coaltech.co.za/chamber%20databases%5Ccoaltech%5CCom\\_DocMan.nsf/0/13C0E50053B60B8788257AF4003392EC/\\$File/Coaltech%20Mine%20Closure%20Report%201%202010.pdf](http://www.coaltech.co.za/chamber%20databases%5Ccoaltech%5CCom_DocMan.nsf/0/13C0E50053B60B8788257AF4003392EC/$File/Coaltech%20Mine%20Closure%20Report%201%202010.pdf) Date of access: 6 July 2014.

Davis, K. 1973. The case for and against business assumptions of social responsibilities. *Academy of Management journal*, 16(2):312-322.

De Vos, A.S. 2005. Qualitative data analysis and interpretation. (In De Vos, A.S., Strydom, H., Fouché, C.B. & Delport, C.S.L., eds. *Research at grassroots: for the social sciences and human service professions*. 3<sup>rd</sup> ed. Pretoria: Van Schaik. p. 333-349.)

Department of Mineral Resources **see** South Africa. Department of Mineral Resources

Dillard, J. & Murray, A. 2013. Deciphering the domain of corporate social responsibility. (In Haynes, K., Murray, A. & Dillard, J., eds. *Corporate social responsibility: a research handbook*. New York: Routledge. p. 10-27.)

Dyllick, T. & Hockerts, K. 2002. Beyond the business case for corporate sustainability. *Business strategy and the environment*, 11(2):130-141.

Eden Project. 2011. Promoting good practice in post-mining. <http://www.postmining.org/> Date of access: 10 October 2014.

EEA (European Economic Area) Grants. 2006. Sustainable Development Policy and Guide for the EEA Financial Mechanism & the Norwegian Financial Mechanism. [http://www.fss.org.pl/sites/fss.org.pl/files/page/pl/2012/04/341\\_1\\_pdf\\_29275.pdf](http://www.fss.org.pl/sites/fss.org.pl/files/page/pl/2012/04/341_1_pdf_29275.pdf) Date of access: 15 August 2014.

Esser, I.M. & Dekker, A. 2008. The dynamics of corporate governance in South Africa: broad based black economic empowerment and the enhancement of good corporate governance principles. *Journal of international commercial law and technology*, 3(3):157-169.

Flores-Araoz, M. 2011. Corporate social responsibility in South Africa: more than a nice intention. [http://www.consultancyafrica.com/index.php?option=com\\_content&view=article&id=835:corporate-social-responsibility-in-south-africa-more-than-a-nice-intention&catid=82:african-industry-a-business&Itemid=266](http://www.consultancyafrica.com/index.php?option=com_content&view=article&id=835:corporate-social-responsibility-in-south-africa-more-than-a-nice-intention&catid=82:african-industry-a-business&Itemid=266) Date of access: 16 September 2014.

Fouché, C.B. & Delport, C.S.L. 2005. Introduction to the research process. (In De Vos, A.S., Strydom, H., Fouché, C.B. & Delport, C.S.L., eds. *Research at grassroots: for the social sciences and human service professions*. 3<sup>rd</sup> ed. Pretoria: Van Schaik. p. 71-85.)

- Fourie, A. & Brent, A.C. 2006. A project-based mine closure model (MCM) for sustainable asset life cycle management. *Journal of cleaner production*, 14(12):1085-1095.
- Freeman, R.E., Harrison, J.S., Wicks, A.C., Parmar, B.L. & De Colle, S. 2010. Stakeholder theory: the state of the art. New York: Cambridge University Press.
- Gomes, C.M., Kneipp, J.M., Kruglianskas, I., Da Rosa, L.A.B. & Bichueti, R.S. 2014. Managing for sustainability in companies of the mining sector: an analysis of the main factors related with the business performance. *Journal of cleaner production*, 84:84-93.
- Greeff, M. 2005. Information collection: interviewing. (In De Vos, A.S., Strydom, H., Fouché, C.B. & Delport, C.S.L., eds. Research at grassroots: for the social sciences and human service professions. 3<sup>rd</sup> ed. Pretoria: Van Schaik. p. 286-313.)
- Gunningham, N., Kagan, R.A. & Thornton, D. 2004. Social License and Environmental Protections: why businesses go beyond compliance. *Law & social inquiry*, 29(2):307-341.
- Hamann, R. 2004. Corporate social responsibility, partnerships, and institutional change: the case of mining companies in South Africa. *Natural Resources Forum*, 28(4):278-290.
- Holme, R. & Watts, P. 2000. Corporate social responsibility: making good business sense. <http://www.wbcd.org/web/publications/csr2000.pdf> Date of access: 18 July 2014.
- Horrigan, B. 2010. Corporate social responsibility in the 21<sup>st</sup> century: debates, models and practices across government, law and business. Cheltenham: Edward Elgar.
- ICMM (International Council on Mining and Metals). 2008. Planning for integrated mine closure: toolkit. <http://www.icmm.com/document/310.pdf> Date of access: 19 September 2014.
- ICMM (International Council on Mining and Metals). 2012. Mining's contribution to sustainable development: an overview. <https://www.icmm.com/document/3716.pdf> Date of access: 9 September 2014.
- ICMM (International Council on Mining and Metals). 2014. Sustainable development framework: 10 principles. <http://www.icmm.com/our-work/sustainable-development-framework/10-principles> Date of access: 19 September 2014.

IISD (International Institute for Sustainable Development). 1992. Business strategies for sustainable development. [https://www.iisd.org/sites/default/files/pdf/business\\_strategy.pdf](https://www.iisd.org/sites/default/files/pdf/business_strategy.pdf)  
Date of access: 9 September 2014.

Jenkins, J. 2004. Corporate social responsibility and the mining industry: conflicts and constructs. *Corporate social responsibility and environmental management*, 11(1):23-34.

Jenkins, J. & Yakovleva, N. 2006. Corporate social responsibility in the mining industry: exploring trends in social and environmental disclosure. *Journal of cleaner production*, 14(3):271-284.

Kanji, G.K. & Chopra, P.K. 2010. Corporate social responsibility in a global economy. *Total quality management & business excellence*, 21(2):119-143.

Kates, R.W., Parris, T.M. & Leiserowitz, A.A. 2005. What is sustainable development: goals, indicators, values, and practice. *Science and policy for sustainable development*, 47(3):8-21.

Kemp, D. & Owen, J.R. 2013. Community relations and mining: core business but not "core business". *Resources policy*, 38(4):523-531.

Kitula, A.G.N. 2006. The environmental and socio-economic impacts of mining on local livelihoods in Tanzania: a case study of Geita District. *Journal of cleaner production*, 14(3):405-414.

Kumar, R. 2014. Research methodology: a step-by-step guide for beginners. 4th ed. London: Sage.

Laurence, D. 2006. Optimisation of the mine closure process. *Journal of cleaner production*, 14(3):285-298.

Lehtonen, M. 2004. The environmental-social interface of sustainable development: capabilities, social capital, institutions. *Ecological economics*, 49(2):199-214.

Mahanty, S. & McDermott, C.L. 2013. How does 'free, prior and informed consent' (FPIC) impact social equity? Lessons from mining and forestry and their implications for REDD+. *Land use policy*, 35:406-416.

Michell, G. & McManus, P. 2013. Engaging communities for success: social impact assessment and social licence to operate at Northparkes mines, NSW. *Australian geographer*, 44(4):435-459.

Mineral and Petroleum Resources Development (MPRDA) Act **see** South Africa

Mintails Mining South Africa. 2014. Introducing the Mintails approach to closure mining. (Unpublished.)

MMSD (Mining, Minerals and Sustainable Development Project). 2002a. Breaking new ground. <http://oldwww.wbcasd.org/DocRoot/ev8jEJvTiMYd4mJhGGHQ/finalmmsdreport.pdf> Date of access: 19 September 2014.

MMSD (Mining, Minerals and Sustainable Development Project). 2002b. Mining for the future. Appendix B: Mine closure working paper. <http://pubs.iied.org/pdfs/G00884.pdf> Date of access: 19 September 2014.

Moffat, K. & Zhang, A. 2014. The paths to social licence to operate: an integrative model explaining community acceptance of mining. *Resources policy*, 39:61-70.

Mogale City Mining Forum. 2014. Mogale city mining forum draft constitution. (Unpublished.)

Moller, M.C., Flugge, R. & Anstee, S. 2007. The most tangible indicator of sustainable development for the mining industry; Rio Tinto's approach. (In Fourie, A., Tibbett, M. & Wiertz, J., eds. Mine closure 2007: Proceedings of the Second International Seminar on Mine Closure. Nedlands: Australian Centre for Geomechanics. p. 199-205.)

National Environmental Management Act **see** South Africa

NOAMI (National Orphaned/Abandoned Mines Initiative). 2009. About NOAMI. <http://www.abandoned-mines.org/home-e.htm>. Date of access: 10 October 2014.

Ololade, O.O. & Annegarn, H.J. 2013. Contrasting community and corporate perceptions of sustainability: a case study within the platinum mining region of South Africa. *Resources policy*, 38(4):568-576.

Owen, J.R. & Kemp, D. 2013. Social licence and mining: a critical perspective. *Resources policy*, 38(1):29-35.

Pascó-Font, A. 2001. Distribution of mineral wealth in Latin America: case studies in the Andes. <http://commdev.org/distribution-mineral-wealth-latin-america-case-studies-andes> Date of access: 11 February 2015. [PowerPoint presentation.]

Patton, M.Q. 2002. Qualitative research & evaluation methods. 3rd ed. Thousand Oaks, Calif.: Sage.

Pepper, M., Roche, C.P. & Mudd, G.M. 2014. Mining legacies: understanding life-of-mine across time and space. (Paper presented at the Life-Of-Mine 2014 Conference, Brisbane, QLD, 16-18 July.) <http://www.mpi.org.au/wp-content/uploads/2013/Pepper-Roche-Mudd-2014-Mining-Legacies-copy.pdf> Date of access: 15 February 2015.

Prno, J. 2013. An analysis of factors leading to the establishment of a social licence to operate in the mining industry. *Resources policy*, 38(4):577-590.

Ramalho, A. 2012. Insights into King III and the code for responsible investing in South Africa. (In Terry, G., ed. Green II: why corporate leaders need to embrace sustainability to ensure future profitability. Bruma Lake: SAICA. p. 232-247.)

Rochlin, S.A. & Googins, B.K. 2005. The value proposition for corporate citizenship. [http://www.handsonnetwork.org/files/resources/BCCCP\\_Value\\_Proposition\\_Corporate\\_Citizenship.pdf](http://www.handsonnetwork.org/files/resources/BCCCP_Value_Proposition_Corporate_Citizenship.pdf) Date of access: 3 October 2014.

Rockey, N. 2013. CSI in mining communities: a complex terrain. (In Matthews, M., ed. The CSI handbook: the authoritative guide to corporate social investment in South Africa. 16<sup>th</sup> ed. Cape Town: Triologue. p. 80-82.)

South Africa. 1996. Constitution of the Republic of South Africa 1996. Pretoria: Government Printer.

South Africa. 2002. Mineral and Petroleum Resources Development (MPRDA) Act 28 of 2002. Pretoria: Government Printer.

South Africa. 2014. National Environmental Management Act (Act no. 107 of 1998): regulations pertaining to the financial provision for the rehabilitation, closure and post closure of prospecting, exploration, mining or production operations. *Government gazette*, 38145:3, 31 Oct. (Government notice no. 940.)



South Africa. Department of Mineral Resources. 2010. Amendment of the broad-based socio-economic empowerment charter for the South African mining and minerals industry. Pretoria: Government Printer.

South Africa. Department of Mineral Resources. 2010. Guidelines for the submission of a social labour plan. Pretoria: Government Printer.

Strange, T. & Bayley, A. 2008. Sustainable development: linking economy, society, and environment. Paris: OECD.

Strydom, H. 2005. Information collection: participant observation. (In De Vos, A.S., Strydom, H., Fouché, C.B. & Delpont, C.S.L., eds. Research at grassroots: for the social sciences and human service professions. 3<sup>rd</sup> ed. Pretoria: Van Schaik. p. 274-285.)

Sutton, M.W. & Weiersbye, I.M. 2007. South African legislation pertinent to the gold mine closure and residual risk. (In Fourie, A., Tibbett, M. & Wiertz, J. eds. Mine closure 2007: Proceedings of the Second International Seminar on Mine Closure. Nedlands: Australian Centre for Geomechanics. p. 89-102.)

Swart, E. 2003. The South African legislative framework for mine closure. *Journal of the South African Institute of Mining and Metallurgy*, 103(8):489-492.

Szwedzicki, T. 2001. Program for mine closure. *Mineral resources engineering*, 3(10):347-364.

Thorne, D.M., Ferrell, O.C. & Ferrell, L. 2008. Business and society: a strategic approach to social responsibility. 3<sup>rd</sup> ed. New York: Houghton Mifflin.

Turton, A. 2015. Untying the Gordian knot: policy drivers and the demise of gold mining in South Africa. *Water international*. (In press.)

UNIDO (United Nations Industrial Development Organization). 2007. What is CSR? <http://www.unido.org/en/what-we-do/trade/csr/what-is-csr.html> Date of access: 17 September 2014.

United Nations. 2002. Berlin II: guidelines for mining and sustainable development. <http://commdev.org/berlin-ii-guidelines-mining-and-sustainable-development.pdf> Date of access: 19 September 2014.

Van Wyk, L. 2011. Developing a corporate measuring instrument based on an established CSR framework. Potchefstroom: North-West University. (Thesis - PhD.)

Veiga, M.M., Scoble, M. & McAllister, M.L. 2001. Mining with communities. *Natural Resources Forum*, 25(3):191-202.

WCED (World Commission on Environment and Development). 1987. Our common future. [http://consent.nl/pdf/OurCommonFuture-Brundtland Report1987.pdf](http://consent.nl/pdf/OurCommonFuture-Brundtland%20Report1987.pdf) Date of access: 20 February 2013.

Whitley, B.E. & Kite, M.E. 2002. Principles of research in behavioral science. 3<sup>rd</sup> ed. New York: Routledge.

Whitmore, A. 2006. The emperor's new clothes: sustainable mining? *Journal of cleaner production*, 14(3):309-314.

# ANNEXURE 1 – INTERVIEW CONSENT FORM



NORTH-WEST UNIVERSITY  
YUNIBESITI YA BOKONE-BOPHIRIMA  
NOORDWES-UNIVERSITEIT  
POTCHEFSTROOM CAMPUS

Faculty of Arts  
Bench Marks Centre for CSR

## Informed consent for participation in an academic research study

### Title of the study

Community perceptions of sustainable development: implications for an approach to closure mining

Research conducted by: Tarryn Nell Tel: 018 299 4382	Research supervised by: Prof. Freek Cronjé Tel: 018 299 1753	Ethics approval number: NWU-00168-14-S7
--	--	--

Dear Respondent

You are invited to take part in an academic research study conducted by Tarryn Nell, a student registered at the North-West University.

The purpose of the research is to assess the community's perceptions of sustainable development and stakeholder engagement between mines and communities.

Please note the following:

- This study involves your participation in a semi-structured interview.
- Your participation in this study is very important. However, you may choose not to participate and you may stop participating at any time without any negative consequences.
- Audio-tapes and written notes/observations will be taken of the interviews.
- The results of this study might be published in the form of a research report and be made available to all the stakeholders in this research project.

Please sign the form or tick the box provided to indicate that:

- You have read and understood the information provided above.
- You give your consent to participate in the study on a voluntary basis.

\_\_\_\_\_

Respondent's' signature

\_\_\_\_\_

Date

I understand and consent to participate in the interview.

## ANNEXURE 2 – FOCUS GROUP CONSENT FORM



NORTH-WEST UNIVERSITY  
YUNIBESITI YA BOKONE-BOPHIRIMA  
NOORDWES-UNIVERSITEIT  
POTCHEFSTROOM CAMPUS

Faculty of Arts  
Bench Marks Centre for CSR

### Informed consent for participation in an academic research study

#### Title of the study

Community perceptions of sustainable development: implications for an approach to closure mining

Research conducted by: Tarryn Nell Tel: 018 299 4382	Research supervised by: Prof. Freek Cronjé Tel: 018 299 1753	Ethics approval number: NWU-00168-14-S7
--	--	--

Dear Respondent

You are invited to take part in an academic research study conducted by Tarryn Nell, a student registered at the North-West University.

The purpose of the focus group is to assess the community's perceptions of sustainable development and stakeholder engagement between mines and communities.

Please note the following:

- This study involves your participation in a focus group discussion.
- Your participation in this study is very important. However, you may choose not to participate and you may stop participating at any time without any negative consequences.
- Audio-tapes and written notes/observations will be taken of the focus group discussions.
- The results of this study might be published in the form of a research report and be made available to all the stakeholders in this research project.

Please sign the form or tick the box provided to indicate that:

- You have read and understood the information provided above.
- You give your consent to participate in the study on a voluntary basis.

\_\_\_\_\_

Respondent's' signature

\_\_\_\_\_

Date

I understand and consent to participate in the focus group.