

The impact of mining on indigenous African communities in Limpopo [South Africa]

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DECLARATION

I wish to declare that this study, THE IMPACT OF MINING ON INDIGENOUS AFRICAN COMMUNITIES IN LIMPOPO PROVINCE [SOUTH AFRICA] is my own work and that all sources used were acknowledged by means of complete references.

David Modikana Solomon Manamela

March 2019

Date

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Thanks be to God Almighty for making it possible for me to undertake this project successfully.

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ABSTRACT

The economic development of South Africa has historically relied on the role that mining has played. Despite the huge profits enjoyed by the mining company, several communities in the study area; are not able to enjoy those accumulated benefits. The company operates invariable among rural communities that have little education and few opportunities, where most people rely on traditional farming to make a living and the mine then competes with those communities for land for its operations. As a non-renewable asset the degradation of land has wide-ranging consequences that impact the lives of the thousands of people that live on it. Many have lost their agricultural land to make way for mining operations and are in most cases offered little in return for compensation within adequate prospects of making alternative livings. Stemming from this is inevitably an increase in hunger and increased poverty among these communities, but also destruction of their traditional way of living. There can be no doubt that incidences of livelihood dispossession are occurring. The fiscal problems faced by many rural communities are often exploited by mining companies, especially when local communities reject extraction projects.

This research work explores the qualitative impact of platinum mining amongst the Chaba people in the Waterberg District of Limpopo Province. Despite serious social impact and concerns, literature reveals that mitigation efforts have focused exclusively on the environment and have incorrectly presumed that dealing with this alone would certainly lessen the social consequences. Though to some extent this may assist with some aspect of the problem because of the interrelated nature of environment and social impact of mining, this research intends to fill the gap by paying attention to what could be done to mitigate the social impact of mining activities experienced mining communities, hence the justification of such a study. Data was sourced from primary and secondary sources, with primary data utilising a combination of methods. This ensured exploration of the issue through various lenses rather than just one.

Key Findings and recommendations: There is pervasive lack of transparency in matters relating to mining development. Firstly, the government endorsement of the distorted colonial version of authority for the chiefs that devolved exclusive decision-making power down to the traditional authorities and which excluded people who occupied the land, thus subverting customary-law systems that endorse collaborative decision-making and transparency. Secondly, the absence of transparency is intensified by flaws in the

regulatory structure that ensures consultation, agreement, and downward responsibility in mining companies. Thirdly, issues are further deepened by the apparent inability to maintain the constitutionally defended, informal land rights of local people living in rural areas who are susceptible to manipulation by traditional leaders and mining companies. Lastly, the traditional leaders' powers and duties have not been transformed to keep pace with 21st Century South Africa. The MPRDA needs to be amended to give the communities the right to refuse mining development in their lands.

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LIST OF ABBREVIATIONS

ANC	African National Congress
ARM	African Rainbow Minerals
ASM	Small-Scale Mining
AU	European Union
BBBEE	Broad-Based Black Economic Empowerment
BEE	Broad-Based Empowerment
BBSEE	Broad Based Socio-Economic Empowerment
CBD	Convention on Biological Biodiversity
CRS	Corporate Social Responsibility
DME	Department Mineral and Energy
DMR	Department of Mineral Resources
DRC	Democratic Republic of Congo
EIA	Environmental Impact Assessment
EITI	Extractive Industries Transparency Initiative
EMP	Environmental Management Plan
GDP	Gross Domestic Product
GRI	Global Reporting Initiative
HDSAs	Historical disadvantaged South Africans
JCI	Johannesburg Consolidated Investment
IDP	Integrated Development Plan
IPR	Intellectual Property Rights
IK	Indigenous Knowledge
IKS	Indigenous Knowledge Systems
LK	Local knowledge
IM	Indigenous Methodologies
ILO	International Labour Organization
MMSD	Mining Minerals and Sustainable Development
MPM	Mokgalakwena Platinum Mine
MPRDA	Minerals and Petroleum Resources Development Act
NEMA	Natural Environmental Management Act
NEPAD	The New Partnership for Africa's Development
NGO	Non-Governmental Organizations
NWA	National Water Act
OECD	Organisation of Economic Co-operation and Development
PAIA	Promotion of access to information

PAJA	The Promotion of Administrative Justice Act
PGM	Platinum Group Metals
PPL	Platinum Potgietersrus Limited
SADC	Southern African Development Community
SLP	Social and Labour Plans
SAP	Structural Adjustment Program
TK	Traditional Knowledge
TLGF	Traditional Leadership and Governance Framework
UDPs	Integrated Development Plans
UNDP	United Nation Development Programme
UNEP	United Nations Environmental Programme
UN	United Nations
USA	United States of America
WDR	World Bank's World Development Report
WCED	World Commission on Environment and Development
WHO	World Health Organization

CHAPTER 1: INTRODUCTION

1. Introduction

1.1 Introduction and Background

As the world's largest prime producer of platinum and platinum-associated resources, Anglo Platinum "produced 2.47 million ounces of platinum and 1.39 million ounces of palladium" in 2007 (Farrell, Mackres & Hamman, 2009: 1). A United Kingdom-listed company it is "majority owned by Anglo American plc" (76.53%), and is "one of the world's largest differentiated mining groups". The company has also received substantial recognition for its social and environmental responsibility (Anglo-American, 2013). Its subsidiary, "Anglo Platinum Potgietersrus Limited (PPL), is located in the Northern Limb of the Bushveld Complex, near the town of Mokopane (of South Africa)" (Curtis, 2008: 14).

Anglo Platinum Potgietersrus Limited has been mining platinum using an opencast system since its inception in 1991. Despite the huge profits enjoyed by the company, several communities in the mining area have not enjoyed any of the benefits accumulated by the mining company and the elites involved in its operations. The company operates amongst a number of rural communities marked by poverty, little education and few opportunities. Many of these poor-community members are subject to a two-tiered system (municipal and traditional authority) of governance in a democratic dispensation whereby land in these parts is usually not privately owned but is rather "held in trust by the traditional authorities" (Oomen *et al.*, 2000:70). Indeed, many of the local inhabitants have never owned land as previous land ownership structures historically favoured the country's white minority. As the bulk of the population depend on agriculture for a living, the mine is perceived by the locals, as being subsidized by the lands, livelihoods and bodies of the indigenous people who have to bear its environmental costs.

Increasing demand for opencast mining requires huge tracts of land which is often acquired at the expense of farming. Large expanses of agricultural, pasture and forest land have been changed into dumps due to the rapid expansion of platinum mining. In opencast mines, wastes materials are staked in huge dumps in the immediate surroundings often having a substantial adverse impact on the land and the environment. Environmental degradation has particularly affected the common property resources of such as land and water on which the subsistence and well-being of these marginalised people depend. Land

is a non-renewable asset and its degradation has far reaching consequences that negatively affect the lives of the numerous local people.

The large opencast mines have the advantage of low gestation periods and higher recovery of platinum and are more responsive to heavy mechanization and modern technologies than underground mines, thus ensuring speed and lower costs in implementation (Goswami & Goswami, 2014). Thus, the dependence on opencast mining has been increased due to the mechanization and modernisation of mining operations.

Many people in the area have lost their primary basis of livelihood, agricultural land, because of the mining operations embarked on by the PPL mine. Curtis (2008:14) stated that, in general “they are offered little compensation and insufficient options for making an alternative living” and that “This results in not just an increase in hunger and poverty but also the destruction of their traditional ways of life.” This imposed dependence results in a communal sense of vulnerability, uncertainty and powerlessness that can manifest as anxiety, fear or depression (Coumans, 2009). Despite the creation of a few high paying positions the platinum operations which extract low grade ore from open pit mines tend to be capital rather than labour intensive. Inevitably these ore deposits, as non-renewable natural resources, become exhausted resulting in mine closure which further negates the little potential mining offers for sustainable employment creation (Holden & Jacobson, 2007). As stated in the United Nations Environmental Programme study, mining is more likely to exacerbate poverty than to reduce it (UNEP, 2010). Whether or not mining can be conducted in a way that introduces little threat to environmental health and well-being of communities is a matter for extensive debate.

This research work explores the qualitative impact of platinum mining amongst the Chaba people in the Waterberg District of Limpopo Province. These people have lost their land, their only source of livelihood, in an attempt to create space for mining. As a result of the impending repercussions of its environmental effects the community is now predominantly against mining. The key feature of Hurley and Ari’s (2011: 2) research indicates that the conflict that exists between the “multinational corporations multiple cultural, ethnic and political groups, including villagers, subsistence farmers and indigenous peoples, over the social and environmental consequences associated with mineral extraction”, where the emphasis is on the imbalanced power connections implanted in the process of policy formation and negotiations over access to resources. Sanyal (2006: 3) maintains that

these issues are “very important considerations for the sustainability of the communities in a country dominated by an agriculture-based rural economy”.

Expanding on this, the researcher contends that the established epistemically Western theories are not founded on the cultures, values, and socio-economic conditions of the local rural people and fail to consider their indigenous knowledge. Instead of enhancing livelihoods the mining companies are part of the problem by undermining existing socio-economic structures. The theories are not informed by the socio-economic conditions in mineral producing countries such as South Africa. Conventional methods employed to mitigate the impact of mining have been constrained by the lack of involvement of local communities. Instead, assessment and monitoring of environmental problems have relied exclusively on conventional ecological methods and indicators selected by scientists (UNEP, 2010). Local community knowledge of environmental management and change has been ignored and no effort has been made to integrate local people’s knowledge with ecological assessments. The importance of local knowledge in addressing complex environmental problems has been supported further by interdisciplinary studies that use the principles of political ecology (Tacconi, 2011).

Using a political ecology lens and critical theory it will be demonstrated in what manner environmental analysis and potentially, policy can be reconsidered to address the difficulties of the marginalised and helpless in society. This study examines the resistance by the Chaba people to neoliberal policies enacted by the post-1994 South African government to encourage the extraction of non-renewable natural resources by multinational mining corporations. Research suggests that opposition to mining is a connecting sentiment amongst diverse groups across class and ethnic lines. This is an example of how environmental issues can offset influential global, political and economic forces (Holden & Jacobson, 2009). In various parts of the world successful use of political ecological tools have contested apolitical approaches, through exploiting the “marginalization of nature and deprivation of the weaker groups of society and the understanding of nature-society interactions” (Wilson, 2012). Political ecology seeks to reveal how global accumulation occurs, to a high degree, to the detriment of natural resources, environment, and the health of the producers and the poor in the ‘Global South’ (Martinez-Alier, 2012; Paulson & Gezon, 2005).

Wittmann and Förstner (2007), argue that although mining has formed the basis of South Africa’s economy over the years, very little is known about its adverse impact on African

indigenous communities, especially on small-scale agriculture adjacent to the mining operations in areas such as Limpopo Province. Down and Stocks (2005) add that much more is known about the direct effects of mining than about the exposure of African agricultural communities in these areas. Those significant players, such as local land users, who frequently have an important part in the administration of conventional environmental schemes, are infrequently recognised, despite recent environmental management applications in South Africa demonstrating the jurisdiction and power of government agencies and legislators at national level.

1.2 Platinum Mining Historical Background

The first extant reference to platinum in an application dates back to 700 BCE in Egypt, when the metal was used for the Casket of Thebes, a small box decorated with hieroglyphics in gold, silver and an alloy of PGMs (Minerals Council of South Africa, 2018). Considerably later, in the 1500s, the Spanish Conquistadors, during their gold prospecting in South America, found something that they called *platina*, (CMSA, 2016). Brought back to Europe their scientists had trouble categorizing the metal and finding applications for it, because of its durability and other unexpected characteristics. Finally, a Swedish researcher from the 18th Century combined the metal with arsenic, but ultimately, the metal was only successfully smelted through the addition of oxygen in 1782 (McDonald & Hunt, 1982). Twenty-five years later platinum was commercially produced through the use of this technique and the metal was used predominantly for decoration. The Enlightenment's scientific and technological advancement brought about advances in platinum refining after the discovery of palladium and rhodium. For the first time, the catalytic properties of platinum became apparent, and in 1842 the first fuel cell was invented through the use of platinum electrodes (Marston, 2010).

Within South Africa, the discovery of the first platinum nuggets date back to 1923 when platinum–quartz bodies were found by Dr Hans Merensky in Naboomspruit, now known as Mookgopong in Limpopo Province, leading to the discovery of the Waterberg Deposit, which was mined between 1923 and 1929. The start of the actual mining was delayed by the complex mineralogy of the very difficult ores and it was not until the 1920s that suitable metallurgical technology had been developed to viably extract PGEs. In 1925, Merensky moved to Mokopane in Mapela where he found the Platreef which was, for a long time, believed to be a similar layer (Cawthorn, 2001). This led to a short-lived mining operation

in Mapela. Since the discovery of platinum in South Africa, several platinum mines have open and closed while some have merely changed their names (McDonald *et al.*, 1982). In 1993 platinum mining continued with the mining rights and surface lease agreement secured across several farms by Potgietersrus Platinum Mine (PPM), now known as Mogalakwena Platinum Mine (MPM), under the umbrella of Anglo American.

MPM began mining in Mapela in 1992 and ore processing began in 1993, 70 years after the initial mining operations were terminated. To date a total of eight open-pit mines have been developed. Most of the platinum mining has taken place at the underground operations on the Eastern and Western parts of the Bushveld Complex and the only open cast mining is found at the MPM, on the Platreef on the Northern Limb of the Bushveld Complex. MPM is the largest opencast platinum mine in the world. For the past 100 years the Northern part of the Bushveld Complex has been the focus for exploration mining for copper, fluorspar, nickel, chromium, tin and the PGEs (Kinnaird and MacDonald, 2005). After World War II platinum production consistently increased as a result of the development of new uses for the metals. One important use was in the petroleum industry where “platinum catalysts were introduced to increase the octane rating of petroleum” and also in the “manufacture of important primary feedstocks for the growing plastics industry” (Minerals Council of South Africa, 2018). The 1960s saw a growing demand for platinum jewellery because of its purity, colour, prestige and value. Platinum, discovered in South Africa in 1923, is today South Africa’s premier mining sector, although it only experienced significant growth in the early 1970s.

The Merensky Reef, the Platreef, and the UG2 Chromite layer house narrow but sizable strata of exploitable reserves of PGMs. Each of these three Bushveld Complex layers has their own idiosyncratic associated mineralogy (Vermaak, 1995). Whilst the Platreef is exclusively mined in Mapela, UG2 and Merensky are extracted by all producers. These metals all require different methods and approaches by the metallurgists for the desired processing. For example, the sulphides of copper and nickel of UG2 ore are much lower in content and have larger amounts of chromite than the Merensky. The Platreef, found only in Mapela, can be considered metallurgically comparable to Merensky ore, despite being richer in palladium (Jones, 1999).

Post-apartheid platinum mining production has changed the geographical epicentre in contrast to the gold mining industry that has largely progressed in urban areas. The Bushveld Complex which consists of an immense platinum-rich geological formation is

dispersed beneath communal land which is under the administrative control of traditional authorities. For the past twenty years, the platinum industry has focused on these heavily populated rural areas for expansion, principally in the North-West and Limpopo Provinces. These two provinces previously fell under the independent homelands of Bophuthatswana and Lebowa and each bears the harsh inheritance of the apartheid regime - acute poverty, substantial unemployment, poor education and an overall shortage of basic public services (Mnawa & Capps, 2015). On this mining frontier the platinum mining industry can be seen as competing for space with the rural communities.

1.3 Purpose and Significance of the Study

Minerals are an important natural resource for many local communities in different countries of the world including South Africa. Burgess (2010) indicates that “South Africa contains strategic minerals which the United States and its allies require for industrial purposes and that the various militaries need for production and sustainment of weapons systems.” China’s imports in particular, have enlarged their footprint within Africa often engaging in operations that are intended to prevent other rival companies from accessing mineral resources in order to satisfy the demand for their quickening industrialisation. Overall there is a growing fight for and tussle over many of Africa’s resources, specifically in the petroleum and mining economies happening at a time when the United States is starting to become progressively anxious about accessibility, sustainability and securing of required strategic natural resources. South Africa “possesses 75% of the world’s platinum group metals (PGM) reserves, as well as major deposits of chromium and manganese and produces a significant amount of ferroalloys...also possesses other strategic minerals, including rare earth minerals, fluorspar, and titanium sands”, all of which are considered by the United States as vital for their manufacturing purposes (Burgess, 2010: 6).

Mining companies have become powerful entities wielding expansive sway with governments and the general population due to the fundamental reliance on “mining as a primary source of raw material and fuel for production at all levels of modern societies’ industry” (Ali, 2009: xix). For South Africa as a developing country this is eminently pertinent and is evinced by the extent of its mining and industrialization history which has exploited the prevailing scarcity of financial resources that the government has available to deliver to its citizens the very rudimentary human, environmental and social services. The offers of thousands of jobs and provision of basic services in such economically depressed

area such as Limpopo Province, allows the mining companies to further capitalize on the situation and pressure government into welcoming mining projects by setting the communities against them. With the unemployment rate on the rise in the country, mining is seen by many as a means of creating employment. Although mining has the assets to bring a rapid tide of development in what is considered isolated and/or needy parts of the world these are often those places that are populated by indigenous tribal populations.

Traditionally, the mining corporations have rationalised the effects of their activities through cost benefit analyses that indicate that the costs exacted on the host communities are offset by the total financial benefits enjoyed by the host country through taxes, job creation and exports (Bryant, 2006). This cost-benefit justification has been criticized in recent years as strong evidence now suggests that a country's reliance on extractive industries such as mining is firmly interrelated with economic underperformance and sluggish growth (Auty, 1993; Sachs & Warner, 1995; Richards, 2009). Coining the phrase, the *resource curse*, Ross (2008) indicates this inferior performance has been attributed to a continuing deterioration in the "terms of trade for primary commodities and the cycle of exchange rate appreciation and economic stagnation linked to commodity exports" (Ross, 2008: 7).

There is a strong connection between mineral dependence and income inequality. Mineral exports not only fail to alleviate poverty, but appear to exacerbate it. In South Africa where clashes between the mining corporations and local communities are progressively becoming characterised by public protest, violence and a prominent lack of state intervention, to the extent that mineral-related clashes have become a permanent characteristic of the political landscape (Barton, 2005; McCandless & Karbo, 2011). The situation is anticipated to worsen with tin mining set to be reintroduced in South Africa after a 25-year break. The restart of tin mining in the Bushveld Complex, especially in the Waterberg region of Limpopo Province, will compound the current problems faced by those mining communities in the area. This will result in more people being exposed to both platinum and tin mining pollution and further land loss through the expansion of mining activities.

Mining companies in developing countries often exploit the local rural communities' fiscal problems particularly when the local communities reject extraction projects. When local communities cannot count on national or provincial governments, the opportunities for the abuse of power by mining companies drastically increases (OECD, 2016). Due to the lack

of strong laws with respect to land and mineral rights, more often than not, local communities do not have any right to prior informed consent and consequently are unable to use legal recourse to stop mining exploration on their land. This is because of the rural and poor nature of the developing country's host communities and their members' reliance on subsistence farming and they often do not have financial resources to challenge mining companies.

The advent of new mining operations invariably means loss of land for many of the local people; either through expropriation by the government or after negotiations with the company where they have had minimal or ineffectual bargaining power (Barton, 2005). In some cases, communities are forcefully relocated, which results in social unrest, as is the case in the Bushveld Complex. These clashes are typically in reaction to three major impacts allied with mining operations, namely loss of land, environmental degradation and human rights violations (A/HRC, 2012). Mining's social cost then relates to other cultural and environmental issues creating a need for more determined endeavours to address them (Revuelta, 2018).

It is the impact of mining activities and associated projects that has been receiving an increasing level of attention in recent years. Within developing countries, it is contended that, mining is a vital economic venture as not only does it assist with industrialization but it also brings the promises of wealth and jobs (Gualnam, 2008). Despite the obvious benefits for the countries involved of foreign exchange earnings, an improved investment climate, the "introduction of new technologies and practices, construction of infrastructure and the education and training of mine workers and their families" (ILO, 2000; McMahon, 1997: 57), it cannot be denied that it also is the source of civil unrest, social discontent and other high social costs (Gualnam 2008; Nyame & Grant 2007; Opoku-Ware 2010).

Environmental resistance to mining is increased by the fact that by its very nature it is a non-renewable extractive enterprise. Researchers in this area are then obliged to present the issue in its most acute framework and provide unequivocal grounds in which to investigate resource clashes that may not have obvious mutually beneficial outcomes. As with most environmental worries, often there is a clear difference between "actual environmental impact" and "perceived impact"; although policy decisions may not automatically show this (Ali, 2009: xx; Gallardo & Friman, 2010). With respect to mining impact on South African local communities, understanding of current projects may be mostly connected to the historical impact of mining which includes those of local

communities being directly or indirectly affected by mining activities. However, while there are those local communities that view mining activities as harmful to their environment and health, others hold the opinion that “technological advance and regulatory stringency can collectively allow for mining to be a means of sustainable development” (Ali, 2009: xx; UNEP, 2010).

In comparative terms Gualnam (2008), shows how excessive involvement by the state in some countries such as in the USA has also been resented by most native communities. This is further elaborated on by Ali (2009: xx) who shows that “European colonial repression of indigenous communities in the New Worlds of America and Australia was particularly severe and persistent”. He argues that, in contrast to such regions as India or the majority of Africa, the “settlers in America and Australia have become a permanent and overwhelming majority of the population, often displacing the indigenous peoples from their environment and instituting resource-intensive enterprises such as mining in their place.” In response to this Australian and American Environmental groups feel and exhibit a certain degree of remorse towards the native cause (Ali, 2009).

The developed nations of the world continue to be unrelenting in their quest for even-greater economic affluence despite mounting attestation of ecological devastation and societal deterioration associated with such economic exploitation. Varying groups of statistics and trade-offs amongst short term economic benefits and long term ecological and social costs are bandied around and debated by such as scientists, activists and even national leaders yet there is little serious debate whether or not such interrogations are pertinent or significant to the destiny of society worldwide (Ikerd, 2006; UN, 2006). Scholars and scientists cannot agree if any public policies or other means of societal mediation can create sustainable capitalism. Undeniably the system of capitalism that predominates in the global economy today is not maintainable whilst it lacks any effective moral and social restraints (Ikerd, 2006). Auty (1993), Bebbington & Williams (2008), Ross (2008) and Sachs & Warner (1995), all promoters of the *resource curse* concept, convey analogous concern on the unfavourable effects of mineral dependence on growth and equity. Bebbington (2008) cites such as Stiglitz, (2007: 15) suggest that if the “institutional conditions are not right then the minerals should remain in the ground”.

Sanyal (2006: 17) notes that the process of development is seen by western viewers as a method of “recolonising” indigenous people “under Western hegemony” with the proponents of alternative development advocating for the restoration and rearticulating of

local conditions, knowledge and culture at grass roots level. Rather than adopting the western practise of creating worldwide scientific knowledge, they focus on the requirements of indigenous communities and diversification of local conditions and life experience of the local people (IFAD, 2010; Sanyal, 2006). Currently popular amongst several development practitioners are Western models of development, particularly with respect to sustainable development about which others are sceptical. Islam (2009), for example, finds the modern discourse on development as a revived model to the long history of Western imperialism to perpetuate a system of dominance in the modernised world. In support of the above view, Shiva (1989, 1991) acknowledged comparable ideas and calls “it ‘mal-development’ which does not appreciate or consider rural communities, their traditions and subsistence indigenous settings.” The narratives advanced at global levels on the status of environment should be related to the counter narratives of local people to counter any indications that environmental crises debated at global level are exaggerated (Gindin & Angus, 2014). Political ecology and environmental history, therefore, provide important links for analysing human-environmental interactions.

When considering the above discussion, it becomes clear that processes of environmental change involve more than ecological changes and are influenced by social factors, including decision making by local land users (Oba, Sjaastad, & Roba, 2008). In light of the recognition of the close interaction that exists between social and ecological systems, there is a need to adopt a more holistic approach that goes beyond the disciplinary divide, and in addition co-opts local knowledge and practices using assessment and monitoring of environmental changes at local levels. No single discipline can satisfactorily address the range of complex environmental problems that exist (Tacconi, 2011). Therefore, the current study highlights the need for research that can integrate political, economic, social and environmental issues to facilitate improved understanding of those environmental difficulties and to plan and execute suitable measures which will tackle them.

1.4 Problem Statement and Objectives

Despite the overall progressive economic effect of mining in South Africa, the influence of their actions leaves much to be desired for the African small-scale farmers and the livelihood of indigenous communities in those areas developed for mining. The researcher has observed the adverse environmental effects of mining on poor small-scale farmers and communities in terms of water, air and soil pollution. All of which affects the health of

the people, animals and crops. Despite serious social impact and concerns, literature reveals that mitigation efforts have focused exclusively on the environment and have incorrectly presumed that dealing with this alone would certainly lessen the social consequences. Though to some extent this may assist with some aspect of the problem because of the interrelated nature of environment and social impact of mining, this research intends to fill the gap by paying attention to what could be done to mitigate the social impact of mining activities experienced mining communities, hence the justification of such a study.

Because policy initiatives are usually designed to consider environmental impact assessments implies a lack of consideration of social impact. Therefore, more recently, there has been growth in the opposition to mining developments and their associated activities (De Koning, 2008). Furthermore, whilst providing a key source of revenue for some local communities such as the Bafokeng tribe in Rustenburg, South Africa, minerals are also the focus of environmental opposition in many local communities, including those in provinces such as Limpopo and others in South Africa (De Koning, 2008). It is evident that there is a need for a study of this kind that will address the extensive problems associated with mineral development; in particular those carried out on local community land, in order to constructively resolve those environmental clashes surrounding mineral development.

Further observation has revealed that, although the majority of the agricultural communities affected by mining activities in the study areas are African small-scale farmers, environmental impact assessments have tended to concentrate on white commercial farming. Hence, the researcher envisions undertaking such a study that endeavours to provide new knowledge and awareness of the environmental impact of mining activities on African small-scale farmers. This will also sensitize policy makers and develop specific policy measures to protect those vulnerable local communities from the adverse effects of mining. In turn, the research aims to contribute towards more informed development approaches, increasing awareness for regional decision makers and local peoples alike, going forward in improving their standard of living.

This research also endeavours to examine interactions between different stakeholders and the development strategies that they support, and how these interactions may play out on the ground. Findings from this research could, therefore, inform policy on both poverty reduction and environmental management for areas similar to Chaba in Limpopo Province

and beyond. Hence the aim of this research is to explore mining activities, their historical environmental impact and additionally to recognise the knowledge and perceptions of African local communities towards mining activities in order to evaluate the findings positively and negatively with the current legal, regulatory and policy documents. The study advocates for the development of policy guidelines to protect these vulnerable local communities from the adverse effects of mining.

1.5 Research Questions

Specifically the study sought to answer the following research questions:

- What impact has mining had on African small-scale agricultural production?
- What are the policy and actor contexts underpinning mining in this sector?
- Are the power relations, cooperation competition, and conflict between the different interest groups currently responsible for driving policies and access to resources?
- How could policy and regulatory instruments be influenced to protect the rights of the indigenous communities towards mining activities?
- What are possible options available to assist farming systems to become more resilient to the impact of mining, such as new crops and technologies, access to inputs; supporting institutions, credit and insurance, policies, knowledge access?
- What is the role of traditional governance systems and indigenous natural resource management in mitigating mining impact?

The specific objectives of the study were:

- Explore the historical environmental impact of mining activities on African small-scale agriculture and local communities.
- Describe power structures and influences affecting development discourse.
- Assess the indigenous resource management and coping strategies in the study area.

- Benchmark mining activities in the study area with other mining companies that conform to international best practices and standards of corporate social and environmental behaviour.
- Analyse legal and policy instruments currently in place in the Limpopo Province designed to protect African small-scale agricultural and local communities in general from negative environmental impact of mining activities.
- Develop policy guidelines to protect these vulnerable local communities from the adverse effects of mining.

The policy development process below will be used to review the Minerals and Petroleum Resources Act (MPRDA). The policy development process will include, but not be limited to, the following five steps:

- **Step 1 – Policy Justification:** What is the aim, objective or purpose of the policy? How will the policy resolve problems encountered by the mining community? Who is intended to benefit from the policy and in what way? Recognizing and defining the nature of the issue to be dealt with.
- **Step 2 – Research:** Gathering and analysing information about the nature of the problem to gain views, ideas and analyses from different stakeholders. Looking for lessons learnt and good practice that can be applied from other countries facing similar problems.
- **Step 3 – Policy Design:** How will the policy support the overall strategic direction and resolve the identified problem/s. Identifying possible courses of action to deal with the issues.
- **Step 4 – Consultation:** Because policy has impact on practice standards, cultures, service users and stakeholders must be consulted on issues that affect their wellbeing.
- **Step 5 – Finalization of the Policy and Impact Assessment:** The policy should be subject to an initial impact assessment. It is essential to galvanize views across the mining community on the success of the policy - what has worked and what has not; consider where there may be gaps; and identify any newly emerging needs or issues. Possibly evaluating the outcome.

A further process of expert consultation will be used to refine the policy guidelines for presentation to stakeholders.

1.6 Structure of the Dissertation

This study will be organised into seven chapters as follows:

- Chapter One: The background, rationale, aim and objectives of the study;
- Chapter Two: Methodology that presents the principles and procedures employed in this research.
- Chapter Three: Knowledge within the context of indigenous knowledge systems.
- Chapter Four: Regulatory framework relating to mining.
- Chapter Five: Theories relating to development.
- Chapter Six: Present the data and findings generated from the study.
- Chapter Seven: Conclusion of the study, with a focus on practical and policy recommendations for mining authorities, government departments and communities after expert consultation.

1.7 Conclusion

The chapter introduced the research problem relating to mining impact on indigenous communities. The research explores the qualitative impact of platinum mining amongst the Chaba people in the Waterberg District of Limpopo Province. The people have lost land, their only source of livelihood, in attempt to create space for mining. It contends epistemically Western theories are not founded on the cultures, values and socio-economic conditions of local rural people and fail to consider their indigenous knowledge. Instead of enhancing livelihood the mining companies are part of the problem by undermining existing socio-economic structures. The researcher envisages undertaking such a study to provide new knowledge and awareness of the environmental impact of mining activities on African small-scale farmers and that will also sensitize policy makers and develop specific policy measures to protect vulnerable local communities from

adverse impact of mining. The next chapter deals with the methodology and research design.

2. Methodology and Research Design

2.1 Introduction

This chapter presents the strategies, methods and techniques used in the collection and subsequent analysis of the empirical data. The first part deals with the orientation of the research which is rooted in epistemological and ontological considerations and influences the strategy employed in this research and the rationale for adopting that strategy. It outlines some of the theoretical perspectives that influenced decision-making with respect to the research design. The research design is presented and discusses the data collection methods employed as well as various stages of the research - sampling and sample techniques that were used in selecting information from the research community. The advantages and disadvantages of various data collection methods are discussed as well as challenges faced in the field while conducting research. Lastly, information is provided on how issues of ethics were dealt with.

2.2 Epistemological and Ontological Consideration

In conducting research there is a need to identify major approaches through which the quest to obtain knowledge would be achieved. The approach to be used is mostly governed by the nature of the study. Basically, the investigator operates in two major worlds in their approach to gaining knowledge. These are the epistemological and ontological worlds. According to Bryman (2012: 24), the epistemological consideration is concerned with questions of “what is (or should be) regarded as acceptable knowledge in any discipline of study”. The epistemological consideration is rooted in two major traditions - positivism and interpretivist-constructivism (Tuli, 2010). Ontology is the study of being (Crotty, 1998:10). Ontological assumptions are concerned with what constitutes reality, in other words what is. Researchers need to take a position regarding their perceptions of how things really are and how things really work.

The positivist approach is firmly grounded in the natural science approach to studying social reality and favours the “use of the natural science methods to study social reality and beyond” (Bryman, 2012). The essence of social reality for positivism is that

“...empirical facts exist apart from personal ideas or thoughts; they are governed by laws of cause and effect; patterns of social reality are stable and knowledge of them is addictive” (Neuman, 2011: 100). Tolley *et al.* (2004: 20), further maintain that the “basic assumption of this paradigm is that the goal of science is to develop the most objective methods possible to achieve the closest approximation of reality”. The ontological belief that “behaviour of human subjects is manifest of an ordered and rule governed external reality grounds this epistemology...there is a conceptual standpoint that human behaviour and actions are largely determined by external stimuli” (Bracken, 2014: 2). Positivism maintains that the scientific process is the only way to demonstrate truth and objective reality (Chilisa & Kawulich, 2012). This view is grounded on the precept that science is the only true basis for knowledge maintaining that the methods, techniques and procedures used in the natural sciences present the best outline for investigation of the social world (Bogdan & Biklen, 2003). The implication therefore, is that study of social reality should follow similar methods.

Conversely, a world that is built, understood, and undergone by people through their exchanges with others and the broader social system is the interpretivist-constructivist perspective (Bogdan & Biklen, 2003; Maxwell, 2006). Through this paradigm the essence of inquiry is then interpretive with its objective being to comprehend a specific phenomenon, rather than to apply it generally to a population (Farzanfar, 2005). According to Tuli (2010: 100) scholars within this framework are “naturalistic since they apply real-world situations as they would unfold naturally, more specifically; they tend to be non-manipulative, unobtrusive, and non-controlling”. This belief is centred on the fact that because knowledge is socially constructed and mind independent it is subjective, arguing that truth lies with the human experience. Therefore, statements on what is true or false, although some may be universal, are culturally bound historically and context dependent. They maintain that, because reality is mind constructed and mind independent and knowledge subjective, social inquiry is then value-bound and value-laden. As a result, researchers are unavoidably influenced by their values, which in turn appraise the framework selected for inquiry; the choice of the topic to be studied; the methods chosen for data collection; how the findings are interpreted; and ultimately the way the findings are reported (Chilisa, 2012).

Two differing ways to view research philosophy are ontologically and epistemologically. Ontology is a system of belief that deals with the nature of reality in that it reflects individual interpretations about what constitutes a fact. The integral inquiry of social

entities should be seen as objective or subjective is associated with ontology. Within the realm of ontology there are two important features objectivism and subjectivism, where objectivism "...portrays the position that social entities exist in reality external to social actors concerned with their existence" (Saunders *et al.*, 2012:110). Objectivism "...is an ontological position that asserts that social phenomena and their meanings have an existence that is independent of social actors" (Bryman, 2012: 29). They claim that it is possible to discover objective truth. Therefore, data already exists in the world and the researcher discovers theory from it.

Equally, subjectivist ontology which can also be referred to as constructionism, observes that social phenomena stem from observations and subsequent actions of those social actors anxious with their existence. They merely have to adjust to the existing meanings that are objective and independent of their own thinking and understanding. They spurn the objectivist opinion of human knowledge, claiming that "there is no objective truth waiting to be discovered" and rather that truth lies within human experience (Levy, 2006: 373). This view accepts that meaning is built rather than discovered. The two theories are usually defined as polar extremes on a continuum from externally mediated reality (Jonassen, 1991) and that the two can be neither mixed nor integrated as they are completely incompatible with their underpinning philosophical assumptions contradicting each other. As a result, either theory may be considered as suitable for some purposes or inadequate or even excessively complex for others. When discussing ontology, Mertens (2007: 216) submits that "transformative researchers need to be aware of societal values and privileges in determining the reality that holds potential for social transformation and increased social justice". She expounds that the ontological supposition that those implementing a transformative framework accept that reality is socially constructed. However, effort must be made to ensure that there is no exclusion of the less powerful in clarifying issues that are not disproportionately created by the research process.

The fact that there are multiple versions of what is considered to be real is recognised by the transformative ontological assumption and further it is aware of the constructivists' debate of the social construction of multiple realities. Nonetheless it deviates from the certainty in that it holds that "there is one reality about which there are multiple opinions" (Mertens, 2010: 470). Therefore, to be aware of realities, it is imperative to have a collaborative linkage amongst the researcher and the participants in the study. Thus within any complex cultural context, knowledge is socially and historically located. The approach

is of critical importance since the research relates to disadvantage community. The aim to ensure a platform is created to ensure that the voices of the oppressed people are heard.

Research is described as a systematic investigation (Mackenzie & Knipe, 2006) involving the collection of data which is analysed and interpreted through various means to “understand, describe, predict or control an educational or psychological phenomenon ...” (Mertens, 2005: 2). However, it is influenced by a philosophical way of thinking which is indicated in the choice of paradigm selected (Kuhn, 1962). For this research, the researcher chose to operate in both an epistemological interpretivist and ontological constructionist consideration. Qualitative research strategy is usually linked to interpretivism and constructionism. Constructivism and interpretivism are related concepts that address understanding on assumptions about nature of reality. The focus is to scrutinise people in their natural setting and to understand their perceptions, and the beliefs and connotations they attach to social phenomena and reality that confront them in their natural setting. Constructionism, by meaning, allows the researcher to investigate the views and understandings of varying participants within a subject context whilst recognising that each may have experienced a differing interpretation of the same situation. Consequently, the researcher employed the above approaches that helped to understand the participants’ social world and their constructions.

The researcher acknowledges that ontologically there are multiple realities that are constructed by the actors involved and that facts and values are intimately connected “since the knower and the known are inseparable” making research value bound (Lincoln & Guba, 1985: 37; Dieronitou, 2014: 7). Epistemologically, the “knower” and the “known” become inseparable within this “subject-subject relationship” (Dieronitou, 2014: 7).

2.3 Research Methodology

The research method is a strategy of enquiry which progresses from the fundamental suppositions through research design and onto data collection (Myers, 1997). Whilst acknowledging the existence of other divisions within the research modes, the most frequent is the qualitative and quantitative classification of research methods. Whilst qualitative and quantitative at one level, denote differences about the nature of knowledge, or how one understands the world and the final aim of the research, none of these methods can be considered essentially superior to the other. The appropriateness of the

method needs to be guided by the context, purpose and nature of the research study in question. There are situations where one can be considered an alternative to the other, again dependent on the type of study.

It is the methodology that guides the way the research questions are posed in the arena, which then permits the researcher to make assertions about the implications of results or significance of results (Clough & Nutbrown, 2002). The methodological process is guided by philosophical beliefs about the nature of reality, knowledge, and values and by the theoretical framework that informs comprehension, interpretation, choice of literature and research practice. Methods are the means of gathering data and are an important part of the methodology (Chilisa, 2012). The researcher applied qualitative case study methodology using political ecology, critical theory lens and a postcolonial indigenous paradigm to determine the effect of mining on indigenous communities. The qualitative research strategy applied provided the researcher with the opportunity to observe, understand, assess and investigate in depth the nature and extent of the impact of mining extraction and to evaluate the situation as it is without being speculative.

2.3.1 Qualitative Research Methodology

Within the social sciences, qualitative research methods were evolved to allow researchers to investigate social and cultural phenomena. Qualitative research endeavours to study the ordinary lives of differing groups of people and communities in their normal settings and is therefore considered naturalistic. As indicated by Domegan and Fleming (2007: 24), “qualitative research aims to explore and to discover issues about the problem on hand because very little is known about the problem”. It is intended to assist researchers comprehend people, and the social and cultural contexts which they inhabit (Myers, 1997). Flick, (2009) maintains that the research paradigm is often defined as a naturalistic, interpretative method, concerned with exploring phenomena “...from the interior” and taking as a starting point, the perspectives and accounts of research participants. Qualitative research employs varying knowledge claims, enquiry strategies, and data collection methods to which analyses are applied (Creswell, 2007). The research involves the “studied use and collection of a variety of empirical materials – case studies, personal experience, introspection, life story, interview, artefacts, and cultural texts and productions, along with observational, historical, interactional, and visual texts—that

describe routine and problematic moments and meanings in individuals' lives" (Denzin & Lincoln, 2005: 3-4).

The qualitative research methodology in contrast to the positivist research approach manages people as research participants and not merely as things. In a fashion this is empowering for participants of qualitative research, as they then become the authors of their own history rather than only objects of research (Casey, 1993). This is an enabling methodology as it allows the participants to understand their own realities and come to value their own creation of knowledge by practice. For this research an epistemological interpretive and ontological construction, was employed.

These approaches have been employed to achieve two points - "to facilitate people in their attempt to express and analyse their experiences of the institutional structures they face, and to work collectively towards transformative action by presenting the insights and critiques people have developed to policy makers and mainstream service providers" (Evans, Hole, Berg, Hutchinson & Sookraj, 2009: 17) Qualitative research tools were applied, using both the case study and *Lekgotla* methods to unpack the research questions. These two research approaches are discussed in detail below.

2.3.2 Research Design

A research design affords the outline for the assembling and analysis of data. This is the "functional plan in which the chosen research methods and procedures are connected together to obtain a reliable and valid body of data for empirically grounded analyses, conclusions and theory formulation...thus providing the researcher with a clear research framework which can guide the methods and decisions, and sets the basis for interpretation" (Bless, Higson-Smith & Kagee, 2006: 7). Research design provides in detail the plan through which research is carried out. Mouton (1996: 107) states that the primary purpose of a research design is to "enable the researcher to anticipate research what the appropriate decisions are likely to be, and to maximize the validity of the eventual results."

In this study, the research is planned on a qualitative basis with data collected through two phases; a literature review and an empirical study. The empirical study informed by the literature review, focused on qualitative research methods. The literature review in Chapters 3, 4 and 5, helped with document analysis to ascertain the possible impact of mining on indigenous communities. On the other hand, empirical study is based on

clarificatory interviews obtained from the results of the document analysis. Because “meaning” is vital to the qualitative approach the focus was the contributor’s viewpoints on their own formulation of practice (Bogdan & Biklen, 2003). Hence, the outline advanced in this study reinforces evaluating participants’ perspectives. Discoveries were deliberated relative to prevailing knowledge with the objective of illustrating how the current study has contributed to growing the knowledge base.

2.3.3 Case Study Methodology

To obtain an improved comprehension of the objectives of the study and to appreciate the degree to which these objectives have been understood required utilisation of a secondary research method, the use of case study. Case study is used to examine those circumstances in which the intervention being explored has no clear, single set of outcomes (Yin, 2009). As mentioned by Hartley (1994: 212), case study allows for “...processual, contextual and generally longitudinal analysis of the various actions and meanings which take place and which are constructed within specific social and organizational contexts.” Although it is classified as qualitative research, case study methodology uses both quantitative and qualitative research methodologies. Therefore, ultimately a qualitative, exploratory and contextual research design was implemented to examine the impact of mining on indigenous communities. The qualitative research method focused on phenomena that occur in natural settings and capture the complexity of the phenomena (Leedy & Ormrod, 2013). The research methodology employed to achieve this study’s objectives incorporated the following features - a literature study, in order to obtain theoretical knowledge of the phenomenon being investigated; and case study, aimed at evaluating the impact of mining on indigenous communities.

This method was chosen specifically as it allowed the researcher to discover problems that exist within a phenomenon and was motivated by a selection of methods that would allow a holistic understanding of the problem to emerge. The relevance of employing a case study as a research strategy in methodology cannot be underestimated, as this involves empirical inquiry that examines a phenomenon within its real life context. Through this method, the researcher gains a honed realisation of why the research issues occurred as they did, and what issues would bear further investigation in the future (Bless *et al*, 2006). The qualitative case study is an “approach to research that facilitates exploration within its context using a variety of data sources...ensuring that the issue was not explored through

just one lens but rather a variety of lenses which allowed for multiple facets of the phenomenon to be revealed and understood” (Baxter & Jack, 2008: 544). A main attribute of case study methodology is that diverse approaches are amalgamated with the objective of looking at a case from differing angles; to triangulate through a combination of methodologies (Baxter & Jack, 2008). The advantage of this approach is a close association between the researcher and the participants which allows them to tell their stories.

Case studies give voice to the powerless and voiceless. Often when sociological investigators submit studies of the homeless and powerless it is done so from an elite viewpoint. Yin (2009: 14) presents this as a “challenging research approach with a rigorous methodological path whose strength is in its reliance on multiple data techniques and data sources, which increase the legitimacy of findings”, further confirmed by Ridenour & Newman (2008). A case study using multiple data sources ensures a broad understanding of concerns connecting to the research topic, and offers depth of the case and allows triangulation for emerging themes (Creswell, 2007; Yin, 2009). The participatory approach provides the research participants with the opportunity to contribute to the process, which includes identification and selection of the study case, data analysis and understanding from their own cultural point of view. The approach was designed to bridge the power divide between the researcher and the research community. In qualitative studies the researcher is regarded the primary tool for data collection and analysis. As both the researcher and the participants construct their own realities this gives rise to multiple realities existing in any given context. The researcher must then make sense of multiple interpretations as they engage with the situation. The researcher collected data in a non-intrusive way, in an attempt to study real-world situations as they happen without any pre-set restrictions or situations that control the study or its outcomes. Case studies cannot claim to be representative, but the prominence is on what can be learned from an individual case (Tellis, 1997).

A qualitative portrayal of their experiences and an inductive analysis of data were considered to be the most suitable for purpose for this research since all of these processes enriched the opportunity for some type of objectivity which would have been missing if quantitative or experimental strategies were used. Whilst case study design is applicable where it is hard to remove a phenomenon’s variables from its context (Yin, 2009), Lincoln and Guba (1985) warn that whilst qualitative research recognizes the

researcher's subjectivity it necessitates that the biases, motivations, interests or perspectives of the investigator are acknowledged and made clear during the study.

2.4 Principal Theories upon which the Research Project was constructed

2.4.1 Political Ecology

The conceptual approach to be utilised in this research is political ecology; a “well-established research field found predominantly, but not exclusively, within geography” (Holden & Jacobson, 2009: 146). Political ecology as an approach which offers to “...unravel power relations which enables and constrains various actors vis-à-vis each other, and in relation to the physical environment” (Heynen, Perkins & Roy, 2006). The main aim of political ecology is to understand which actor/s controls and has access to power or natural resources and how the actor/s gain economic benefit from that (Biersack 2006). Political ecology approach's aim is to comprehend the phenomenology beneath environmental changes and the way it manifests and disturbs different social groups. In political ecology studies according to Blaikie (2009), it is the actors' perception and interest that receive special consideration. Typically, political ecology addresses those “unequal power relations regarding access to and control over resources; the reflection of such power relations in discourses and knowledge claims about the environment and development; and the resistance and opposition to unequal social-environmental dynamics” (Tschakert & Singha, 2006: 1306).

Political ecology queries socio-economic conflicts and also explicitly resource access battles, in view of the exchange between ecological, socio-economic and political processes that shape control over resource access and the distribution of environmental ‘goods’ and ‘bads’, giving specific consideration to power relations (Martinez-Alier, 2012; Peet & Watts, 1996, 2004). It deals with disputes over availability to resources as fights in protection of livelihoods that encompass economic, ecological and cultural dimensions. Political ecologists such as Harvey (2003: 137-183) and Martinez-Alier (2012: 349) consider these as conflicts of “accumulation by dispossession” or “accumulation through contamination” in which the capability of the resisting participants to further their own “world view” in their relationship with nature and to obtain control access is facilitated by unbalanced power relations (Bailey, 2008; Peet & Watts, 2004). Currently, political ecology demonstrates how environmental analysis and policy can be refashioned to address the problems that confront the socially vulnerable in society (Forsyth, 2008). It aims at

contributing to policy and civil society with suggestions of alternative and less unequal resource management.

The political ecology perspective will be used by connecting resource struggles to the local socio-environmental change arising from the impact of mining. The struggle for this access that local people go through to attempt alleviation of the impact of mining represents an “environmentalism of the poor” (Watts & Peet, 2004: 55), in other words the efforts made in defence of natural resource-based livelihoods endangered by the socio-environmental changes that the mining activities cause (Guha & Martinez-Alier, 1997; Martinez-Alier, 2012). In the political arena it is in the sphere of socio-environmental conflicts in which ‘environmentalism of the poor’ is positioned. These are inevitably disagreements over access to natural resources and the pressure of environmental impact which can be found in differences in ideals and the disparity in power among people (Escobar, 2006; Martinez-Alier, 2007). The impact of mining affects access to natural resources for local communities in various ways; which includes through physical dispossession or eviction, through displacement, relocation, or locking out or through changes to their environment that sustains livelihoods (Martinez-Alier, 2007; Bebbington & Williams, 2008).

Within political ecology thinking, threatened livelihoods and the connection too altered social and environmental conditions figures centrally. One of the fundamental subjects at the core of political ecology is the struggles of small farmers and other socially disadvantaged groups to defend the environmental base of their livelihoods (Robbins, 2012). Political ecology research has established the foundation for the type and scope of resource access struggles, as well as their connection to a larger socio-economic, political and environmental practice. As Forsyth (2003: 8) notes, “much concern about political ecology in the developing world has reflected the belief that injustices are being committed against both local people and against environmental resources that may be of value to these people.”

Political ecology is useful because of its power to analyse the interaction between human systems and landscapes. The goals of political ecology are a good fit for this research work which aims to investigate the impact of mining on indigenous communities - decisions influencing environmental management and local people's environmental access. The research draws from political ecology as a useful framework to understand power structures and influences affecting development discourse, peoples, and the environment of the Chaba people. From the political ecology perspective, development

should engage the community to allow local people to join in the shaping of development policies and possible strategies that affect them (King & Peralvo, 2010). The use of the public participation process advocated by the field of political ecology includes local people's contributions to shape policy and to ensure that a one-size-fits-all hegemonic development framework is avoided (Du Plessis, 2008).

2.4.2 Rationale for Postcolonial Indigenous Paradigm

The researcher used a postcolonial indigenous paradigm since the research relates to exploited and oppressed indigenous people by mining companies. The postcolonial indigenous research paradigm as a world view focuses on the several common aspects, namely the ontology, epistemology, axiology and research methodologies of disempowered or historically oppressed social groups. The postcolonial indigenous paradigm has blossomed in recent years as a means for hearing non-Western voices and emancipating the voices of formerly oppressed generations from that silence imposed by colonization (Denzin & Lincoln, 2005). Mertens (1999) indicates that the transformative paradigm is characterised through the lives and experiences of marginalised groups being given central importance. As an umbrella term, transformative theory covers those views that are meant to be "emancipatory, participatory, and inclusive". Going further she states that "...the transformative paradigm is characterised as placing central on the lives and experiences of marginalised groups such as women, ethnic/racial minorities, people with disabilities, and those who are poor" (Mertens, 1999: 4). When working with this model, conscious attempts should be made by researchers to "link the results of social inquiry to action and to link the results of the inquiry to wider questions of social inequality and social justice" (Mertens, 1999: 4).

According to Mertens the transformative model is grounded on ontological, epistemological and methodological assumptions that are dissimilar to those that underpin post-positivist world views. It goes further and necessitates the inclusion of active aims to promote social justice inside the research agenda. It is the presentation and production of knowledge contained in certain ideologies that preserve power relations, helplessness and inequalities which work to expand the marginalization of certain groups of people (Anderson, 2004). There are multiple versions of what is considered to be real recognised within the transformative ontological assumption. Inside a postcolonial indigenous research framework, the focus on related constructs "...emanates from indigenous value

system that recognise the connection between people, past present and future, and all living and non-living things” (Cram, Chilisa & Mertens, 2013: 16). Connectivity is of paramount importance for an ethical premise as it allows for making decisions about research.

The postcolonial indigenous paradigm emphasises respect for marginalised groups’ belief systems and equality in the relationship between researcher and participants. Postcolonial researchers value cultural ways of interpreting the world and emphasise the use of oral histories, social justice and healing methods, sharing circles, and songs as examples of useful methods (Chilisa & Ntseane, 2010). The discourse asserts that colonization destroyed local history, traditions and cultures of indigenous people and created inequalities in relations and power (Dei, 2000). It is used to understand why indigenous knowledge was lost and why this happened. The discourse allows a researcher to conduct a study of a social institution which was oppressed; it challenges conventional and dominant institutions; forms of knowledge or groups; or it can capture social struggles (Comstock, 1982; Cresswell, 1998; Bodgan & Biklen, 2003).

2.4.3 Critical Theory Lens

The postcolonial indigenous paradigm has much in common with the values of political ecology and critical theory. The formation of critical theory emanates from about the 1920s during the period before the Second World War, when basic questions concerning knowledge and power were expressed amongst social movements that had their origins in post-World War I Germany and the persecution and subsequent extermination of Jewish population (Voigtländer & Voth, 2012). It is contended that an oppressive system is perpetuated through scholars that use traditional forms of research whether or not they are consciously or unconsciously, aware that they are reinforcing and reproducing the system. There is a consciousness on behalf of critical researchers that it is necessary for community members and research participants to have greater awareness of their futures and that they themselves are obligated to begin research that nurtures emancipation, democracy, and community empowerment, and at the same moment applies itself to power imbalances to give those formerly marginalised a voice (Lincoln & Guba, 2003). Critical theorists are also of the belief that the privileged groups have a vested interest in preserving the status quo (Kincheloe & McLaren, 2005). Critical theory seeks to critique and change society and not to merely study and understand it.

Mining companies often threaten the well-being of host communities through their violation of indigenous rights, operating without community consent, altering local ecosystems, triggering social conflicts and gendered violence, limiting access to food and water, and/or exacerbating poverty (Coumans, 2009). The exploitative nature of the mining industry provides fertile ground for critical theorists to highlight injustices within society and in doing so attempt to raise the public's awareness of these inequalities.

An anti-colonial lens is a way of theorizing, re-articulating, and challenging colonial relations (Dei, 2000). This perspective is important because the well-being of indigenous communities is situated in historical and political landscapes (La Duke, 2005). Anti-colonial thought has divergent origins stemming from a diversity of indigenous knowledge embodied both physically and spiritually (Shahjahan, 2005). Key to anti-colonial perspective is the acknowledgement that colonialism is a contemporary reality, not a thing of the past (Endres, 2009).

The critical theory lens is pertinent to the study of indigenous knowledge as these systems have been oppressed for centuries by colonialism, apartheid and modernisation. Indigenous scholars assert that in order to redress the impact of colonialism, indigenous researchers have the right and are required to take the responsibility to develop their own indigenous methods of research and that these should be consistent with indigenous values and traditions and be answerable to indigenous communities (Smith, 1999). Babbie *et al.* (2008: 36) denote critical theory as the “exposure or liberation from historical, structural and value-basis of social phenomena.” For this research, the critical approach highlights “becoming part and parcel of the everyday life-worlds of the people being studied. Participants should feel free and encouraged to give their own view of their situation and the world in which they live” (Babbie *et al.*, 2008: 33).

2.4.4 *Lekgotla* Indigenous Research Method

This research was also directed by the *Lekgotla* indigenous research method as an additional qualitative research method. It has become necessary for the application of research within indigenous communities to develop and implement indigenous methodologies (IM) which are clearly designed to offer substitutions to foremost positivist paradigms and are envisioned to give a say and distinction to those communities who have been previously disregarded in research practices (Berg, Tymoczko & Stryer, 2007).

As the plural form of *Lekgotla*, *Makgotla* is a Setswana or Sepedi word, *kgoro*, which when directly translated means “council meeting”, “gathering” or “an assembly” (Pienaar, 2016: 88), *Lekgotla* can also be described “as a chief’s court where a wide range of community issues, disputes and offences are dealt with.” The *Lekgotla* is based on observation, qualitative measures, and the formulation of patterns (themes) and, therefore, is an acceptable scientific practice. The difference is that it is based on African ways of knowing. As said by Pienaar (2014: 88), *Lekgotla* follows a “specific process, whereby the chief becomes aware of the matter to be discussed, and the matter is brought to the chief’s attention informally, privately, and confidentially”. In support of Pienaar, Boniface (2008: 382) describe *Lekgotla* as a “group or public mediation forum conducted by the indigenous holders and the headmen or a chief for the resolution of disputes, with all present having the right to seek answers and propose suggestions.” Within the community each of the indigenous holders has reputations as persons with knowledge and integrity and of understanding the cultures and traditions of their people. Occasionally they will be appointed as authorities based on their “notable status” in the community but more often than not on their lineage.

Pienaar (2014: 88) maintains that as an “indigenous African qualitative methodology, the *Lekgotla* is comparable with ethnography in the Western research world”. Ethnography comprises an understanding of the social world or a culture encompassing the shared behaviours, beliefs and values of particular groups, typically obtained through absorption in their community (O’Reilly, 2012). The *Lekgotla* is grounded in an indigenous practice of problem resolution and treats psychological and sociological issues holistically and, accordingly, fits into an ethnographic paradigm. According to Higginbottom (2013) as quoted by Pienaar (2014: 90), the main goal of ethnographic research is “to acquire from people the knowledge of how to resolve their own challenges; therefore, it is important that when researchers use the *Lekgotla* they underpin the principle of learning from the community to resolve issues for the community in the community’s context.” *Makgotla*, however, is more closely aligned to Erickson’s (2010) views; who regards ethnography as more detailed and understandable in its explanation and truly focuses on the authentic truth of the community.

Indigenous methodology is summarised by Evans *et al.* (2009: 894) as “research by and for indigenous peoples, using techniques and methods drawn from those traditions.” This approach repudiates research on indigenous communities whose rationales classify wholly positivist, reductionist, and objectivist research as immaterial at best, colonialist for the

majority, and palpably deleterious as a matter of course. For decades, indigenous scholars have critiqued the colonising practices of Western research methodologies. It is argued that research methods should be compatible with indigenous values and traditions and answerable to indigenous communities (Smith, 1999). Identification of qualitative research as an instrument suited to pursue the battle of indigenous communities' decolonising project "...to wage the battle of repression ...to situate, place, and contextualize, to create spaces for decolonising ...to create spaces for dialogue across difference; to analyse and make sense of complex and shifting experiences, identities and realities..." (Smith, 2005: 103 quoted in Botha, 2010: 315). As it concentrates on indigenous-settler relationships and tries to question the dominant social relationships that demote indigenous peoples, a decolonising perspective is important to indigenous research (Nicoll, 2004). Questioning the power relationships contained within the indigenous-settler dynamic facilitates a form of praxis that searches for the indigenous voice and representation with research that has traditionally marginalised and silenced indigenous peoples (Smith, 1999).

Some indigenous scholars believe that the only way indigenous peoples and issues should be studied is by indigenous peoples using indigenous methodologies (Kahahalau, 2004). The call for research philosophies and practices emanating from indigenous people's efforts acknowledges that current social science research, although successful, does not yet apply any ontologically, epistemologically and axiology-appropriate methodologies of indigenous research. It speaks of a researcher and the subjects' reciprocal relationship who ultimately must become a cohesive unit that is interrelated in a common manner with the surroundings of a research project with which they are involved. Epistemology deals with ways of knowing especially with reference to the limits and validity of knowledge. Indigenous research ontologies deal with presumptions about nature and relations of being and reality, and has the opportunity to bring new perceptions, which may be different from those that are "familiar and scientifically accepted in Western research"... "indigenous axiologies deal with nature, types and criteria of values and value judgements, particularly in relation to research ethics" (Rigney, 1999: 111). Evans *et al.* (2009: 905) maintains that it is "intended that the research practices will move policy to transform practice, and recognise that routes to transformation require that researchers speak truth with, as well as to, power."

To address the problematic nature of research and resultantly to give indigenous people a voice, indigenous scholars have adopted methodologies that correlate with their communities and which relate effectively and culturally with how knowledge is dispensed.

As a body of indigenous and theoretical approaches, indigenous methodology advocates similar methods, rules and postulates used by indigenous research for the study of indigenous people (Porsanger, 2004). Porsanger (2004: 108) goes on to elaborate that “The main aim of indigenous methodologies is to ensure that research on indigenous issues can be carried out in a more respectful, ethical, correct sympathetic, useful and beneficial way, and be seen from the point of view of indigenous peoples.” These methodologies necessitate that researchers think analytically about their processes and outcomes, whilst not forgetting that “indigenous peoples’ interests, experiences and knowledge” must be at the forefront of research methodologies and the creation of knowledge about indigenous people (Porsanger, 2004: 109). Some scholars in Africa are of the opinion that current dominant research paradigms have ignored African communities’ ways of knowing and leading to creation of research-driven development projects that are inappropriate to the people’s needs.

For years, indigenous peoples have endured under the imperialism and colonialism of the present world to become displaced minorities in the land where they once held traditional ownership. This dispossession has often pushed them into the position of being merely the subjects of research. Resultantly, it is uncommon for indigenous peoples of the world to be “the initiator, manager or co-investigator of the research” as they are more likely to be in the position of the researched (Rigney, 2006: 32). It is recognised by indigenous peoples that research in its failure to value indigenous thinking and worldviews has also perpetuated ongoing racism and colonialism (Martin, 2003; Sherwood, 2010; Smith, 1999). West *et al.* (2012: 1583) quoting Rigney (2006) maintain that research that is carried out from an indigenous point of view should be guided by three vital principles – “involvement in resistance as the emancipator imperative; political integrity; and giving privilege to indigenous voices”. To free themselves from colonial oppression and tendencies, indigenous people must seek out the construction of new anti-colonial epistemologies and methodologies which will rediscover, and/or reaffirm their knowledge and culture. Inherent in these epistemologies must be the potential to strengthen emancipation and liberation from oppression. The term transformative/emancipatory paradigm signifies research that is determined by several philosophies and theories with a common thematic of liberating and changing communities through group action (Mertens, 2009). One of such influential theories is Marxism established by Karl Marx, who believed that “those who controlled the means of production, that is the ruling class, also controlled the mental production of knowledge and ideas. Inevitably, the knowledge produced perpetuates the domination of

other social classes or lower classes by the ruling class” (Chilisa, 2012: 35). This theory attempts to clarify the current domination of Western research paradigms and marginalization of knowledge formed in other cultures especially those in the South.

2.5 Sampling

The researcher followed the *Lekgotla* indigenous research method of discussing with the chief/headman/indigenous expert first and sharing the information with him privately prior to the *Lekgotla* being called to unpack the research questions. According to Pienaar (2016), *Lekgotla* enhances respect for culturally competent engagement in a community-based context through the fact that the community is responsible for facilitating the research question and resorting to a resolution during the *Lekgotla*. Through involving the community during Makgotla and making them responsible for their own problem resolution contributed to the purpose of research, allowing one to come closer to the authentic truth during the research process. The collaboration formed during the planning and execution of the *Lekgotla* contributed to the mutual collaboration needed during the research project. Consequently, it was also a mutual education process because the community learned how to resolve their own problems while the researcher learned how a specific community resolves its own problems. It was therefore a participative–collaborative process. To ensure sustainability of any programme, a major prerequisite is that the local people must be considered as partners in the project with combined ownership (Kitula, 2004). For this to happen, communities must effectively participate in the design and implementation of the project as was ensured in this study. Research was directed by means of a literature study and empirical research. The nature and complexity of the research problem, research questions and related aims required a decisive research design to meet the demands of the aims. A purposive sampling technique was considered the most appropriate as the researcher was familiar with the population from which the sample was selected. Sampling can be interpreted as the process of systematically choosing a group of people or cases to be incorporated in the research project (Neumann, 2011), that was representative of the population and would be more practical to work with than the whole population or a collection of cases. Battaglia (2008: 4) defines a purposeful sample as a method that applies “...expert knowledge of the population to select in a non-random manner a sample of elements that represents a cross-section of the population...”

According to Battaglia (2008: 4) “The main goal of purposive sampling is to focus on particular characteristics of a population that are of interest, which will best enable the researcher to answer the posed research questions.” Basing selection on various criteria including specialist knowledge of the research issue, or capacity and inclination to partake in the research, the researcher decided on the individuals to be included in the sample, thus adhering to a form of non-probability sampling. A clear disadvantage of purposive sampling is the relatively high probability of researcher bias occurring. This can happen as each sample is chosen grounded in the judgment of the researcher in question, who in the majority of cases is trying to prove a specific point. Accordingly, researchers must ensure that decisions are based on accepted criteria, not on “what will best support their theory” (Oppong, 2013: 5).

2.6 Data Collection

Data for the case study was sourced from primary and secondary sources, with the primary data utilising a combination of methods. The method is mindful of the necessity of the inclusion of indigenous protocols, values, and beliefs that are important to the people in the study area. The researcher used multiple data collection methods, including interviews, *Makgotla*, participant observation, and field notes applied during the interviews and the observation. This ensured exploration of the issue through various lenses rather than just one, according to Baxter and Jack (2008: 545-6) “allowing for multiple facets of the phenomenon to be exposed and understood”.

Data collection strategies (interviews and participant observation) are well-matched with qualitative research, since these strategies were suitable to obtain the desired information from the participants. According to Creswell (2013) data collection and its analysis are intertwined processes in qualitative research. In all cases qualitative data can help the researcher “understand the people, their motivations and actions, and the broader context within which they work and live” (Myer, 2009: 8). The *Lekgotla* “respects the community as an equal of the researcher and puts the community in charge of the data collection and analysis process where the researcher becomes the co-author of the exploration and the community becomes the author of its own resolution” (Pienaar, 2016: 89). For the accomplishment of genuine community engagement, the researcher needs a collective affiliation based on respect and equality with the community (Wood, 2013; Procter, 2005).

2.7 Trustworthiness and Credibility

Within quantitative research, reliability usually denotes the degree to which a variable, or set of variables, are consistent in what is proposed to be measured, when several measurements are taken the “reliable measures will all be consistent in the values” (Hair *et al.*, 2006: 3). Procedural reliability is related to consistency, particularly in qualitative research, which means that an alternative person should be able to scrutinize the work and come to comparable conclusions. If measurement results are unreliable it then becomes more difficult to test the hypotheses or make extrapolations about the relationships between the variables or even defend the data when challenged. This is also known as trustworthiness in qualitative research. Guba (1981: 79) cites four significant elements for increasing and assessing trustworthiness in his model of *Trustworthiness of Qualitative Research*:

- **Truth value:** Confidence in the truth of the findings and context in which the study was undertaken.
- **Applicability:** The degree to which the findings can be applied to other contexts and settings or with other groups.
- **Consistency:** Whether the findings would be consistent if the inquiry were replicated with the same subjects or in a similar context.
- **Neutrality:** The degree to which the findings are a function solely of the informants and condition of the research and not of other biases.”

The researcher tried his best to be guided by these four elements during the study. To ensure the trustworthiness of data, triangulation, member checks and peer reviews were used. The purpose of validity is to ensure that the study measures or tests what is actually intended, whilst credibility deals with the question, ‘How consistent are the findings with reality?’ Lincoln and Guba (2003), argue that guaranteeing credibility is one of the most significant factors in creating trustworthiness. In addition to trustworthiness, it was ensured that the collected data was transferable to other studies or settings. Creswell (2005) proposes that reliability of a study can be ascertained if the results of a study are close to the original if the study is administered repeatedly at the same time period to similar candidates used in the original study. Hence, studies using qualitative data, and interpretive methods should be carefully premeditated during the planning, implementation and data analysis stages to secure reliability.

Well recognised is that one single disciplines cannot satisfactorily addressed complex environmental problems, and rather that it is necessary to have an interdisciplinary approach in natural resource management (Tacconi, 2011). The combination of various participatory and case study methods and sources (primary and secondary) is to enable the cross-referencing of the validity and reliability of the various sources of information including the instruments used to collect the data in relation to the research problem. The involvement of the community knowledge holders in the research process was intended to ensure that the research instruments and sources of information were relevant and appropriate to the study and its outcomes.

The researcher made use of the above-mentioned approaches in the collection and interpretation of the data. Data collection and analysis occurred holistically because the community resolves its own challenges in its own ways of knowing. The researcher, therefore, continued to refine the data analysis further in collaboration with the indigenous holders (Pienaar, 2016). Typically, data gathered via audio recordings were transcribed in a narrative format to facilitate the sorting and interpretation process. By using the qualitative interpretative approach to data analysis, common, essential or universal themes from the entire meanings attached by the participants to their contexts were identified. Throughout all stages of the research validation checks were carried out to safeguard the highest level of data accuracy. Any information considered vague or fragmented was clarified or retrieved by returning to informants and revising issues and concepts. Endeavours were made to ensure that the transcriptions and interpretations were accurate and the final composition, including data obtained from all sources, was offered to the participants for member checking (Creswell, 2008: 267). According to Lincoln and Guba (2003) 'member checking' is a crucial element in ensuring research credibility, which involves returning to the research participants to confirm themes that emerged from the data.

2.8 Restrictions to Which the Study is Subjected

In a divergence from quantitative research traditions that consider objectivity as an aim, qualitative research acknowledges that fundamentally the data gathered and the analytic processes engaged with are based in subjectivity. Subject to the underlying paradigm, a researcher will work to limit, control or manage subjectivity, or they may accept it and use it as data. However, it would be erroneous to only associate qualitative research with

subjectivity and quantitative research with objectivity. Morrow (2005: 254) maintains that “all research is subject to researcher bias; qualitative and quantitative perspectives have their own ways of approaching subjectivity and are very much influenced by the paradigms guiding research”.

Being subjective in nature, qualitative research leaves much of the quantification process to the choice of the researcher (Zikmund, 2003). Approaches to subjectivity have been referenced as “bracketing” and “monitoring self” (Peshkin, 1998: 20) or being “rigorously subjective” (Jackson, 1990: 154). In order approach several important issues and achieve the objective of managing subjectivity, reflexivity and representation, qualitative researchers need to ensure that any implied expectations and biases are obvious to both themselves and others (Morrow, 2005). It is argued that researchers always believe something about the phenomenon in the enquiry and that an increased acquaintance with the literature discourages prejudice by increasing researcher comprehension of the numerous ways of viewing the phenomenon (Morrow, 2005). Another strategy is through consultation with the research participants and de-briefers (Hill *et al.*, 2005). Additionally, Rossman and Rallis (2003: 60) recommend making use of the “community of practice” made up of well-informed colleagues to engage in “critical and sustained discussion”. As a qualitative research, various strategies were utilised in an effort to fairly represent participant’s realities. Within the data-gathering process this included seeking elucidation and probing more intensely into the meanings of participant responses, adopting the position of an inexperienced investigator. This can be of particular importance in such situations when the investigator is an ‘insider’ with respect to the culture being explored or when they are conversant with the phenomenon of investigation. An additional approach was to involve member checks, validation and reflection.

2.9 Ethical Considerations

Many researchers have defined the notion of ethical behaviour, however, Bogdan and Biklen (1992) and Miles and Huberman (1994) provide simple yet profound definitions of researcher ethics. Bogdan and Biklen (1992: 49) define it as “principles of right and wrong that a particular group accepts.” Congruent with Bogdan and Biklen (1992: 49), Miles and Huberman (1994: 288) propose that as researchers “We must consider the rightness or wrongness of our actions as qualitative researchers in relation to the people whose lives

we are studying...” The simplicity is misleading because the essence of the advice reverts to the individual. They present ethics as actions and not theories to appreciate.

Due to the nature of qualitative studies, the researcher has to collaborate intensely with the participants, and as such enters their personal domains, and becomes acutely aware of their values, weaknesses, any individual learning disabilities and the like to collect data. Silverman (2001: 201) prompts researchers to “always remember that, while they are conducting research, they are actually entering the private spaces of the participants.” Indigenous research, as considered in this study, is through an ethically and culturally-appropriate study of indigenous people. Its methodology is not theoretically fashioned but follows indigenous ethical procedures that form the methods in consonance with local cultural obligations (Porsanger, 2004). Throughout the research process, the core values, beliefs and healing practices of the indigenous community were integrated. According to indigenous researchers, such research is a ceremony and must be valued as such. Centred within this research framework is connectedness and relationality that ensures answerability and application of research outcomes for the benefit of all participants (Durie, 2004; Smith, 1999). Collaborative partnerships are a primary condition in international research ethics. Smith (1999: 15) argues that any project “has to be thoroughly considered, not merely as a single contribution to the body of academic knowledge, but as respect of indigenous people’s interests and needs.”

Communal knowledge warrants that knowledge is not composed and retained for individual power and ownership by single authorities, but rather is advanced, reserved and shared within indigenous groups for the advantage of the entire community (Chilisa, 2012). She delineates the ethical stance rooted in a relational ontology by advising that, in terms of relational ontology, research should be directed by the “...principles of accountable responsibility, respectful representation [of viewpoints and experiences], reciprocal appropriation, and rights...”, (Chilisa, 2012: 117) or that relational axiology assumes that researchers will, considering their effect on social life and on living and non-living, recognise their responsibility and their obligations and this will suitably inform their research. This is in line with the African philosophy of *Ubuntu*, epitomised through the African adage “I am because we are; we are because I am”, which articulates a global perspective of “...existence in relation and being with for self-and-others...” (Chilisa, 2012: 108-109). This world view encourages conserving and developing balanced rather than manipulative relations with non-living things, such as ecologically sensitive thinking and

practice. This is in direct opposition with the exploitative nature of the extractive industry and its impact on the indigenous communities and their environment.

Procedurally, the researcher obtained permission from all relevant institutions before the undertaking of any activities involved with the research context and the participants. In compliance with ethical protocols, ethical clearance was acquired from the Ethics Committee of the University in which the researcher was enrolled, North-West University (Ethics No. NWU-00534-17-A9). It is vital for the researcher to capture subtle nuances of meaning from the voices of the participants and in order to achieve this trust, rapport and authentic patterns with them need to be established (Denzin & Lincoln, 2005). Therefore, not only do sensitive issues need to be addressed but actual access to the participants is important (Kawulich, 2011). The Traditional Authority from the study area was petitioned for permission to conduct the study and subsequently granted. The researcher negotiated with the indigenous leader and informed the chief about the value of the input of the participants, which aimed to enhance cultural competence. After the indigenous leader was satisfied with the explanation, he called the participants together and described the nature of the research. In addition to the explanation, the researcher also provided the indigenous leader with written ethical approval from overseeing authorities, specifically, the ethics certificate from the university.

Though an ethics application is undeniably necessary for the start of any project on indigenous issues, research ethics should not be measured only in a restricted sense. According to Smith (1999: 115) “indigenous methodology, cultural and ethical protocols, values and behaviours should be built into research explicitly, to be thought about reflexively, to be declared openly as part of the research design, to be discussed as part of the final results of a study and to be disseminated back to the people in culturally appropriate ways and in a language that can be understood.” Research processes were preceded by the attainment of written consent from the participants following a detailed presentation of the proposed study. The codes of conduct to protect the participants that included ensuring participant anonymity and confidentiality of the responses were incorporated into the research. Additionally, data dissemination was handled in a way that was appropriate for the community. Subsequently, the indigenous leader concluded a shared agreement for the data collection which was typically recorded in writing and/or on audiotape and then analysed.

2.10 Conclusion

This chapter has provided the research paradigms, methodologies, strategies and design of the study, and has explicated the procedure, participants, data collection techniques, data collection and analysis methods used, and acknowledged the potential of data credibility issues. It has also discussed prominent paradigms used to guide research with each being described within the framework of its own epistemology, ontology, axiology and methodology. For each paradigm methods of data collection used are included.

Due to the complexity of social science research and because it is diverse and pluralistic, the way its research is conducted varies significantly; inclusive of its goals and basic expectations. Two of most favoured major forms of research are quantitative methodology based in a positivist - interpretivist paradigm, and qualitative methodology based in the interpretivist-constructivist paradigm. This research was guided by qualitative methodology using interpretivist-constructivist research paradigms which are the methodologies that guide the work of many social science researchers. Accordingly, researchers should have clear comprehension of the philosophical argument directing their research. Ethical issues and considerations were embedded in the discussion. The next chapter discusses knowledge within the framework of indigenous knowledge systems.

CHAPTER 3: KNOWLEDGE WITHIN THE FRAMEWORK OF INDIGENOUS KNOWLEDGE SYSTEMS

3. Knowledge within the Framework of Indigenous Knowledge

3.1 Introduction

This chapter deals with various concepts relating to indigenous knowledge systems (IKS) and sustainable development. South Africa has an extensive history of mineral exploration and the introduction and use of mineral during the Iron Age. The ancient miners had a close relationship with the environment. In many parts of the world colonial rule led to marginalization of many cultural norms and values. For centuries, Western settlers, professionals, colonialists and apartheid officials viewed the African 'ways of knowing' and their 'value systems' not as knowledge, but rather as pagan, uncivilized, irrational and subjective. Indigenous knowledge was thus not viewed as science, as science was deemed to be based on empirical observation and measurement (Jacelon, 2007). Several factors contributed to this notion. Chief amongst these were, politics, power, conquest, domination, colonial and anthropological discourse, views of indigenous knowledge from a Eurocentric perspective and a general lack of critical understanding. For centuries, this African body of knowledge has been marginalised and stigmatized in favour of Western knowledge. Thus, marginalization of Indigenous Knowledge (IK) emanates from those historical, social, political, and economic events that can be linked with colonization of indigenous people by imperial countries driven by the desire to discover areas where tradable goods could be obtained. The knowledge of the colonizer became the dominant official knowledge for social transaction to the detriment and subjugation of the body of knowledge of indigenous peoples.

3.2 What is Indigenous Knowledge (IK)?

Recently, within environmental discourse the term 'indigenous knowledge' has become an accepted description. Providing a definition and creating 'working boundaries' for studying IK is not always simple (Dei *et al.*, 2000). Literature available on IK does not offer a single definition principally because the topic is wide-ranging and lends itself to differing viewpoints across a variety of disciplines. Dei (2002: 6) conceptualises indigenous

knowledge as “a body of knowledge associated with the long term occupancy of a certain place and is shaped by the traditional norms and social values of a given society.”

IK, which can also be called traditional knowledge (TK), or local knowledge (LK), commonly denotes ancestral, established traditions and practices of determined regional, indigenous, or local communities (Kaya, 2009). TK, according to Kalua *et al.* (2009: 96), also “encompasses the wisdom, knowledge, and teachings of these communities, most of which has been handed down from one generation to the next”. Further, “while some forms of TK are expressed through stories, legends, folklore, rituals, songs, and even laws, others may be expressed through other means...this knowledge distinguishes one community from another, often reflecting each community's interests, with some communities depending exclusively on their traditional knowledge for their survival.” (Kalua *et al.*, 2009: 96).

As reported from the Convention on Biological Biodiversity (CBD), 1992 approved in Rio Janeiro, IK refers to “knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles” as well as “indigenous and traditional technologies” (CBD Art. 8(j) and 18.4). The foremost characteristics of such knowledge according to Kalua *et al.*, (2009:96) is that “it is (i) held collectively, although certain types of TK may be the purview of specific individuals or subgroups within the community; (ii) largely undocumented and hence transmitted orally from generation to generation; and (iii) an evolving form of knowledge according to which communities respond to new challenges and needs.” Embedded within the concept of who qualifies as “indigenous” is colonization’s history, which is the major notable experience that indigenous people have a part in. The expression indigenous is also associated with colonization, including the marginalization of non-ruling ethnic groups by the western world. Around the world the appellation itself has become identified with the word, ‘native’; a derogatory colonial utterance that inevitably was linked with the colonized peoples of the world. ‘Indigenous people’ is a relatively new term, usage of which is deemed more politically correct and one which may also contribute to disparity in meaning as it is used in an all-encompassing manner. This is certainly not the only manner of describing indigenous, but it has become routinely accepted and gives a compelling stand point. However, various IK researchers and scholars have defined it in diverse ways founded on the CBD concept of the term indigenous. For example, the *International Labour Organisation’s Convention 107* drawn up in Geneva, Switzerland in 1957 stated that, indigenous applies to:

“Members of tribal or semi-tribal populations in independent countries whose social and economic conditions are at a less advanced stage than the stage reached by the other sections of the national community, and whose status is regulated wholly or partially, by their own customs or traditions or by special laws or regulations”; and

“Members of tribal or semi-tribal populations in independent countries which are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization and which, irrespective of their legal status, live more in conformity with the social, economic and cultural institutions of that time than with the institutions of the nation to which they belong” (International Labour Organisation, 1957)

The more recent and certainly less paternalistic *Convention 169* formulated in 1989 applies to:

“Tribal peoples in independent countries whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partially by their own customs or traditions or by special laws or regulations”; and

“Peoples in independent countries who are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at the time of conquest or colonization or the establishment of present state boundaries and who, irrespective of their legal status, retain some of their own social, economic, cultural and political institutions” (International Labour Organisation, 1989).

There seems to be common agreement that Indigenous Knowledge Systems (IKS) comprises of knowledge produced over many centuries through long periods of interaction with the natural environment. This knowledge has been developed through generations of behaviour observations of both living and non-living components of the natural environment, through experimentation and innovations encompassing plants, varieties of trees, animal species and habitats as well as the relationships amongst them (Maila, 2007; Reid *et al.*, 2006). This knowledge has been tried and tested over generations. IKS has, therefore, developed through the close relationship and interaction existing between human beings and their natural environment (Hart & Vorster, 2006; Grenier, 1998).

IKS is holistic in nature as its bearers and the users of this body of knowledge view the natural environment as connected as a whole with humans seen as an essential part of that nature. This means that indigenous ways of natural resource conservation and administration consider the use and conservation of one component of the environment within the context of its relationship to the entire ecosystem. IKS, as used in socio-economic and political development is therefore enshrined in traditional ceremonies and practices, customs, spiritual beliefs, rites, rituals, taboos, religion, values and culture of indigenous communities. Environmental and ecological knowledge embedded in IKS has been used for generations by indigenous communities around the world for sustainable utilization of the natural environment (Lawes *et al.*, 2004).

It is argued here that the mainstreaming of IKS is firstly linked inextricably to the processes of the formal political and social liberation of the colonized indigenous peoples as a pre-condition. Secondly, total emancipation of IKS can only happen when the previously colonized peoples divest themselves of the remnants of the negative ideological and intellectual knowledge content that was forced on them by the colonizers. Thirdly, previously colonised people should endeavour to reclaim and recapture the remains of the IKS which is fast dwindling as the old knowledge holders in communities are passing on (Shizha, 2010). Finally, it is argued here that to achieve the ideological cleansing and the repositioning of IKS to its historical pedestal side-by-side with other previously dominant bodies of knowledge, the knowledge holders should seek to expand the understanding of the philosophical, epistemological and sociological foundations of IKS (Mawere, 2010). It is through the application of these appropriate conceptual tools and the associated research paradigms flowing from the foregoing that the battle against the detractors of IKS can be won over decisively and irreversibly.

The current rise in global interest and focus on IKS is a significant milestone and goes beyond the earlier marvel of colonial discoverers as well as further than mere anthropological and archaeological novelty value in the discourse of IKS. Acknowledgement of IKS at world level, driven by the United Nations institutions and at country level, in general, marks a significant shift in perspective and opens up possibilities and opportunities in favour of indigenous knowledge practices wherever they occur. However this change brings with it many new problems and challenges that confront the knowledge owners, practitioners, students and professional researchers who are working in association with the indigenous communities.

Emerging problems include historical spatial and geographic separation and the marginalisation of indigenous communities from the remainder of main stream society and its gross domestic product (GDP) in those countries in which it occurs. Increasingly so, there are modern day illegal bio-prospecting and knowledge prospecting; unscrupulous local and foreign operators who pre-emptively patent products whose Intellectual Property (IP) rights legally and morally belong to indigenous communities. Interested parties continually develop other means of avoiding benefit sharing of IK products and services with the rightful knowledge owners. The lack of administrative systems and sufficiently developed jurisprudence and any form of policing in this area of transgression in many countries poses great risk to the unprotected knowledge owners. However, some of the African leaders often are doing this using policy and institutional/legal instruments which are on the statute books. The Mines and Minerals Acts of the various African countries provide the legal basis for annexing land for mining.

3.3 Indigenous knowledge systems (IKS), Ubuntu and Environmental Conservation

South Africa has an extensive history of mineral exploration and the introduction and use of metals during the Iron Age has been heralded as one of the greatest innovations in the region. In the pre-colonial period, metals were used for both utilitarian and ceremonial purposes and provided the means for livelihoods and other economic opportunities through exchange with local, regional and international communities (Chirikure, 2007; Swan, 2008). The ancient miners had a close relationship with the environment and their technology used then; hence their mining had minimal impact on the environment. Changes in the socio-political landscape after the 19th century have caused the annihilation of many indigenous technologies. Modern mining, however, can be linked with the study of ancient mining as many recent prospectors have followed the leads left by those pre-industrial miners and metalworkers (Summers, 1969; Chirikure, 2010). However, current mines can be found in those locations that were first mined in pre-colonial times, thus signifying that the indigenous prospectors had good familiarity with the local geology and the available resources, particularly iron, copper, tin and gold.

The past few decades have been marked by wide-scale devastation of biodiversity through increasing industrialization, urban expansion and population pressure placed on the land. Rising industrialization created ever increasing demands for resources such as minerals, timber and animal products. The scramble by many developing countries for these

resources “encroached and destroyed preserved indigenous forests and animal species. Foreign invasions disregarded existing sacred places, and those taboos and cultural beliefs that had been passed from one generation to another within communities” (Risiro *et al.*, 2013: 20). Environmental degradation has prompted a number of international conferences that endeavour to promote environmental protection, to no avail as the obliteration of biodiversity continues unabated. Although severally countries, including South Africa, have endorsed the *Convention on Biodiversity Conservation* its enactment that is proving a challenge. The main challenge to agreement, amongst others, is that not all countries are signatories to the agreement. Further there is often a lack of continuation, financial constrictions and perhaps most importantly a lack of political will leaving gaps in environmental resource management (UNEP, 2000).

In many parts of the world colonial rule led to the destruction or marginalization of many cultural norms and values as colonial administrators imposed their authority on indigenous people who often resisted their influence (Jary & Jary, 1995). Laws were passed in order to subjugate these people and marginalize their cultural heritage. IKS were often denigrated in order in favour of Western forms of knowledge such as Natural Science. Mawere (2010: 17) indicates that “*Ubuntu* and other indigenous knowledge systems that regulated the people’s way of life and perpetuated the harmonious relationships of humans with all other entities in the natural environment were pejoratively considered speculative and unscientific.” Colonial rulers were unwilling to acknowledge the work of indigenous people as that would undermine their false claims or beliefs that Africans were primitive and inferior to Europeans. More recently, the post-colonial era in Africa, has seen a rising curiosity in the restoration of lost or dying IKS as modern research has demonstrated that it is neither inferior nor backwards as it has been derived from centuries of accurate observation and experiments (Ward, 1989). It has also been proved to be efficacious in sustainable use of environmental goods.

Similarly, in more recent years the concept of *Ubuntu* has taken a prominent position in academic research. In South Africa, as on the rest of the continent generally, academics and researchers have struggled with the “various aspects of this subject, with most researchers emphasizing the contribution of *Ubuntu* in business, education, health, philosophy and legal systems” (Mawere, 2010: 1). However, this consciousness has not been extended to investigating the value of *Ubuntu* in environmental management. Struggles to limit environmental degradation have not been successful as the conservation models being used are based on enforced international customs (Museka & Madondo,

2012). “An increasingly important perspective is that *Ubuntu* represents a wider worldview or belief system rather than just a set of discernible characteristics” (Hailey, 2008: 3) Its standing as a value system can be noted in the way that it has “been the backbone of many African societies” and that it is “the fountain from which many actions and attitudes flow” (Nyathu, 2004). *Ubuntu* is a declaration of being that captures the essential features that entitle any person to be human. Currently pre-dominant in the curricula in Africa are western scientifically-orientated traditions that are unfamiliar and, thus, far detached from its indigenous people’s existential realities. The union of these foreign traditions in Africa has brought about the formation of a society which is inward-looking and self-centred (Museka & Madondo, 2012). An ethos of personal achievement and “socially inputted needs” has alienated those long-standing customs of communal cohesion and “virtues of simplicity, conviviality and being at one with nature” (Rahnema & Bowtree, 1997), to the extent that now, “aggrandizing values of the West now overshadow indigenous humanitarian values” (Tower, citing Sarnoff, 1992). These Western informed traditions of socio-economic development have undermined locally supportable society-nature connections that are of benefit to the poor who are dependent on the environment for their livelihoods. Consequently, the decline in indigenous knowledge must be seen in the context of the inundation of foreign traditions. According to Museka and Madondo (2012: 259), the “current environmental crisis is fundamentally a religio-cultural problem that requires a religio-cultural remedy which is rooted in *Ubuntu* philosophy.”

As Afro-based philosophy looking at the world, *Ubuntu* is a worldview that attempts to encapsulate the spirit of what it means to be human (Murithi, 2006). Dandala (1994) suggests that *Ubuntu* is a “cosmology” that describes the “harmonic intelligence” that is an inherent portion of local Southern African cultures, and is in opposition to the Western concepts of communities that seem progressively centred towards individuality and competition. *Ubuntu* is variously known as *botho* (Tswana), *unhu* (Shona), *bunu* (Kalanga/Tsonga), *umunthu* (Chewa), *vhutu* (Venda) or *abuntu* (Luganda) and hence widespread among the peoples of Southern Africa. Following this, *Ubuntu* can be understood as our humanness. “A persuasive spirit of caring and community, harmony and hospitality, respect and responsiveness that individuals display to one another”, it is able to encourage genuine accord and continuity throughout the broader human system (Mangaliso, 2001: 24).

Traditionally, the notion of the philosophy of *Ubuntu* is generally transmitted orally from one generation to another. This philosophy is crucial as it arouses some kind of

environmental consciousness from deep within people. This is because the “religio-cultural beliefs, practices, and customs” in which this philosophy is embedded is not recorded in a literary tradition, but fixed within people’s beings as a part of their acculturation (Feris & Moitui, 2011; Museka & Madondo, 2012: 259). The ethical order advocated for in this philosophy modulates behaviour and enables people to know and respect the singular connection they have with the tangible environment and other species. A large body of research now links environmental problems to the human tendency to act in one’s own interest as can be noted with respect to the mining industry of the late 20th and 21st century.

Considered a multi-faceted philosophy *Ubuntu* is an approach that comprises logic, metaphysics, epistemology and ethics. This is a life philosophy amongst the Bantu people that deals with the underpinning of unity, oneness and cohesion (Ramose, 2002). Resultantly, the perception has been astutely spread as a fundamental philosophy or code of conduct into “business, the legal system, education, theology, health and disciplines such as African philosophy and ethics” (Mawere, 2012a: 3).

This is further supported by Museka and Madondo (2012: 259) who contend that *Ubuntu* philosophy is a power that assists in upholding and maintaining the “equilibrium of natural, spiritual and human forces in the environment”. In essence it is a way of living that “contributes positively to the welfare of all members that make up the universe”. With its “theocentric and spiritual world view”, the philosophy sees the universe as occupied by “mutually dependent, visible and invisible, tangible and intangible, as well as inanimate members” (Museka & Madondo, 2012: 259). In encouraging this affiliation, Bennett and Patrick (2011), observe that the philosophy is non-legal in nature with an insistence on communal obligations rather than individual privileges. Therefore Museka and Madondo (2012: 259) consider *Ubuntu* to be “a cosmological formulation that leads to an adaptive attitude towards the environment.”

3.4 Contextualising Ubuntu and Environment in the African Cosmology

Ubuntu stems from the African Bantu people and is an African indigenous philosophy and way of knowing that provides humans an interpretation of themselves in connection with the world and all other forms of Creation. Following this philosophical thread there is a common connection that exists between all human beings and others. It is via this

connection and exchanges amongst the various forms of creation that it is possible for each individual to realise their own human qualities. In South Africa, the Pedi people would say, "*motho ke motho ka batho*", meaning that "a person is a person through other persons". This philosophy of existence was encapsulated by Dr John Mbiti (1975) in the early 1970s as "*I am because we are, and because we are therefore I am*". Simply, "we affirm our humanity when we acknowledge that of others" (Manda, 2010)

Ubuntu has a universal appropriateness as a value system as it accentuates the fact that "to be human involves valuing the good of the community and other forms of creation above self-interest" (Flippin Jr., 2014). It comprises attempting helping others in the essence of service, showing respect to others and being both honest and honourable. It sees humanity as an essential part of the eco-systems that steers a communal obligation to maintain life. *Ubuntu* stresses the "sharing and conservation of natural resources on the principle of equity among and between generations" (Mubangizi & Kaya, 2015: 127).

As an African indigenous way of knowing, knowledge production and value system *Ubuntu* contests the Eurocentric view held that before colonization, Africa was a *tabula rasa*; it was a continent with no civilisation or history of thereof, that it lacked value systems and that the Western approaches to knowledge and its production could be considered as the only route existing to authenticate the worth of Africa's ideas, beliefs and overall way of life (McCarthy, 1994). It is seen as an "African worldview, doctrine, ideology philosophy, ethic, community-based mind-set and culture" amongst others (McAllister, 2009; Olinger, Britz & Olivier, 2007) and the "basis of African communal cultural life" (Tambulasi & Kayuni, 2005: 147). The link between African indigenous knowledge systems and *Ubuntu* are grounded on the above mentioned *Ubuntu* philosophy and principles. These are all-inclusive in nature as they assimilate theory and social practice pertaining to age and gender (Banda, 2005; Mubangizi & Kaya, 2015). These philosophies and principles are habitually passed from one generation to another in a variety ways including "involvement in social practices such as farming, hunting, and arts and crafts, and through folk media such as folklore, proverbs, drama, myths, legends and initiation ceremonies" (Mubangizi & Kaya, 2015: 128).

Ubuntu philosophy and its associated principles, like many other philosophies, have not been immune to disputes. This has been attributed to many factors, to a "lack of precise definition and/or its vagueness" whilst others have asked questions such as "How philosophical is the philosophy of *Ubuntu*?" (Museka & Madondo, 2012: 259) As an African

conceptual framework to guide this research process, *Ubuntu* mirrors “an indigenous philosophical perspective of African people that denotes and symbolises a collective responsibility among human beings to distribute the life force for common benefit” (King & Miller, 2006: 2). This is supported by Bennett and Patrick (2011: 223-242) who reiterate the philosophy that *Ubuntu* “spreads collective personhood in which an individual becomes a person through other people”. As a life value it is incorporated and displayed in outlooks and social practices such as “love, caring, tolerance, respect, empathy, accountability, responsibility, fairness, justice, compassion, unity, compromise” amongst others (Museka & Madondo, 2012: 259). By emphasising the significance of other people in one’s own life, *Ubuntu* philosophy can be considered as opposed to all forms of discrimination. Broadly, *Ubuntu* is a “celebration of being in its tripartite manifestation” (Museka & Madondo, 2012: 259), alternately the human, natural and spiritual forms (King & Miller, 2006).

This study subscribes to this wider view of *Ubuntu*. In its three-fold form, the philosophy provides a total and distinctive system of thought that elucidates on the universe; how the universe’s resources interconnect; and how each person fits in overall. The philosophy can be applied to questions of sustainability as it reflects tested African indigenous approaches to life and environment. Shumba (2011) further argues that as an African philosophy, it demonstrates the African indigenous ways of knowing and value systems, in opposition to the Western philosophical dialogues that repudiate Africa and its input to global knowledge and civilisation. In the setting of environmental sustainable development, the *Ubuntu* philosophy, within a broad perspective, provides humanity with moral principles for interaction with other forms of creation, other species within the universe. It is on the basis of this perspective that Museka and Madondo (2002: 260) state that for a person to be considered “virtuous, they must show deference for taboos, omens, symbolic or sacred objects, beliefs and practices that govern their relationship beyond humanity”, and with all other forms of creation. Dwivedi (1996) adds that African religio-cultural beliefs and practices connected with *Ubuntu* have, through the use of myths and various alternate methods, succeeded in representing the voice of other forms of creation; from nature to humanity. There are a variety of rituals that commemorate and sanctify humanity’s links to the non-human world, to remind them of their fragile and inexorable association with both animate and inanimate entities.

3.5 Causes of Environmental Degradation

Whilst there is suitable confirmation that numerous countries in the world including South Africa are facing environmental conservation challenges, and there is disagreement for the real grounds of these challenges. Scholars, such as Moyo *et al.* (1991) and Masaka (2011) assert that environmental problems experienced in both South Africa and other parts of Africa, were aggravated by colonialism, apartheid and science. Others, such as Bowyer-Bower, (1996) contend that exploitation, overdevelopment, increasing populations and indigenous practices have caused environmental degradation and similar environmental conservation problems. Aylen (1941) asserts that throughout pre-colonial times and into the beginning of the colonial period, there was negligible harmful effect on the environment in Africa through human land use due to the wide-ranging, roaming and fallow land-use practices that allowed sufficiently for the comparatively low population densities, further reinforced by the exercise of indigenous soil conservation actions.

At these times, land was not considered a limited resource, nor was it in danger of lasting environmental disintegration, but the increase of colonial settlement and control, which created disparity of access to the natural resources (Moyo *et al.*, 1991). The colonization of South Africa, as with the rest of Africa, was based on the spurious claim of improving the existence of the African people when in fact it was a sign of the resource expulsion that was to impoverish the African people (Masaka, 2011). Colonialism and apartheid in South Africa was founded on the conviction that Africans were unable to use the natural resources that were available for the benefit of sustainability.

Other researchers argue that some of the post-colonial land policies in Africa, such as those experienced in Zimbabwe, are responsible for environmental degradation (Chenje, 2000; Goredema *et al.*, 2011). They allege that in addition to contributing to a drop in agricultural production, countless natural resources have also suffered in the recently resettled areas because of mismanagement by the replacement of White farmers. That the various actions carried out by these “new farmers have resulted in large tracts of forest areas being indiscriminately cut or burnt, animal habitats destroyed, and scattered dwellings being left to collapse”, all of which has had “implications for climate change as these activities have reduced vegetation, impacted on the soil conditions, runoff processes and have triggered soil erosion” (Mawere, 2014: 86). These activities have created a pronounced decline in crop production.

In the context of IKS, Mawere (2012b) argues that one major cause of environmental degradation in Africa, and principally in South Africa, is the marginalization of the role of IKS as embedded in the Africa philosophy of *Ubuntu*. The post-independent government, as with the colonial governments, adopted Western science and Western ways of knowing as the sole tools for environmental conservation. By so doing, South Africa, and Africa as a whole, was propagating the colonial legacy of marginalizing *Ubuntu* and other environmentally linked IKS values for environmental conservation in the educational system. As result of these, stressed connections amongst humans and non-humans and the nature/culture, science/IK dichotomies which the colonial government fashioned, endured unopposed. The status of some species remains alienated, specifically such as forest insects whose value and rights were excluded from the colonial government's environmental conservation schemes.

In most African countries various insect and other small species lack recognition in the countries' environmental policies in spite of the contribution that many of these make to human livelihood and the ecosystem overall. It can only be assumed that insects, and the other small organisms, are those being denoted as the "uncounted species in other groups" (ZNEPS, 2009:7). In these countries there are no precise clauses that provide for the "protection of forest insects or the many other small organisms" (Mawere, 2012: 9). This is in contradiction to the philosophy of *Ubuntu*, which promotes balance among all forms of creation. *Ubuntu* principles, as entrenched in environmentally linked traditional knowledge systems, recognise the "moral value and rights of all entities in the 'natural' environment" (Mawere, 2012: 8). Thus, African people's traditional administration of the environment was originally informed by *Ubuntu*, the practises that most modern Africans have integrated since the colonial period has caused them to scorn their own traditional knowledge systems.

This study has the view that based on the examination of related literature there is limited research study on *Ubuntu* and environmental conservation in most of the rural areas of South Africa including Limpopo Province. However, observations in certain rural areas of Limpopo show that the *Ubuntu* philosophy remains in use in small-scale environment conservation pursuits and with observable positive significances to the environment. In local communities under traditional leadership and governance, chiefs through the headmen and other community leaders constantly advise both the locals and outsiders not to interfere with certain traditional environmental resources such as sacred forests, specific plants and animal species as it will anger the ancestors and hence bring bad luck to the

entire community. The community members are taught the importance of protecting and conserving these communal natural resources for the sake of the dead, the living and those still to be born.

3.6 What is Development?

Development is a “concept which is contested both theoretically and politically, and is inherently both complex and ambiguous” (Thomas, 2004:1-2); some have also argued that it is an empty concept, making it susceptible to all manner of discourses and practices being incorporated under its umbrella (Sachs, 1999). It, therefore, lacks a single clear definition and has been subject to much contestation; its practice and meaning being nuanced and accentuated by the global forces through which it has been mediated and the local sites where it has been practiced and has produced particular effects.

Agbakoba (2003) considers development as a method through which humans seek to amplify the realization of themselves. This parallels Mabogunje’s (1989: 45) conceptualization where “development is essentially a human issue, a concern with the capacity of individuals, to realize their inherent potentials and effectively to cope with the changing circumstances of their lives.” Further explaining the idea of self-realization, it is defined by Agbakoba (2003: 2) as “development as universal and particular, where the universal dimensions of self-realization consists of those values, orientations, attitudes, ideas, practices and objects which are necessary (either as preconditions or as enhancing conditions) for the realization of people across the globe”. Certain facets of development are those that are of interest to explicit communities and individuals. Critical analysis has indicated that every society, according to its historical, cultural and geographical antecedents and conditions, frames its “communal values and aesthetic sense in respect of secondary needs” (Chukwuokolo, 2009: 25)

Despite non-agreement on a precise definition, there is an extensive propensity to connect something positive and desired with the word “development”. Contained in most definitions is the common thread that “development” incorporates “change” in an assortment of facets of the human condition. Even though the idea of change may be dominant, what makes “good change” will inevitably be disputed as Kanbur (2006: 5) states “...there is no uniform or unique answer...” The notion of “good change” gives rise to a multitude of questions concerning what is “good” and what sort of “change” matters

and if 'bad change' can also be seen as a form of development (Yushau, 2011). Opinions that may be predominant in one part of the development community are not necessarily considered as important in other sections of that community, or even in wider society.

The origins of development as an international practice aimed at shifting a society from an existing state of dislocation and chaos to a superior state of order lies in enlightenment thinking and the social disorder that resulted from the intense social transformations that occurred throughout Europe in the 19th century (Cowen & Shenton, 1995). Central to the notion of development is, therefore, firstly the idea of modernity, which development is tasked with achieving. Secondly, the perceived existence of an inadequate organisation of a society, to which development must be applied as a remedy.

The premise of development as a specific domain of enquiry and worthy of state intercession is relatively recent (Watts, 1995). It is only in the post-World War II era that there was an exerted and intentional effort towards the creation of institutions tasked with the practice and dissemination of development on an international scale, specifically to the so-called 'Third World' countries. The decolonization of the European colonies of Africa, Asia and Latin America ignited a wealth of disciplines and experts aimed at studying and understanding the emergent societies in these regions. Development has now come to be connected with "economic, social and political change in the countries of Africa, Asia, and Latin America" (Naz, 2006:65).

Gegeo (1998: 289) maintains that "development dictated from the outside rather than anchored in the knowledge base of the target populations is in principle modernisation in disguise: it will not be fully concerned with local needs". He, supported by Grugel (1995) and Afshar (1996) feel that "western-oriented development in emergent countries has been haunted by its own ghost; underdevelopment...evidenced by the continuing marginalization of an already marginalised population", a sentiment that is pertinent to South Africa especially in Limpopo Province, despite the wealth of mineral resources. The unsustainable mining of natural resources by transnational corporations has left much of the landscape degraded. For development projects to be reactive to the requirements of rural communities they should originate from inside the communities. If mining development degrades indigenous communities' agricultural land, deprives them of their livelihoods and desecrates their ancestral graves, it must be rejected as it disempowers the people rather than empowering them.

3.7 Sustainable Development

The World Commission on Environment and Development (WCED) printed a report designated *Our Common Future* in 1987. Later this document acquired the name *The Brundtland Report* in recognition of the chairperson of the commission, Gro Harlem Brundtland, a former Prime Minister of Norway. The report maintained that “fulfilling human needs and aspirations for a better life is the most important goal of development and that poor people have a justified right in having these needs and aspirations fulfilled” (United Nations, 1987: 24-25). To achieve this, countries must seek to attain “sustainable development”, defined as “development that meets the needs of the present without endangering the opportunities of future generations, to meet their own needs” (United Nations, 1987: 24). Meaning that, existing human requirements and ambitions must be met by encouraging levels and types of construction and utilisation that does not decimate the environment.

Front and centre of the development agenda is now ‘Sustainable Development’, applicable for mining, as is confirmed by the Mining, Minerals and Sustainable Development (MMSD) project. This is also relevant for overall economic development, as confirmed by the World Bank’s World Development Report (WDR) 2003 and through the August 2002, Johannesburg *Summit on Sustainable Development*. The WDR cautions that environmental problems and social unrest “threaten international poverty reduction goals and suggests that new alliances are needed at the local, national and global levels to better address these problems” (Amoah, 2003: 13).

Following the report’s release, the dialogue on the objectives and strategies of development has been characterised in the notion of sustainability. But it is debateable if this concept can provide motivation for practical solutions for economism’s extremes and for poverty abolition. Consistent with the Brundtland Report, the Johannesburg Summit report adjudged economic development, social development and environmental protection as “the interdependent and mutually reinforcing pillars” (United Nations, 2002: Para. 5) of sustainable development. A circumstance necessary for attaining this is to obtain access to financial resources and expose markets for underdeveloped countries. The report (2002: Para. 47) maintains that development can be achieved through participation in globalisation, which it describes as “the rapid integration of markets, mobility of capital and significant increases in investment flows around the world”. The Report “adopts the UN Millennium Development Goals and participatory advances to development, it also

supports NEPAD whilst re-affirming” (United Nations, 2002: Paras 1, 26, 22) the important part that indigenous people play in sustainable development.

Sustainable development raises questions for Reid (1995), Moffat (1996) and Sachs (1999) with the post-war assertion still dominating the majority of conventional economic policy, that global affluence and human well-being can be attained through enlarged international trade and industry. It identifies that previous growth models have been unable to eliminate poverty either on a global or on a country basis. Indication is lacking of any trends, programmes or policies that can propose any real confidence of closing the mounting distance between the rich and poor countries. This growth pattern has also harmed the very environment on which indigenous people are dependent creating a sinking spiral of impoverishment and environmental disintegration. Brundtland, in recognition of this shortcoming called for an alternate form of growth “...changing the quality of growth, meeting essential needs, merging environment and economics in decision making with an emphasis on human development, participation in decisions and equity in benefits...” (WCED, 1987: 49). The development suggested is seen as a process to “eliminate poverty, meet human needs, and ensure that all get a reasonable share of resources”; a proposal that is in direct contrast to current development (Hopwood, Mellor & O’Brien, 2005: 6). Social justice both now and going forward are vital factors within the notion of sustainable development.

Despite the fact there is ever increasing evidence that ecological destruction and societal deterioration can be connected to economic abuse, the “developed nations” of the world are still unyielding in their quest of ever bigger financial affluence. Different sets of statistics are frequently cited by such as national leaders, scientists, and activists along with discussions on the probable trade-offs between “short-term economic benefits and long-term ecological and social costs, but no serious debate exists regarding whether or not such questions are relevant or important to the future of global society” (Ikerd, 2006: 2). Further there is disagreement between scientists and scholars if capitalism can be ever become supportable through public policies or other forms of societal interventions. Ikerd (2006: 2) goes on to maintain that “lacking any effective moral and social restraints, the form of capitalism that dominates global economy today quite simply is not sustainable”. Recently, proponents of the *resource curse thesis* have revealed similar apprehensions about the detrimental effects of mineral dependence on growth and equity (Auty, 1993; Ross, 2008; Sachs & Warner, 1995). Even those who glimpse the possibility of escaping

the resource curse advise that if institutional conditions are not right, then minerals should be left in the ground (Stiglitz, 2007).

Established theories are rarely founded on the values, cultures and socio-economic conditions of the indigenous people. Development theories should be informed by the socio-economic conditions in mineral producing countries such as South Africa, especially from mining communities themselves. For this research work, sustainable development means the skill of communities to use their natural, human and technological wealth to ascertain that their present and future generations can reach a “high degree of health and wellbeing, economic security and have input in shaping their future, all the whilst maintaining the integrity of ecological systems on which all life and production depends” (Kumah, 2006: 5-8). Indigenous people have a wide-ranging awareness of how to live sustainably, but formal education systems have dislocated the real-world daily life facets of IK and ways of learning, substituting them with intangible knowledge and academic methods of learning.

When discussing the impact of the market economy on the environment, Omari (1990: 172) supported by Vimbai (2002) states that African “indigenous belief systems have been destroyed by the introduction of a money economy with its capitalist mode of production and by the introduction of state control of natural resources.” African traditional value systems originally helped maintain the balance between humans and the environment have been displaced by Western capitalist value systems that have had adverse effects on traditional African land beliefs. These new values are seemingly attractive and many Africans are influenced by them to the extent that they are progressively making use of natural resources as articles for exploitation and making profit. Resultantly, ethical decisions that are made for land and natural resource management are directed by a production principle and developing social values.

3.8 Indigenous Knowledge Systems and Agriculture

African traditional agriculture is regarded as an indigenous agricultural practise that has emerged through time with its cropping patterns centred on IKS. This is considered to be in vibrant symmetry with the environment, and is impacted by innovations that emerge from the process along with those implemented from other indigenous practices, including international and national agricultural procedures (Warren & Cashman, 1988). As an

ecologically accepting and hardy crop production method, traditional agriculture has improved yield safety via an advancement which emphasises low risk by adjustment to the local environment. This is illustrative of one of the closest associations between man and his environment. Chikaire *et al.* (2012: 202) assert that “crop security is essential to subsistence farmers and is assured through the development of complex systems involving such factors as diversity of crops, well dispersed plantings, and the seasonal use of fallow land, as well as the sharing food and labour”. These applications are often logical reactions to local settings and are a reasonable variation to mitigate uncertainty.

Common amongst indigenous farming systems are intercropping which includes the planting of dissimilar crops in the same field during a farming season and bush fallowing. The crop mixture often includes varieties that have different requirements in terms of moisture, soil nutrient requirements and their resilience levels. The practice safeguards the farm from complete destruction in cases of disease or pest outbreak. Unlike commercial farmers who use synthetic pesticides, indigenous agriculture uses plant derivatives for insect control. It is their biodegradability that is the environmental advantage of most natural products and, unlike synthetic pesticides; natural products are environmentally friendly and are readily available to the majority of poor subsistence farmers.

This type of knowledge has been developed by subsistence farmers who use it to anticipate the onset of conditions for particular farming activities and consequently adapt their farming schedules of activities (Galacgac & Balisakan, 2009). Typically, what constitute this knowledge is a set of observations on aspects of nature in the local environment which, when interpreted correctly, can indicate or foretell changes in time and season. While preference for and reliance on this body of knowledge suggests there is some value to it, like most other aspects of the local traditions, particularly in Africa, it is disseminated orally and thus suffers the risk of being lost to future generations.

Moreover, it has not been subjected to validation procedures to demonstrate its efficacy in a manner similar to that which the more formal forecasting products are subjected. It is also not clear how the use of these tools which are based on local observations would change in an environment increasingly impacted by climate change and variability. It is rational to suggest that documentation and development of appropriate validation procedures of these local traditional forecasting tools would ensure their preservation, improve understanding and will further validate the development of a framework for their

application under circumstances where the influence of climate change and variability are increasingly apparent.

Although IKS has played a critical role in sustaining indigenous agriculture for centuries, it is still seen by the West and many African people as primitive and unscientific. Development in agriculture is seen as modernizing process which aims to transmute traditional habits and practices, and thus is considered the thinking norm for many places of agriculture research according to Thompson and Scoones (1994). They (1994: 59) continue and maintain that the dominance of “rational science” is presumed and the quest for progress is virtually an exclusive derivative of the results of the research station which is then communicated to the farmer via “hierarchical, technically-oriented extension services”. In recent years, proponents of IK emphasise the rational nature of rural people’s knowledge and have faith that this knowledge can be merged with or incorporated into prescribed scientific knowledge systems. Lukong (2016: 25) argues that if “IK or local knowledge and capacities are granted legitimacy within scientific and development communities, existing research and extension services will play greater attention to the priorities, needs and capacities of rural people.”

The local communities in Africa developed their own indigenous knowledge systems for environmental management and survival tactics, making them adaptable to environmental change. IK has enabled the various communities for generations before colonization, to co-exist harmoniously with their environments, and these systems are necessary mechanisms in environmental conservation and natural disaster management.

3.9 Natural Resources and Conflict in Africa

According to Mashau and Raphesu (2013), for the majority of the late 20th century minimal mineral exploitation and development work was carried out in Africa other than in Southern Africa, even though there still remained substantial prospects for the detection of new deposits as many of the major substantial mineral deposits in the world have originated in Africa. Yet the mid-1990s current exploration had taken place across the majority of the continent with many new deposits found and developed and some of the old key deposits being reworked. The potential of the African continent for the future discovery and development of mineral resources still remains immense as mineral occurrences are present throughout the continent across all countries.

Exploitation of natural resources features as a critical player in many of the conflicts that have afflicted African countries since attainment of their independence, both motivating and fuelling armed conflicts rather than being utilised for the betterment of the people and the obliteration of poverty. Monies from this exploitation are used for supporting armies as well as private enhancement and the production of political support. As a result, peace and stability in the various war-torn countries is no longer an option as the leaders of the various armed groups involved in this lucrative exploitation will not give up their control over these natural mineral resources (OSAA, 2016). Even when often fragile peace is established, regulatory powers over natural resources and their resultant revenues regularly remains in the control of a small elite, instead of being used for the larger improvement of the specific country.

The above problem is compounded by the weakness of key state structures. Firstly, the weakness of political and corporate governance where most states have weak corporate governance practices that regulate the natural resources sphere second is the deficiencies of institutional and technical capabilities and thirdly is corruption by African leaders. Kofi Annan (2014) at the United Nations *Convention Against Corruption* stated that “corruption is an insidious plague that has a wide range of corrosive effects on societies, it undermines democracy and the rule of law, leads to violations of human rights, distorts markets, erodes the quality of life and allows organised crime, terrorism and other threats to human security to flourish...Corruption is a key element in economic under-performance and a major obstacle to poverty alleviation and development.” There are many forms of corruption and this includes, according to the US Department of State (2011) “bribery, extortion, cronyism, nepotism, patronage, graft and embezzlement, money laundering and human trafficking; and it is not restricted solely to these activities.” According to Mbaku (2010), corruption in Africa is a consequence of poorly developed and inappropriate institutional arrangements. Most of the public now understand the word corruption much more broadly to include the abuse of state resource, maladministration, theft and fraud.

In varying degrees, corruption is a feature of all societies, but this is something that is a specific problem for African countries as it damages economic growth, inhibits foreign investment and decreases available resources for infrastructure, human well-being, public services and anti-poverty initiatives. More recently, corruption has become a subject of key political and economic importance. African countries are by no means the only countries that are struggling with establishing means to fight and stop corruption; this has become a worldwide phenomenon. Recently an array of significant international, national

and regional conventions intended to fight and prevent corruption have been developed in international acknowledgement of the scale of the issue. Despite a plethora of laws, many African countries still grapple with containing acts of corruption by their elites.

A further closely related issue is the characteristics of ownership rights in Africa. The dysfunctional nature of the political systems in many of the continent's countries, several private players, including private citizenry and ethnic groups who live in those areas with natural resources deposits, frequently participate in struggles to reinforce their considered ownership of these resources (Mashau & Raphesu, 2013). This further indicates the importance of property rights issues relative to the sphere of natural resource politics. The question of indeterminate ownership is also related to illegal exploitation of natural resources, as is reflected by the vast "black-marketing of stolen crude in Nigeria's oil-rich Delta region, where citizens and ethnic minorities do not feel constrained in tapping resources found on their land, and which by implication belong to them as opposed to the Nigerian state" (Foryoh, 2015), and by inference, they feel belongs to them rather than the Nigerian state (OSAA, 2016).

The characteristics of certain natural resources make them susceptible to hostilities due to easy obtainability by non-state players. This includes easy location and removal, transportation, and fewer technical mechanisms for processing for use. Land is the primary natural resource on the continent with each society and country in Africa conceiving land as a natural resource that must be held in safe-keeping for the coming generations. Natural resources are found on the land and the majority of land conflicts can be connected to the incapacity of African states to develop a land tenure system that is deemed tolerable to the bulk of their populations (Mashau & Raphesu, 2013). The difficulty of harmonizing land tenure system to one that is compatible and for which the majority will have various levels of acknowledgement and respect is still a significant trial for many African countries, South Africa being but one example (OSAA, 2016).

Agricultural resources have become connected to disputes as they have also been used to subsidise civil wars. In the centre of many of the controversies and conflicts in Africa have been solid minerals. Subsequent to solid minerals for Foryoh (2015) is "oil, whose linkage with conflict has generated much interest and attention in Africa primarily because of its high degree of profitability, the environmental consequences of its exploitation, the international nature of its politics and its role in the ethno-political and socioeconomic affairs of the endowed countries" (Alao, 2007). The greed versus grievance concept of

conflict is slanted by an overplaying on the influence of resources on rebel group conduct and inadequate focus is given on how governmental maladministration of resources and income boosts fighting and human rights abuse. To reflect seriousness in reducing conflict-related abuses in resource-rich countries, the international community must demand more transparency in government incomes and expenditures and retributive measures must be enacted against governments that attempt to profit from strife.

However, the proposed method to curb abuses of natural resources in Africa cannot succeed because the First World countries benefit from this conflict. They can benefit by buying natural resources with arms which at times are exchanged at a lower rate determined by First World countries. The conflict benefits the development of the economies in first world countries to the detriment of African countries. All the major companies which process mineral resources can be found in developed countries. The problem is further exacerbated by the reality that when the manufactured goods are brought back to Africa, they come at high cost. These are countries which control markets and dictate terms to African countries on how to run their economies. If the situation were to be turned around it would result in conflict between the developed countries and poorer African countries.

For many years, natural resource exploitation in Africa has been linked with underdevelopment and violence, firstly under colonialism, and lately through the effect of global economic liberation. The previous decade has witnessed the privatization of the global marketplace which has occurred alongside a corresponding and not unconnected privatization of the forces of war. Armed conflicts have become progressively “self-financing, as rebel groups, criminal networks, mercenaries and predatory elites have increasingly relied on natural resource revenues and more accessible global markets to fund their military activities” (Masheu & Raphesu, 2013: 280), despite the fact that “extractive companies, particularly large multi-national enterprises, are key sources of capital and technological investment for African countries”. Though investors favour a constant and foreseeable economic environment, extractive companies go to where financially worthwhile resources can be found. To an increasing extent these natural resources are found in those unstable and war-torn regions of the African continent. It is not a coincidence that many of those countries where there are conflicts are rich in mineral resources. Any analytical analysis of the conflict will reveal that the control of mineral resources is one of the primary causes of the conflict.

Nevertheless, unlike mercenaries and criminal profiteers, the majority of companies, do not purposely seek to profit from violence but “however law abiding they may seem to be, extractive companies often find themselves in situations where local rule of law is weak or absent, host governments’ regulatory institutions broken, and economic activity beyond the reach of current international and trans-national frameworks” (Mashau & Raphesu, 2013: 280; OSAA, 2016). These extractive companies often take advantage of the situation and maximise profit to an extent that it will persuade governments to conclude long term agreements which permit full exploitation of mineral resources by those companies. In the process the local indigenous people are exploited and undermined under the guise of job creation and development of the country. In many instances the local people are not properly consulted and so-called ‘development projects’ are imposed on them. Their function is then to provide cheap labour without questioning the conditions of service.

3.10 Mining and Rural Development

During the 1950s and ‘60s, policy makers in rural development and project design were colonials and the indigenous people were inevitably only “participated as labourers, consumers, and observers of the services provided through the projects” according to Gegeo (1998: 296). Any rural development encouraged was not in acknowledgement of the requirements of the indigenous people, but adjudged to be that which was best according to the ruling expatriate government who applied this under a model used in other countries of the British, French, Portuguese, Belgian empires especially in Africa. The ultimate objective being to colonise and exploit these colonies with any profits exported to the colonial state, which kept political control (Gegeo, 1998). Lacking contribution from the indigenous people, especially villagers, rural development policies and projects were unsurprisingly Anglo-European in perception and philosophy, as was demonstrated by several agricultural developments commenced by Africa’s colonial government. These projects were very similar to those effective farms in New Zealand, Australia and England, both in their structure as well as the variation in choice of animals and crops and were not necessarily pertinent to the necessities of the indigenous peoples. Further, Gegeo (1998: 296), maintains that “the colonial government would suddenly abandon projects that it considered on the verge of failure, often without any explanation, leaving indigenous people to handle any negative environmental consequences.”

From the perspective of development theory, the colonial government's use of the expression "rural development" for its undertakings was a contradiction. Rural development, according to development theory, is a "process of growth, springing from within a rural society that involves a growing individual and collective self-reliance, and focuses not only on material and economic needs, but also on emotional, ethical, and political empowerment" (Gegeo, 1994:12; Nyerere, 1990:10). Bearing in mind top-down or centre-periphery unilinear change, the ventures introduced by the colonial government can be more aptly designated as recolonization more readily than rural development as change had not been directed by any indigenous knowledge and teachings (De Soto, 1989; Gegeo, 1994).

Several authors assert that sustainable development contests the growing incorporation of the world in a capitalist economy controlled by conglomerates who use Brundtland's substantiation for rapid growth to validate the phrase "sustainable growth" (Christe & Warburton, 2001; Hopwood *et al.*, 2005). Rees (1998) indicates that this permits capitalism to continue to promote economic growth as its "morally bankrupt solution" to poverty, using the rationale that if the economy improves, all will benefit ultimately. In the long run "economic growth with an ever increasing use of resources and production of waste is unsustainable" (Hopwood *et al.*, 2005: 7).

3.10.1 Capitalist Mode of Production and Mining

Development in mining is founded on the capitalist mode of production, and it therefore, exacerbates economic and ecological crises, as defined by Lioudakis, (2010). He outlines specific features and accounts for the fact that "the specific character of the society-nature relationship and the capital-nature in particular, largely derives from the particular role of private property on land and natural resources". The inference here is that private property on land cannot guarantee satisfactory environmental care, but rather, frequently causes a misuse and damaging exploitation of natural resources. The competitive character of the capitalist method of producing focuses exchange-value other than any use-value which fulfils human needs. The related growth obsession and the predominant objective of excess extraction and profit accumulation intrinsically leads, not just to an over-abuse of labour and power, but similarly to a swift reduction in natural resources and to global pollution which creates further risk for the ecosystem.

Liodakis (2010: 2608) further points out that the “inherently contradictory character of capital and market competition by undermining community property, common property and collective action, and ignoring social interdependence, implies a self-interested behaviour and an increasing externalization of production costs by private capital”, something further substantiated by Burkett (2006) and Swaney (1990). As a result of this undervaluation of cost, capital over-extends its endeavours by draining resources, contaminating the environment and transferring a large portion of the cost to society. Capitalism is “exclusively based on wage-labour exploitation and largely ignores the contribution of nature, while considering the natural forces utilized as a ‘free gift of nature by capital’” (Liodakis, 2001: 2608 quoting Marx). Under capitalism the measure of ecological destruction is far larger than under former methods of production (Castro, 2004). This can be attributed to the totalizing propensity of the market apparatus, as well as the augmentation of value and inclination for accumulation in the capitalist mode of production itself, which denotes increasing energy, resource throughput and environmental degradation (Liodakis, 2010).

Marx (1973: 83-108) fittingly contended that the direct “end and purpose” of capitalism production is the accrual of surplus value or the source of profit. Liodakis, (2010) maintains that Marx (1973: 83-108) stressed that “... international trade; urbanization and technology have been among the most important factors contributing not only to rising alienation and estrangement of people from nature, but also to an increasing depletion and material scarcity, and a growing metabolic rift”. For other Marxists, the social metabolic order of capitalism is fundamentally anti-ecological as it methodically suppresses nature and its quests of never-ending accretion and production on an ever increasing scale (Clark & York, 2008). Liodakis (2010) further argues that technology, not generally but as advanced and administered under the capitalist condition to serve capitalist gains, has played an important role in ecological degradation and the society–nature metabolic division.

Increasing problems for the exploitation of land, dropping prices, and swelling environmental concerns seem to have played an integral part in “pushing back” mining activities from the industrialized world (Muradian, Martinez-Alier, & Correa, 2003: 2). The disparity in environmental costs in the actions of multinational sequences of production permits multinational corporations to have expanded ability to assign costs onto local communities and to shift environmental problems across space and time (Glover, 1999: Wapner, 1997). In addition, Glover (1999) argues that since the indigenous and disempowered peoples can be so readily compensated in contrast with wealthier and

empowered communities, they seem to shoulder an unreasonable burden of environmental risks at local, national and international levels. Mining activities, as one of the most environment-concentrated sectors, have created environmental problems and disputes globally. Post-materialist theory resumes that underprivileged people are too consumed by the requirements of survival to be concerned environmental interests, which are anyway, seen as an indulgence. According to this point of view, when the basic necessities of food, shelter, and clothes are fulfilled, people then start to be troubled by non-material issues, for example, the environment (Inglehart, 1990).

For many marginal groups such as indigenous peoples, it is argued, that the environment is a question of livelihoods, and is not there for improving the quality of life. Public policy on matters affecting local mining communities tends to depend on the influence of outside expert opinion rather than by those people who are affected by mining activities. According to Garvin (2001) there is a vast “epistemological distance” between the scientists, policy makers, and indigenous people. Professionals are inclined to approach risk in terms of likelihood of the unacceptable event and the qualitative immensity of the outcome, whilst indigenous people are inclined to tackle risk from a more complicated stance, which includes taking into consideration qualitative features, such as the difference between personally chosen and ‘forced’ risks (Kasperson, 1992).

Sethi (2005: 56) in his report to the United Nations stated that it is an “assured fact of life that mining activities leave a large and often irreversible footprint on the environment in ways that are increasingly unacceptable to society in general, and which have impacted communities in particular”...“a condition that has been further aggravated with the increasing demand for minerals and fossil fuels from the growing economies of countries such as China and India.” To a degree, public hostility for the mining industry emanates from a growing cognizance of environmental concerns, for example “global warming, sustainable development and environmental degradation” (Sethi, 2005: 56). The mining industry is considered by countless as too influential economically and it is claimed that it has utilised this authority to gather political sway and to circumnavigate material changes to its *modus operandi*. Other concerns are related in particular to poorer developing countries in remoter regions of the world. Amongst these are claims of “human rights abuse through the utilisation of unrestrained military and police forces” (The Economist, 2002); “harm to local communities and indigenous populations” (The Economist, 2005); “forced labour and involuntary servitude” (Oil and Gas Journal, 2000); “bribery and corruption” (Cockburn, 2003), amongst others.

3.10.2 Environmental Impact of Mining

Mining's environmental impact can be classified in two areas; when the effect is confined to the mine site or if it happens away from the mining enterprise. Environmental effects that are confined to the mine site comprise "those arising from clearing vegetation and habitat modification, modification of soil profiles, changes to topography and slope or subsidence", while those happening some distance from the mine site include "increased noise, dust disposition, and impact on downstream water quality and ecosystems" (Cavanagh *et al.*, 2015: 16).

The environmental impacts of mining are well attested. A proliferation of literature exists detailing these consequences, presented according to Aseseji *et al.* (2014: 479) through "waste management; impact to biodiversity and habitat; deforestation of land with the consequent elimination of the vegetation; pollution in water, air, land and noise pollution". Mining can also lead to heavy metal pollution with elements such as zinc, magnesium, calcium, lead and mercury, entering the food chain and affecting both animal and human health. Many communities complain that medicinal plants and some indigenous fruits and vegetables are no longer obtainable in the mining areas due in part to the mining activities; also a variety of health problems such as malaria, tuberculosis, conjunctivitis and other skin diseases are exacerbated by those activities and their environmental results. Large-scale mining operations continue overall to minimise vegetation for the majority of mining communities to points that are harmful to biological diversity.

In mining communities, the degradation of large tracts of land by large scale-surface mines constitutes a major threat to agriculture and economic survival in communities. Akabzaa (2009) notes this trend and states that mining companies are annexing vast tracts in their operational areas and depriving communities of their main sources of livelihood. At the extreme, mining has been the instigator of several growing conflicts with many communities ousted by mining operations. That there have been growing incidences of dissatisfaction between mining communities and their chiefs on one side, and the mining conglomerates on the other, reflects mounting concerns that the effects the mining sector is having on the indigenous populations. In South Africa, opposition to mining projects and activities have been widespread amongst the local people who have raised queries about the violation of ancestral graves, loss of homes, health and livelihood.

The environmental impact of mining is problematic, Bebbington (2002: 98) warns of the "environmental challenges that mining expansion will bring ... by definition this growth will

take mining into new territories...mineral expansion will continue to drive new forms of social conflict". Current mining is frequently now large scale and open-pit, which involves a central pit involving several terraces from which the ores are removed. Further, mining needs large amounts of water at every point of the process and therefore, these activities can lead to water shortages in typically climatologically dry regions as well as effecting surrounding areas due to the lowering of surface and ground water levels (Farrell *et al.*, 2004). Finally, and almost certainly regarded as the primary environmental complication of mining, is acid mine drainage. Mining uncovers sulphite-containing ores to water and air, forming sulphuric acid. The acid then enters the rivers and causes serious ecological harm to the nearby lands, often for centuries. In rural areas where the population is dependent on subsistence agriculture; continuity of their livelihoods is quickly damaged by this merger of ecological and socio-economic influence.

3.10.3 Social Impact of Mining

Recently, the social impact of mining and its associated projects has been receiving increased attention. Although it has been claimed that mining can be an essential economic catalyst for the majority of countries, specifically the developing ones as it can enable industrialization together with the pledges of wealth and jobs, and conversely, it can be seen as a cause of social unhappiness, civil conflict and other high social costs (Gualnam, 2008). Bebbington (2008) highlights that mining is and has always been, a socially equivocal industry and that people have passionately expressed objections both for and against mining during the past few centuries. Using current South Africa as an example it can be observed that mining, in particular, can prompts protests against the mining companies from those populations in close proximity to the sites and who do not benefit from the industry.

In reality the multinational mining companies are more likely to base their operations in the more remote, rural regions which prompt questions about the interactions between the local communities and potentially global powers. According to Eggert (2001), many of the poorest and worst achieving economies in the world are mineral-dependent nations. Inevitably, where mining permission is granted the population derives their livelihoods from subsistence agriculture. Although mining was declared as sustainable by the World Summit on Sustainable Development, it has been argued by Eggert (2001) that it is not

always conducive to sustainable development due to its non-renewable resources exploitation and its, often irreversible, environment and societal destruction.

3.10.4 Environmental Justice and Human Rights

In recent times, communities affected by mining activities have increased their fight for human rights, self-determination and social and environmental equity to counter human rights violations as well as other social vices resulting from mining activities. Such struggles and opposition to mining projects and activities have also been rife and recorded in Limpopo among the rural people who have raised concerns about the desecration of ancestral graves, in addition to loss of homes, health and livelihood. The balance has shifted, as ideas about 'corporate social responsibility' and 'sustainable development' have emerged and generated considerable interest around the impact of mining activities if sustainable development is to be achieved (Prutina, 2015). At an international level, principal mining companies have now embraced the paradigm of sustainable development, corporate social responsibility and triple bottom line reporting, with these paradigms defining the community obligations of companies quite broadly, stressing the need for mining companies to improve the social, environmental and financial performance of their activities within those indigenous communities in which they operate (Brereton & Forbes, 2004).

Major companies are now making efforts to align their reporting practices to the Global Reporting Initiative (GRI) framework which necessitates that companies supply an account of policies intended to manage impact on communities in those areas that will be affected by their mining operations, in addition to descriptions of the measures to be implemented that will address the sustainability of their operations. It can be argued that such moves are an attempt in futility since the activity is founded on the removal of non-renewable resource materials whose impact exceeds what is normally understood as unsustainable. In South Africa, mining companies are compelled to submit annual reports relating to mining activities as set down in the Broad Based Socio-Economic Empowerment Charter for the South African mining industry.

However, the researcher states that another problem that is happening is that, while the big mining companies are starting to become 'greener', it is now smaller mining companies that are presenting problems. Small operators are obliged to present EMPs, yet it seems

as if the authorities lack the wherewithal to make certain that this is kept to. An example of brewing conflict can be seen between the Seringveld Conservancy, near Cullinan in Northern Gauteng, and the property-owners who are mining sand. The sand deposits in the area are used for building operations in Gauteng. The conservancy maintains that silt from these mines is being swept into the wetlands and waterways, subsequently killing the fish and plants, and effecting and restricting bird life.

South Africa is gifted with vast natural resources, and as a result is inhabited with an abundant proliferation of mining operations. Often the mining rights are held by foreign stakeholders at a small portion of the actual worth of the wealth resource lying underneath the ground and a larger portion of all income is transferred out of the country along with the mined resource. These foreign investors not only exploit the country's natural resources for the benefit of their own countries, but leave behind a legacy of polluted environments which affect mining communities for centuries. While the country's natural resources are potentially a substantial economic advantage for its people, few South Africans have really benefitted from its prospective wealth.

Fonseca (2004: 23) does not doubt that mining appropriates "land belonging the local communities; impacts on health; alters social relationships; destroys the many forms of community subsistence and life; causes social disintegration by radical and abrupt changes in regional cultures; and displaces other present or future local economic activities". Additionally, working conditions in the mines are known to be hazardous and unhealthy. However, it is noted that "...the fruits of such development can seldom be fully harvested without affecting the personal, social and civic lives of many people..." and thus such policy makers would have to make ready for such impact and adjustments arising from their development strategies and policies (Anderson, 1997: 18).

Ever since the United Nation's participation in indigenous peoples' issues, the past few decades have highlighted a desire in several countries to make atonement. Examples can be seen in such countries as Canada where a variety initiatives have been publicly initiated to make apologies for the injustices of the past. *Gathering Strength* is Canada's published plan for indigenous renewal through which the government recognises the "legacy of injustices and officially apologized for the abuse of indigenous children in the residential system" (Ali, 2009: xxi). Currently \$350 million for healing centres has been committed to come to terms with the after effects of this mistreatment. The plan unequivocally reflects a sense of remorse:

"Sadly our history with respect to the treatment of indigenous people is not something in which we can take pride. . . . We must recognise the impact of these actions on the once self-sustaining nations that were disaggregated, disrupted, limited or even destroyed. . . . We must acknowledge that the result of these actions was the erosion of the political, economic and social systems of indigenous people and nations" (Stewart, 1997).

This has also been carried out in New Zealand through a similar mode of an apology and statement of reconciliation. No public apology has yet been issued in the United States or Australia, despite policies proceeded firmly along the course of rectifying the iniquities of the past in Australia, through native title endowment as well in the United States, through financial agreements and autonomous regulations. South Africa's ANC-led government has done nothing yet to compensate the indigenous people for the loss of land and suffering they endured under colonialism and later apartheid.

It can be said that well-handled mineral development can produce a raft of long- and short-term benefits with the most frequently quoted being the injection of employment, economic opportunities and expectations into rural areas bedevilled by poverty and incessant lack of development. However, in South Africa, especially in Limpopo Province, most mining communities do not enjoy benefits from mining development. For them, mining is associated with the degradation of large tracts of land which, in turn, constitutes a major threat to agriculture and their economic survival. Many have lost their agricultural land through expanded mining activities and are now unable to cultivate their farm lands or keep livestock. Since the inception of mining, most communities have been subjected to air pollution, human rights violations and cultural shock. Despite these communities being promised employment and a better life by the mining companies, all evidence points to the contrary. The environmental impact of mining operations may damage local rural assets to a degree that communities are not able to sustain themselves any longer, thus threatening their very survival.

3.11 Conclusion

South Africa has vast wealth in its natural resources which attracts a proliferation of mining investment. Almost inevitably mining rights are held by foreign investors who rarely retain either the mined resource or their profit in South Africa. Despite large capital investment inflow and evidence of substantial profit generation, very little remuneration in any form is

felt by the rural communities within those mining areas. Well-managed mineral development can produce a wide raft of long- and short-term benefits in a country, for many this does not happen. Many of the mining communities in Limpopo, South Africa do not benefit from the mining development in their province, in reality it is the reverse, as they are faced with numerous threats to both their livelihoods and their personal and environmental health. The following chapter deals with laws regulating mining to ensure that the environment and the people are not adversely affected by mining operations.

CHAPTER 4: SOUTH AFRICAN MINING LAWS

4. South African Mining Laws

4.1 Introduction

The chapter deals with mining regulation in South Africa. It shows how the colonial laws influenced mining regulation and land tenure of rural communities. Despite the introduction of new mining laws indigenous rural people still remain vulnerable when mineral is discovered in their land. The customary legal nature and the tenure in which indigenous people hold land under the auspices of tribal and chieftainship are among the vulnerability concerns that arise when mining takes place on their communal land. The MPDRA is discussed and analysed to demonstrate the weaknesses in the legislation and how it impacts on indigenous rural communities. The analysis of mining regulation and land tenure will help to put research findings later into perspective.

As one of the original industries in the world, mining's history has evolved alongside that of humankind. Boon and Ababio (2009) describe it as an economic activity that is comprised of the removal of plausibly usable and non-renewable mineral resources, exclusive of petroleum, natural gas and water, from the land or sea excluding the involvement of agriculture, forestry or fisheries. This exploitation has gained momentum through the locating of new ore deposits and the growth of new mining and metallurgical techniques. Modern mining processes differ from those of the past in that they involve searching for ore deposits; analysis of the profit capacity of a potential mine; removal of the desirable materials; and eventually rehabilitation of the land for other usages once the mining is finished. The mining industry is often viewed as a principal contributor to the growth of local and foreign economies in that it adds to the "Government's Gross Domestic Product (GDP), growth, job creation, revenues and the up-skilling of personnel" (Mathabatha, 2011: 7). A report published by a collection of NGOs including EARTHWORKS and Oxfam International in 2006, however indicates that "Mining does not have a good record of contributing to sustainable development or poverty reduction" (Sarin, Reisch, Kalafut, & Slack 2006: 1).

Widespread mining in South Africa first commenced at the end of the 1st and the beginning of the 2nd Millennium CE with an early agricultural, herding, mining and trading culture in Southern Africa first occurring at Mapungubwe (Hall, 2014). The latter half of the 19th

Century saw the beginnings of South Africa's transformation from what had essentially been an agricultural economy to a modern industrial one. South Africa's exceptional geological endowment means that mining embraces a wide variety of minerals which has remained the centre of the economy throughout the 20th and 21st centuries (Malherbe, 2000).

4.2 The Influence of Roman-Dutch Law in Southern Africa

Political conquest of the country brought with it jurisdiction over possession and management of Africa's resources, predominantly concerned with land and minerals. An extraction-oriented extractive sector regulator trajectory came into being and regulatory frameworks that were first finalised under the colonial era were aligned towards advancing the optimum removal of resources (Murombo, 2013). This was the beginning of South Africa's history of dispossession, marginalization and deprivation under colonialism and subsequent apartheid. Many of the colonial mining laws still remain in place and it is only recently that a mining code which aims to integrate sustainability has been introduced. Local agents and elites replaced the former colonial powers and global companies in exploiting mineral resources for self-enrichment.

Roman-Dutch law, despite nominal statutory changes, continues to regulate land ownership and transfer. Murombo (2013: 40) indicates that "under Roman-Dutch law a landowner owned the mineral resources beneath the land ... yet ... under most African customary legal systems, communities often do not even 'own' the land but only have rights to use the land" ... also that ... "customary rights are often group rights grounded in common property rights and communal use regimes". This notion of communistic or communal title is deceptive and partially shows the problems undergone by foreigners in comprehending or specifying African systems, all of which has created the usage of ill-suited comparisons and terminologies often sourced from European rather than from African history (Delius, 2008). The combining of legal systems witnessed a disconnection of the local indigenous communities' claim to land and mineral rights, something never completely settled in the Land Restitution process of South Africa.

4.3 Governance and New Regulation Globally

Even-Zohar (2002) when discussing mining governance indicates that new directives and processing of legal changes intend to enrich the harmonization and strength of the mining division in those mineral-rich countries. The new regulations in African countries for the mining industry are still a developing issue, although one that has the possibility to be resolved, when an agreement can be reached on the best way. The 20th Century saw the flourishing mining areas in mineral-rich countries delivering scanty benefits to local communities with respect to sustainability. Growing discussions and influence by NGOs and communities have begged for alternate programs which would incorporate those disadvantaged communities, and would aim to achieve sustainable development following mine closure (that would include transparency and income management). In the early 2000s, community development matters and relocations became prioritised in black mining developments. Mining industry growth after the 2003 mineral price increase and also possible fiscal incomes in those countries produced a dereliction in other economic areas in relation to finance and development. Moreover, it drew attention to both local and regional requirements for mining income and a lack of aptitude of sub-national governments to proficiently utilise the proceeds.

The Extractive Industries Transparency Initiative (EITI) was prioritised in 2007 in conjunction with the World Bank's mining industry amelioration in all countries. The EITI functions and is executed through funding from the Multi-Donor Trust Fund, overseen by the World Bank. The EITI attempts to expand openness in dealings between governments and extractive companies by tracking the revenues and benefits passing between them (World Bank, 2008). Admission is optional for any country and is under the aegis of numerous participants which include government, private companies and civil society officials, who are answerable for disclosure and distribution of the reconciliation report. The competitive shortcoming of company by company open reporting is for some the main drawback, as for example in Ghana. Consequently, the final assessment in terms of success or failure of the new EITI regulation lies not just on the government's shoulders but with civil society and individual companies (Hughes, 2008).

Criticism of the EITI is highlighted by Jogi (2016) as being "two main execution problems - inclusion or exclusion of artisanal and small-scale mining (ASM) from the EITI and how to deal with 'non-cash' payments made by companies to sub-national governments". Moreover, "the disproportion of the revenues the mining industry gains in relation to the comparatively small number of people that it employs causes another controversy".

Artisanal mining is obviously a problem in such EITI Countries as “Guinea, the Central African Republic, D.R. Congo, Liberia and Sierra Leone”, which accounts for almost 50% of the mining countries applying the Initiative. Within this and other issues, the restricted range of the EITI concerning inequality in relation to “knowledge of the industry and negotiation skills” ... and by extension ... the “flexibility of the policy”, and for example, the freedom of countries to increase it further than its base essentials and modify it to their requirements, generates additional danger of unsuccessful implementation. An increase in public awareness of government acting as a link between the public and the EITI for a positive result of the policy is an essential component that should be contemplated (Saskiya, 2004).

Steyn (2016) in her article for the Mail & Guardian declares that “Glencore, once criticized as being one of the world’s most secretive companies, is the latest of the major global mining houses to report its payments to governments in every country in which it operates”. Glencore’s “Payment to Governments Report”, 2015, delivered on 29 June 2016, reflects that it “paid \$5 billion to differing governments, of which \$2.86 billion was paid in taxes and royalties in relation to its extractive operations, the largest sum of \$867 million was paid to the Australian government” (Steyn, 2016). The South African government being eighth according to the Glencore report itself, received \$83.5-million, a sum that is equal to 0,6% of the entire collected corporate income tax for the 2014/15 tax year (Kalmin, 2016). In 2016 it was reported that Glencore paid South Africa \$862million with Rio Tinto also paying \$93 million (Steyn, 2016). This admission was made as directed by the European Union Transparency instruction which necessitates all large EU-related companies to divulge various “payments to governments, country by country and project by project” (Steyn, 2016).

Whilst the latest developments regarding tax disclosure are encouraging, governments are still very secretive on how those taxes are used and distributed, especially to the communities influenced by extractive operations. It is imperative for affected communities to know how this money contributes to the growth of society and their country’s economic standing. The acknowledgement of payments by mining companies to governments would contribute to the reduction of corruption. It is also vital for governments to use part of that income to budget for mine closures and rehabilitation, something which is often ignored and which exposes mining communities to various health risks associated with mining. Government should be encouraged to ring-fence money for the purpose of mine closures and subsequent rehabilitation.

4.4 Legal Regulation of Mining in South Africa

South Africa's constitution is respected as the highest law of the country. Law or behaviour that is incompatible with the constitution is unacceptable and the duty levied by it must be carried out (The Constitution of Republic of South Africa, 1996). Chapter 2 of the Constitution (Sections 7-39), *The Bill of Rights*, gives everyone, including indigenous peoples, with both substantive and procedural rights. This section "provides the right to an environment that is not harmful to health or well-being; and imposes a duty on the state to protect the environment for the benefit of present and future generations". Environmental mining impact in South Africa is currently primarily regulated by three legislative articles, namely, the National Water Act, No. 36 of 1998 (NWA), Natural Environmental Management Act, No. 107 of 1998 (NEMA) and Minerals and Petroleum Resources Act, No. 28 of 2002 (MPRDA). Governments and mining companies have made an effort to control mining operations with the aim of rectifying a portion of the impact of mining minerals ever since their detection.

Historically, according to Marais (2010: 65) "neither the profits nor the costs of the production of the minerals of the region have been distributed equitably among the people involved in or affected by their production" ... with ... "the mining and minerals sector closely linked with a long history of instability and conflict that characterizes class and race relations in South Africa". Black South Africans, the greater part of the population were methodically repressed by white South Africans in a variety of ways. Additionally, the obvious problems connected with extreme poverty, hunger and lack of housing, as well as those less apparent problems continue to prejudice the prospects of black South Africans (Friedman, 1992). Apartheid under the South African government deprived its black people of the possibilities of entrepreneurship, self-employment, and skills growth. It restricted black people to homeland areas that were exceedingly destitute and was without appropriate business infrastructure. These unfavourable circumstances severely inhibited the capacity of black South Africans to contest in the new vibrant business environment that arose after the demise of the apartheid system. Twenty-four years after the new democratic dispensation, the majority of the population is still held back by these disadvantages and are not able to become self-reliant and participate fully in the country's economy.

As the greater percentage of the South African population is black, inevitably unskilled workers employed by the mines were in the majority, also black. Industrial-scale mining required mining companies to contract in "skilled white labour to operate and maintain

machinery used at the mines” (Marais, 2010: 67). These skilled white-workers were “paid higher wages and saw the black workers as a threat to their relatively high wages” (Rosenfield, 2012). In order to safeguard their higher salaries, the white unions compelled business and government to apply the ‘colour bar’, prohibiting blacks from skilled employment and keeping black families from permanently settling in mining towns. This expanding need for a permanent labour force in the second half of the 20th century occasioned the mining corporations to introduce various schemes aimed at keeping workers on site for longer periods (Marais, 2010).

As still one of South Africa’s largest industry sectors, mining is globally recognised because of the variety of mineral products that are exported internationally. Furthermore, although South Africa is classified first on the top countries list by mineral reserves, paradoxically, no local mining company is listed amongst the top ten mining companies globally. However, the country still maintains characteristics of underdevelopment through which the majority of its citizens exist on the perimeter with poor access to fundamental necessities and with some of the services that are supplied of dubious calibre and quality (Babarinde, 2009).

The introduction of a new South African mining regulatory framework marked a turning point in the country’s minerals policy as it represented the foundation for introducing new State intervention in the country’s minerals economy to tackle the heritage of racially discriminatory policies, as discussed above, which had omitted the greater portion of the country’s population from full involvement in the mining industry. Previous to this, the only regulatory measure of significance was the Mine Health and Safety Act 1996 (Act 29 of 1996) which “provided for the protection of the health and safety of employees and other persons at the mines” (Rogerson, 2011: 13374). The MPRDA was ratified by South African Parliament on October 2002 and circulated on 01 May 2004. Further modifications have since been inserted into the Act (Republic of South Africa 2007, 2009). The Act’s acknowledgment of State guardianship of natural resources was of special significance, as it enabled South Africa to bring its regulatory domain in conformation with the majority of other mineral producing countries. The objective of this MPRDA was to ensure that the mining industry successfully benefited its people; that industrial growth and sustainable development should succeed through mineral beneficiation; and that the minerals mined should be amalgamated into the remainder of the economy through further processing before they are exported.

The MPRDA (2002: 2) is “to make provision for equitable access to and sustainable development of the nation’s mineral and petroleum resources; and to provide for matters connected therewith” and the preamble continues “with:

- RECOGNISING that minerals and petroleum are non-renewable natural resources;
- ACKNOWLEDGING that South Africa's mineral and petroleum resources belong to the nation and that the State is the custodian thereof;
- AFFIRMING the State's obligation to protect the environment for the benefit of present and future generations, to ensure ecologically sustainable development of mineral and petroleum resources and to promote economic and social development;
- RECOGNISING the need to promote local and rural development and the social upliftment of communities affected by mining;
- REAFFIRMING the State's commitment to reform to bring about equitable access to South Africa's mineral and petroleum resources;
- BEING COMMITTED to eradicating all forms of discriminatory practices in the mineral and petroleum industries;
- CONSIDERING the State's obligation under the Constitution to take legislative and other measures to redress the results of past racial discrimination;
- REAFFIRMING the State's commitment to guaranteeing security of tenure in respect of prospecting and mining operations; and
- EMPHASISING the need to create an internationally competitive and efficient administrative and regulatory regime”,

Through the MPRDA (2002: 10), the Minister may:

“Grant, issue, refuse, control, administer and manage any reconnaissance permission, prospecting right, permission to remove, mining right, mining permit, retention permit, technical co-operation permit, reconnaissance permit, exploration right and production right”

MPRDA promotes the incorporation of traditional communities in South Africa's mining industry. By means of this legislation, the state has encouraged an array of measures, which include "black economic empowerment (BEE) mine-community partnerships, continued royalty payments and social labour plans as requirements for mining companies" (Mnwana, 2015: 502). Before 1994, growth in the mining and minerals sector in the present era was not of benefit to all. South Africa's minerals economy advanced basically devoid of unnecessary state involvement with the consequence that market forces predominantly dominated the shape of its progress (DME, 2008). A noteworthy policy move is that South Africa's national government has emulated other countries, such as Australia and Botswana, in recommending a larger and more active participation in the expansion of the state in mineral rights.

4.5 Profile of South Africa's Mining Industry

South Africa is one of the world's, and certainly Africa's, most prime mining countries in relation to the diversity and capacity of minerals produced, the country contains the world's largest deposits of chrome, gold, vanadium, manganese and Platinum Group Metals (PGMs). The six platinum-group metals are ruthenium, rhodium, palladium, osmium, iridium, and platinum. They have similar physical and chemical properties, and tend to occur together in the same mineral deposits. South Africa can claim to be the leading producer of nearly all of Africa's metals and minerals other than diamonds, where Botswana and the DRC lead the field, also uranium which is mined in Niger, copper and cobalt from Zambia and the DRC and phosphates for which Morocco leads the field. According to the South African Metals and Mining Industry, 2017 (Research and Markets, 2018) it is "estimated that South Africa holds 80% of the world's known manganese reserves as well as 72% of the world's known chromite ore reserves". In 2005 it was established that South Africa was the ninth largest producer of aluminium and the largest producer of alumina-silicates, chrome ore and ferro-chromium (Choshi, 2006). Further, South Africa was also "found to be the second largest producer of manganese ore and the ninth largest producer of nickel in the same year" (Research and Markets, 2018). Migrant labour remains an important position within the South African mining industry with workers now being drawn from Lesotho, Mozambique, Botswana and Zimbabwe. Nevertheless, because of the dropping gold prices and the marginal character of several of South Africa's gold mines, subsequent restructuring and cost saving measures have caused thousands of workers to lose their jobs. Variations in the local currency versus the US

dollar have cushioned these outcomes to a certain degree and the gold industry is still the largest employer, accountable for more than 50% of overall employment.

4.6 Structure of the Mining Industry in South Africa

South Africa's mining industry has been party to considerable restructuring and amendments since the early 90s with the established "big six" mining houses, Anglo American/De Beers, AngloVaal, Glencor/Billiton, Goldfields, Johannesburg Consolidate Investment, and Rand Mines, restructuring and extending their international footprint. Traditionally the 'big six' oversaw chrome, coal, gold, platinum, and base metal production in South Africa. The dawn of the new democratic constitution and increasing expenses from gold mining enterprises induced a variety of re-organisations in the industry (Campbell, 2008). The falling away of the label of "mining houses" has allowed the entry of consulting engineers who serve the mining industry to participate in projects that formerly were the exclusive preserve of the mine owners. The emerging trend is now to outsource many of the engineering roles, meaning that mining houses no longer have to shoulder the financial burden of permanent engineering staff when they are not busy with mining projects. Government is also moving towards assisting small mining companies, and producing openings for junior operations to start up.

Predominantly the South African mining industry remains white controlled, but weight is being placed on motivating black empowerment in the business. Consequently, some black or union-owned firms are now starting to play an important role in the industry (Hannesson, 2004). IBP (2008, 119) explains that this is "particularly the case following the impending legislation of the Minerals Bill that favours involvement of previously disadvantaged communities in South Africa's mineral resources. Not all have been successful so far". Further, "Anglo American's unbundling of Johannesburg Consolidated Investment (JCI) was seen as the first step in black empowerment in the South African mining industry" (IBP, 2008: 119). This however was not successful and JCI is resultantly now comprised only of a few gold property holdings and investments. IBP (2008:120) highlights the success of several individuals:

"Mvelaphanda, led by Tokyo Sexwale, a prominent black businessman at the helm, has become one of South Africa's most successful empowerment resource companies. To date it has acquired interests in developing platinum, energy and diamond resources in

South Africa. African Rainbow Minerals (ARM), a company formed in 1997 by Patrice Motsepe, acquired several shafts from AngloGold's Vaal Reefs. ARM are also jointly developing a platinum mine with Anglo Platinum as well as entering a joint venture with Harmony Gold to exploit several Free State assets acquired from AngloGold". This in combination with the expected modifications in mineral rights' legislation in the country, should enable South Africa to develop mineral resources for the advantage of all South Africans; currently this does not appear to be the case as benefits are being accrued by only the few connected individuals. Black economic empowerment has not as yet led toward broad based benefit sharing that includes local communities.

Despite the advent of democratic elections in 1994 entry of foreign investment into South Africa has been slow and this attributed to a variety of reasons which include, amongst others, the minerals legislation, and doubt over the economic circumstances and the soaring crime rate (Heathcote, 2007). Very slowly the situation is shifting and several minor exploration companies are now becoming enterprising in the development of a number of small to medium scale operations, mostly in connection with diamonds, gold and platinum. Globally, there are some success stories, such as the Klipspringer Diamond Mine in Canada and Australian Aquarius Platinum amongst others. The fourth largest foreign investment for South Africa's came from Placer Dome, a global gold mining company, which acquired 50% (worth \$235 million) of the Western Areas Gold Mine, including the South Deep Project, predicted to be one of the world's largest identified minable gold ore expanses (Gavin, 2004).

4.7 Land Tenure in South Africa After 1994

The 1913 Land Act fashioned a system of land tenure that had a profound effect on the African population as it removed the right to own land from the majority of South Africans. This was followed by serious socio-economic repercussions as it was designed to extend land dispossession of indigenous people (Mahlangeni, 2013). Only land in the rural areas could be legally owned by indigenous people and this was applied under a ruling which obliged them to formally request permission to live on that land. This prevented them from having the right to use it as collateral for loans that might be required for further development (Fourie, 2000).

In many ways indigenous people in South Africa still live in accordance with customary law and practices. Land settled on by indigenous people is owned by a tribe or by small social units as a whole, while individual community members primarily obtain protected rights of occupancy and use of such land for residential and subsistence farming. Indigenous people use their communal land to explore and they use its natural resources, such as water and clay, to sustain themselves and their families. Communal land therefore differs from land owned by an individual where an individual can decide to dispose of the land unilaterally by virtue of the ownership title that the person holds over the land and without consultation with third parties who have no rights to the land (Pienaar, 2010).

The customary legal nature and the tenure in which indigenous people hold land under the auspices of tribal and chieftainship authority are among the vulnerability concerns that arise when mining takes place on their communal land. This is because the communal ownership title under which indigenous people hold land seems to conflict with the land use and ownership legal system which currently prevails and informs mining legislation, such as the MPRDA, the Mining Title Registration Act 16 of 1965, the National Water Act 36 of 1998 and other legislation applicable to mining in South Africa.

Twenty-four years after democratic dispensation, there is still no wide-ranging regulations to protect the tenure rights of those who suffered under the Land Acts and the forced removals, specifically the peoples who were settled in the former Bantustans. The government has advanced a structure of communal tenure in these areas with the *magoshi* (chiefs) retaining the land titles and the residents assured only user rights. The apartheid government trapped millions of people in poverty without the freedom to escape the misery brought about by it; these people are now being restrained in segregated judicial and legislative systems within the old territories (Claassens & Boyle, 2015). Some of these areas such as Limpopo Province are completely impoverished due to underdevelopment, in spite the existence of the rich minerals deposits.

Several pieces of legislation, according to Mnwana (2015) have been promulgated over the past decade that has considerably increased the authority of traditional leaders and chiefs. These include the Traditional Leadership and Governance Framework Act of 2003; the Communal Land Rights Act of 2004 and the Traditional Courts Bill, B15-2008. Studies by such as Mnwana (2015: 15) indicate that “these laws and bills on traditional leadership tend to impose colonial ethnic identities on rural residents by establishing the current traditional authorities in exactly the same boundaries as the apartheid ‘tribal’ (Bantu)

authorities” (Claassens & Matlala, 2014). Many of these laws have been censured for strengthening the control of local chiefs and tribal councils for communal property to the detriment of the indigenous people who occupy that land (Claassens, 2014).

Indigenous communities are ruled through customary laws enforced by traditional leaders and through customary systems are allotted cultivating and grazing land. Ownership of “most rural land is registered in the name of Minister of Land Affairs in trust, for the benefit and use of the communities occupying it” ... “some farms are registered in the name of traditional authorities for the benefit of the villages under such authority” (Pila, 2011: 9). The legislation grants the Minister the exclusive right to transact with the land as they wish, including the granting of mineral rights. The MPRDA revoked all preceding mineral laws to contain previously disadvantaged persons’ sharing in the central business of mining. Because of the rural communities’ distinctive absence of land ownership, they are not explicitly safeguarded by the Act. They are still at risk when minerals are discovered on their land. The Act does not give them a firm footing with which to negotiate with the well-resourced mining companies on an equal power base. The result is that the poor rural communities are often pressured into signing exploitative agreements with mining companies.

The past two decades have seen legal and policy processes move towards providing traditional authorities with greater powers, which are frequently in disagreement with constitutional provisions (Hall, 2014). The Traditional Leadership Framework Governance Act 41, 2003 “recognised traditional leaders and provided for the establishment of traditional councils made up of these state-appointed leaders, together with a minority number of elected members” (Hall, 2014: 10). The Communal Act 11 of 2004 planned “to transfer ownership of land in the communal areas to ‘traditional communities’ to be administered by these chief-dominated councils” (Hall, 2014: 10). This development can be seen as reinforcing the legacy of colonialism and apartheid.

4.8 Consultation with Rural Communities

The MPRDA legislates that mining companies participate in public discussion with respect to exploitation, human rights, mineral rights and environmental impact. However, mining laws refutes the objectives of these procedures. Mining companies are required according to several laws, policies and official guidelines, to advise host communities about

proposals for prospecting and mining, however if they hold a license to prospect or to mine, they are permitted access to the land in question as illustrated below.

- “Subject to this Act [MPRDA], any holder of a prospecting right, a mining right, exploration right or production right may (a) enter the land to which such right relates together with his or her employees...and may bring onto that land any plant, machinery or equipment...which may be required for the purposes of prospecting, mining, exploration or production...” (MPRDA s 5(3));
- “No person may...commence with any work incidental thereto on any area without... notifying and consulting with the landowner or lawful occupier of the land in question” (MPRDA s 5(4)).

The *Centre for Law and Society* (CLS, 2015: 3) report notes that “MPRDA’s official guideline for consultation with communities and interested and affected parties requires a consultation report, but it does not allow for a host community to say No”, and that

- “Consultation means a two-way communication process between the applicant and the community or interested and affected party whereby the former is seeking, listening to and considering the latter’s response...”

“The purpose of consultation with the landowner, affected parties and communities is to provide them with the necessary information about the proposed prospecting or mining project so that they can make informed decisions, and to see whether some accommodation with them is possible insofar as the interference with their rights to the affected properties is concerned. Consultation under the Act’s provisions requires engaging in good faith to attempt to reach such accommodation.” (CLS, 2015: 3).

4.9 Environmental Impact Assessment (EIA)

According to MPRDA and NEMA regulations mining permit applicants must also analyse the Environmental Impact Assessment (EIA) findings to enable design of an Environmental Management Plan (EMP) and programme that will be used as a guideline for the protection of the environment (in future and/or at present) by the permit holder and to ensure that the environment and the existing biodiversity of the local community are not detrimentally affected by the proposed mining operations. With these provisions in mind it appears as if the consultation process with interested and affected parties and local

communities to prepare EMP, EIA and other environmental management programmes, as described above, is a legislative pre-condition for a mining permit to be granted. It also appears as if consultation processes and preparation of environmental documents - in terms of the MPRDA and NEMA requirements - are the mechanisms which should enable, or ought to force, applicants for mining permits to meet and to meaningfully consult with affected communities, in order to jointly identify positive and negative impact of the proposed mining.

There are also various other pieces of environmental sectoral-specific legislation relating to water, air quality and dust, biodiversity, heritage sites, protected areas, and land use available to guide the exchange of information between the state, interested and concerned parties, and applicants for a mining permit; discussion with interested and affected parties; environmental regulation; and compliance in the mines (NEMA: Air Quality Act 39 of 2004). It also appears as if the rights of interested and affected parties and communities to have access to information and to engage in a fair and reasonable consultation process, where each party has an opportunity to respond and to make informed decisions (procedural fairness), are compromised by the almost secretive approach of government authorities and mining companies when the State ultimately decides on the allocation of mining rights (Mitchell, 2012).

The power relations are always tipped on the side of the mining companies as opposed to the rural communities. Consultation with rural communities is treated as a mere formality. In addition, companies are not obliged to connect at first hand with these rural communities before “turning communal grazing and ploughing fields into massive open pits and multiple shafts” (Mnwana, 2015: 502). In some cases, local chiefs have become the presumed curators of communal resources; and have made themselves the intermediaries of mineral-led development and mining transactions. A major imbalance in information resources, wealth and power that sustain such arrangements exists. In the majority of instances communities are intimidated by the appearance of proficiency put forward by the mining companies in such consultative engagements. Such consultative engagements work in favour of mining companies if rural communities are illiterate and have no backing of government or any NGO propagating the rights of vulnerable communities. Mining companies inevitably confer with communities in a manner that is favourable to the mining companies and to the detriment of the rural communities.

Generally mining company official management for dealing with community objections provide the community with little recourse often other than public protest (Kemp & Bond, 2009). They argue that this emanates from dissatisfaction at the lack of recognition and management response to the grievances brought up by the community. This is compounded by the mining companies not addressing the community's grievances as part one of the central concerns of sustainable development and corporate social responsibility. Community leaders appear to be manipulated by mining company representatives with gifts and 'donations' when the utilization of communal land for mining purposes is proposed to the tribal leadership. Tribal authorities and community members appear to be lacking in-depth knowledge, financial resources and including knowledge of the laws and regulations to challenge and question environmental and mining impact (positive or negative) anticipated as a result of mining operations and any mitigating measures that the mining company submits to the community in the form of an 'EIA', 'EMP' and similar environmental instruments.

An analysis of the legitimate regulation of South African mining indicates that the emphasis of laws and policies was and remains to enable extraction with minimal concern towards the effect of mining on the environment. Self-regulation and corporate social responsibility mediations by mining corporations in the most show that these were directed at enabling mining rather than being benevolent community development deeds (Murombo, 2013). These initiatives have, sometimes, "represented welcome developmental contributions; but they have little impact on the root causes of social problems affecting the mine community" (Mathabatha, 2011: 9). According to the Bench Marks Foundation (2008) overall the community perceive the mine's developmental initiatives as purely decorative and artificial. The Mining Charter Impact Assessment, according to Thobatsi (2014: 5, 29), shows that "63% of mining companies consulted with communities when drafting their SLPs while 49% participated in formulation of IDPs ... while 37% showed proof of expenditure in accordance with approved SLPs".

4.10 Broad Based Socio-Economic Empowerment (BEE)

The Broad-Based Economic Empowerment (BEE) is a general policy document that was drafted by the Department of Trade and Industry to tackle the economic handicaps of black people created by the apartheid regime. BEE was created as an empowerment

statute. The Mining Charter strives to achieve “the following six objectives (Department of Mineral Resources, 2010):

- Promote equitable access to the nation's mineral resources to all the people of South Africa.
- Substantially and meaningfully expand opportunities for historically disadvantaged South Africans (HDSAs), including women, to enter the mining and minerals industry and to benefit from the exploitation of the nation's mineral resources.
- Utilize the existing skills base for the empowerment HDSAs.
- Expand the skills base of HDSAs in order to serve the community.
- Promote employment, and advance the social and economic welfare of mining communities and the major spending areas.
- Promote beneficiation of South Africa's mineral commodities”

The objective of the Charter was to enable sustainable transformation and growth of the mining industry, with a focus on a goal of “26% black ownership of the country's mining assets by 2014” (Moraka & Jansen van Rensburg, 2015: 671). One of the main developments for 2010 in mining law in South Africa was the revision of the BEE Charter for the South African Mining and Minerals Industry. The start of the new Charter came following an evaluation of the previous Charter had revealed that specific targets had not been met. According to the Department of Minerals and Energy (DME) assessment of 2009, “white men and women continue to dominate top management and technical positions in South Africa's mining industry, earning considerably more than their black counterparts regardless of skill and experience” (Rosenberg, 2015: 22). They go on to indicate that “the racial ownership pattern of the country's mining assets has remained largely unchanged, with only 8,9% black ownership attained by 2009 against the target of 15%” (Rosenberg, 2015: 22). The revised Mining Charter aimed to amend this, giving prominence to the need for 26% of South Africa's mining assets being required to be BEE compliant by 2014. Additionally, it made preparations for the total abolition of the mine hostels by 2014, and initiated a maintainable component, posited on the cognizance that the social license to operate encompassed the environment, health and safety conduct. Sadly, BEE targets are still not being realized.

The premise was to attempt to bring in as many HDSAs into the mainstream business, but what has happened is that a few people have become rich overnight while 95% of HDSAs are not receiving any benefit (EM & J, 2011). The examination shows poor response from the mining industry at macro and collective levels to handle post-colonial and -apartheid legacies in the first five years of the Mining Charter (2004–2009). In spite of participating in the inception of this charter, the proof rather implies that industry's level of acquiescence is still disgracefully small and inauspicious. There are also indications that the majority of mining companies welcome the requirements of the Mining Charter for expediency and agreement and rather than because of requirements. Conversely, the State, "through DMR, seems to be on the back foot due to a lack of an enabling environment to enforce compliance" (Diale, 2014: 24). Consequences for non-compliance do not make mining companies comply with the Act. Therefore, it is necessary for the State to make a more determined effort to put enforcement mechanisms in place and that the penalties are made more serious. Lack of proper liability by corporations has a pejorative result on society. Subsequently, the idea of 'corporate social responsibility' (CSR) is taking a progressively stronger place in Southern African companies' policies, especially for the mining industry (Meeran, 2003; Hamann, 2004).

Significant legislation developments with regard to society's well-being, specifically in the work-place, have been presented since 1994 in of South Africa; nevertheless, the execution and observance of these measures is still challenging (Cronje, Reyneke & van Wyk, 2013). There have been several high-profile, expensive share transfers instigated under the auspices of BEE. A worry held by a diversity of sources is that the gains of BEE appear to be appreciated by a small elite cluster of recipients that are becoming very wealthy without additional benefits being appreciated by the bulk of previously dispossessed black people, which has resulted in growing inequality between black people. It has been relatively simple for mining companies to comply with the Charter by empowering the few, such as the politically connected. Paradoxically, this has led to current demands from the National Union of Metal workers and the Economic Freedom Fighters (a political party in South Africa) to nationalize assets of the wealthy black South Africans based on the fact that democracy was never intended to enable connected politicians to become the exploiters. This view is supported by Moeletsi Mbeki (2009: 61) in his book *Architects of Poverty* in which he describes South African BEE policy as responsible for creating a "small class of unproductive, but wealthy, black crony capitalists

made up of African National Congress (ANC) politicians, some retired and others not, who have become strong allies of the economic oligarchy”.

4.11 Mining Royalties

The primary objective of the Royalty Act is to accumulate mining revenue from those South African mines that have been granted mining rights in terms of the MPRDA. The intention is to “compensate the State for its custodianship of South Africa’s non-renewable mineral resources when these are exploited by mining companies for their own benefit” (Cawood, 2011: 443). The dominant aspects of the Act are that one of two formulae are applied to assess the payment rate and the choice of formulae needs a valuation on refinement; and third, both formulae are due based on gross sales. The royalty payment is one revenue stream for the Government which is then subsumed into a larger reserve used for sustaining the country. The “size of the royalty income in relation to other government funds is directly related to factors such as mineral abundance, size of the industry, prices for mineral products and relative ease and cost of doing business in the country” (Cawood, 2011: 444)

Throughout the Southern African Development Community (SADC) mining activities have had impact for decades on the health and safety of mining communities. In spite of mining’s economic contribution to the surrounding communities, considerable social and environmental harm is connected with the industry. In this respect, mining companies have donated towards enhanced social development by offering jobs, paying taxes and netting foreign exchange but conversely, they are associated with “intrusion in sovereign affairs, deepening wealth disparity, poor labour conditions, corruption, transfer pricing, pollution incidents, health and safety failings, as well as disrespect of human rights” (Cronje *et al.*, 2013: 1).

4.12 Social and Labour Plans (SLP)

An important regulatory requirement of the MPRDA is the submission of a SLP. This describes how the mining company should contribute in the development of the community in which it operates. This development includes spheres such as education, labour, housing, purchasing and infrastructure. Implementation of such a plan is then monitored by Government. Any mining right holder is required to present an annual report on its

conformity with the SLP to the pertinent Regional Manager of the DME or nominated agency. This is carried out in addition to the taxes and royalties that the mining companies are obligated to pay as part of their mining rights.

Further, a set of guidelines are produced by the DME to guide preparation of the SLP. The “objectives of the plans are threefold, namely:

- i. To promote employment and advance the social and economic welfare of all South Africans;
- ii. To contribute towards transformation of the country’s mining industry;
- iii. To ensure that holders of mining or production rights contribute both to the socio-economic development of areas in which they operate and critically also to the areas from which the majority of the workforce is sourced“(DME, 2008c)

One of the shortcomings of the SLP is that these plans are not made known, even after DME approval. The confidentiality surrounding these plans has caused substantial unease and controversy (Rogerson, 2011). The secrecy around the SLP makes it problematic, if not near impossible, to accurately assess their implementation. There is no clear provision in binding legislation or regulations that requires any community participation in the SLP. The guidelines state that communities must be consulted in the design of the SLP; nothing specifically stated with respect to the role of communities for the rest of the plan’s life cycle. The legislative framework does not make it compulsory for firms to provide both the SLP documents and summary of their contents for communities.

4.13 Corporate Social Responsibility (CSR)

Development initiatives in South Africa’s mining industry, have until recently, been voluntary. To get the better of this, the idea of CSR has become identified with social development. Similar to sustainable development, this concept is also disputed and fundamentally complicated and obtuse (Marais, 2010). The European Union defines CSR as “an essential concept whereby companies decide voluntary to contribute to a better society and cleaner environment” (Harmann & Kapelus, 2004: 85). Through the classical Anglo inception of a mining company did not principally occur for “the public interest intent of building hospitals, roads, public libraries and schools for people who were not shareholders” (Murombo, 2013: 36). The issue is that theory and practice are not always

compatible. The Bench Marks Foundation (2008) notes that mining companies have included their intent in their company policies but application of these are not policed.

To deal with the optional nature of CSR and to guarantee that mining companies are answerable, the South African Government has established regulatory policies in the shape of the South African Mining Charter (2002) and the Mineral and Petroleum Development Act (MPRDA). These policies necessitate that mining companies' reach 40% historically disadvantaged South African involvement in management and 10% female involvement in mining inside five years. The Community Regulation 46 (c) iii portion of the Act specifically requires "mines to support infrastructure and poverty eradication in line with the integrated development plans (IDPs) of the area in which the mine operates and of major labour-sending areas" (Mathabatha, 2011: 10). The advancement of community potential is a critical constituent of creating a supportable community and, thus, the Government necessitates that each mine formulates inclusive IDPs for those communities where mining takes place in addition to their major sending areas. These regulations are now prerequisites for mining license renewal (Mining Charter, 2002; MPRDA, 2002).

On paper, the notable range of environmental and sustainable development plans and laws indicate an optimistic future, but the endurance of environmental degradation produced by mining; land, water and air pollution; and the depletion of arable agricultural land are continual prompts of the innately unsustainable essence of mining. "Water pollution in Limpopo Province" and "acid mine drainage in the Witwatersrand Basin in Johannesburg" are two clear examples (Murombo, 2013: 36). These difficulties are made worse by the dearth of "substantive transformation of the mining sector in South Africa where the poor, previously disadvantaged groups remain marginalised and only a few elites have broken into the sector" (Murombo, 2013: 36). Mining unrest in the Platinum Belt of South Africa in recent years has revealed how the poor and the marginalised are exploited by mining companies.

Indifference for social environmental responsibility evidenced by mining companies seem to reflect that the sustainable mining notion may just be a masquerade for concealing the blatant global capital interest in securing revenues from the developing countries of the south (Murombo, 2013). Several South African mining companies have been found to be operating without water use licenses, and some companies start their mining processes lacking any of the appropriate licenses (Gore & Dugut, 2013). More often than not it is the local communities that are left to handle the mining companies rather than the

Government mediating on their behalf. The consequence of mining on society, livelihoods, the environment and geopolitics has not essentially altered. The actors may have altered but the drama of the exploitation of Africa's resources remains relentless. Mining is presumed to provide jobs, improve conditions and enhance economic prospects for local communities. However, as Peter Leon (2012) in his '*Marikana Mangaung and SA's Mining Industry*' opinion piece justly indicates, in South Africa the "current approach to mine communities is not delivering these benefits. It presupposes a one-size-fits-all model for such communities, despite their diverse needs and circumstances, and reserves no seat at the regulatory table for affected mine communities".

The MPRDA is considered as a radical piece of law that promotes sustainable development and black economic empowerment. In spite of this hope, and together with restructuring of the mining laws, South Africa has honestly appraised the demand to facilitate sustainable mining by presenting environmental laws that intend to check the sector. So far this has been fruitless, as environmental laws have predominantly continued to be marginal in application due to institutional reluctance and weak execution. Mining, in conjunction with the pertinent government departments, has constantly combated efforts to make it answerable to severe environmental regulations (Groenewald, 2009). A significant part can be played by improvements to the legislation that lessen the discretion accorded to companies and provide entry points for communities to have a meaningful voice in how the programmes tasked with improving their life circumstances are designed, implemented and monitored.

4.14 Mining Compounds

The closure of mine 'compounds' has occurred in most other parts of South Africa through the Mining Charter and various modifications to legislation. Circumstances at the mines were particularly harsh, with the workers living in essentially prisons, or compounds in comparison to their white counterparts. Many indigenous men would work for nine months of the year on the mines, which left any work back home to be carried by women, the elderly and children (Frye, 2008). Whereas the closure of the mining compound system has been hailed as a progressive step in the history of mining, there is no alternative proper planning to house migrant workers. While in some mines the compound system was replaced by family housing, this does not apply to all mining areas. Studies show that

the thousands of still-employed mine workers now live either in shacks in informal settlements or rooms in the surrounding villages (Cronje *et al.*, 2013).

4.15 Land Dispossession in South Africa

The 17th Century in South Africa marked the beginning of the colonial conquest of indigenous people. The Khoisan became the first group to suffer dispossession from European settlers and the expansion of European countries into their lands (Ulrich, 2011). After the incorporation of the Cape into the British Empire, further expansion of colonial boundaries extended colonial conquest of the Xhosa chiefdoms through the Eastern Frontier Wars for the better part of the first half of the 19th Century. Colonial conquest then gathered pace from the second half of the 19th Century, especially from the 1860s to the 1880s, bringing much of Southern Africa within colonial boundaries (Mulaudzi, 2013). The main events associated with this period were the 'mineral revolution' and the broader 'scramble for Africa' by imperial forces. Through these periods of colonial conquest, various groups of African indigenous people in Southern Africa were officially dispossessed of their lands, the main source of their livelihoods. Consequently, this dispossession completely undermined the pre-existing political economies and heralded their incorporation as subservient labourers into colonial society.

South Africa differed from most colonial territories in Africa in that it attracted a high proportion of European settlers. Southern Africa also differed from most New World colonies of the Americas and Australasia in that the bulk of their indigenous population suffered no major demographic setback (Beinart & Dubow, 1995). However, the hunter-gather San and pastoral Khoi-khoi people suffered ruthlessly from the new diseases brought about by settlers, especially small pox. But the indigenous communities who dominated the eastern half of the subcontinent had already been exposed to many diseases which the settlers brought with them. Contrary to the expectation of 19th Century European observers, who believed that the indigenous people of the subcontinent would suffer and die out in the face of European settlement, this was clearly not the case in Southern Africa where the apparent 'vigour' of the indigenous people helped to fuel fears arising from their demographic superiority (Crosby, 1986). While colonial labour supplies in the New World was largely drawn from imported slaves and migrants, in South Africa it was largely indigenous people who laboured on the settler farms, in rich gold mines and, later, in the factories (Beinart & Dubow, 1995). The introduction of indentured Indian

workers into Natal from the 1860s created another legally defined racial group whose status in the social hierarchy was likewise ambiguous.

In the aftermath of conquest and prior to the 20th Century, two forms of colonial government emerged, namely direct and indirect rule (Mignolo, 2008). In terms of direct rule, the colonized are incorporated into colonial society without recognition of customary law and chieftainship while indirect rule recognised both. The Cape Colony, the Transvaal and Orange Free State Republics (now Western and Eastern Cape Provinces, Gauteng, Mpumalanga, Northwest and Limpopo Provinces) have been associated with varying forms of 'direct rule' while 'indirect rule' became the norm in the colony of Natal, now KwaZulu-Natal Province. The Khoisan, for example, were incorporated into colonial society without any recognition of customary law or pre-existing political structures. On the other hand, Natal recognised customary law and chiefs mainly due to the existence of the powerful Zulu kingdom under King Tshaka Zulu. The system of control developed by Theophilus Shepstone, for many years Secretary of Native Affairs, devolved considerable local control to African chiefs who regarded as the best supporters of a firm social order (Beirnat & Dubow, 1995).

The end of the South African War of 1902 led a process of consolidation of colonization and dispossession as part of the creation of the modern South African state. Reconstruction restored white private property rights and reaffirmed colonial conquest. The 'indigenous question' assumed even more significance in the aftermath of the war and reconstruction. Access to privately-owned farms was formally based on the belief that indigenous people would only provide labour to the mines and white farms but reside in their respective locations or reserves (Mulaudzi, 2013). Based on the idea of 'indirect rule', segregation would be the guiding mantra in "indigenous administration" throughout the beginning of the twentieth century. The institutions of chieftainship and customary law were deeply transformed over time to suit colonial aims and objectives and not to embody a continuation of pre-colonial Africa in any substantial manner. Notably, the core of the politics in the decades preceding the inception of the Land Act of 1913 was one of subordination, separation and exclusion of the indigenous people. Yet, even at the height of their power, whites were a minority of the country's population. Segregation thus evolved in a milieu in which Europeans had defeated the indigenous population but could only partially relocate them.

Land dispossession preceded the 1913 Land Act (Delius & Beinart, 2013). This Act was in this regard the climax and affirmation of dispossessions that had been ongoing in several areas, especially in the Cape Colony for several centuries (Hall, 2014). The Act's provisions were enforced evenly and widely resisted (Ntsebeza & Kepe, 2012). This can be considered as the beginning of "new era of political, economic and spatial dualism, and its effects on South Africa throughout the 20th and 21st Centuries" (Hall, 2014: 1). The most conspicuous inheritance of the Act is the amalgamation of poverty and inequality in South Africa; although most South Africans now live in towns and cities, "as of 2008, 57% of those who are poor are in rural areas, and 77% of the rural population is poor" (Leibbrandt *et al.*, 2010: 37). The growth of prosperous capitalist farming in the white countryside occurred not only through dispossession but also through "politically-motivated production and export subsidies, price controls, regulated marketing through state control boards and trade protection" (Hall, 2014: 5). Although supposedly areas of wealth, the white farmlands are also zones of massive inequality, with the farm workers' children, despite them being the food producers, more likely than any other children to be suffering from malnutrition. By the beginning of the 21st century, one in three farm workers' children were considered underdeveloped because of malnutrition (Department of Labour, 2001).

The migrant labour system which underpinned the Bantustans permitted the accrual of wealth in the mines, factories and other sectors. While indigenous people were paid low wages, cheap labour was best procured through the migrant labour system and the key elements of the segregation policy reinforced this arrangement. The migrant labour system ensured that the mines and white farms predominately used the labour of adult males whose families remained in rural areas. Capitalists were able to pay indigenous African workers meagre 'bachelor' wages because the costs of both the physical and social production of the labour force was borne by their families who remained primarily responsible for maintaining subsistence agriculture in the reserves (Swart, 2006). For the system to survive, reserves for indigenous people had to be entrenched - a central feature of the 1913 Land Act. In the early phases of migrant labour, chiefs sometimes sent out workers and tried to benefit from their earnings by encouraging the acquisition of firearms to defend the independence of their kingdoms (Beinart & Dubow, 1995). Subsequently, the pressures on rural men to earn wages multiplied. Cheap migrant labour might have been beneficial to the mining industry, which sold its products internationally and had to depress labour costs to preserve profits, but the system inhibited the growth of a local market for manufactured commodities (Lipton, 1985).

The socio-economic injustice and landlessness of many indigenous people derived from colonial and apartheid land disposessions and exploitations still continues to haunt the majority of indigenous people. Because “an estimated 4.35% of white people are poor, compared to 61.4 % of indigenous people” (Stats SA, 2012: 71) reflects the untold pain inflicted on the indigenous people by colonial and apartheid policies. Before the Land Act, and the dispossession of land owned by indigenous people, very few indigenous people experienced poverty (Modise & Mtshiselwa, 2013). When conceptualizing poverty it is important to note that “poverty is a failure to attain a minimal standard of living measured in terms of basic consumption needs” (Odhiambo, 2009: 323; van W. Scheepers, 2010: 164). When contemplating this perspective in conjunction with South African discourse on socio-economic injustice, the following fact comes out, “in 2009, about 35% of South Africans were extremely poor” (Odhiambo, 2009: 321). Indigenous people encounter greater poverty in comparison to people from other racial groups.

South Africa is positioned highly amongst those countries that have a high income inequality and further has very high levels of absolute poverty, which is more conspicuous in the rural areas (Dercon, 2009; Pauw, 2007). In South Africa this is reflected in the centring of poverty in the former homelands, where 65% of the poor can be found (Machethe, 2004). The majority of South Africa’s indigenous people live in the rural areas and are either directly or indirectly associated to agricultural undertakings (Pauw, 2007). It is reasonable to expect that, as in many African countries, this area would deliver essential income and employment for its rural inhabitants (Ojediran, 2011). However, insecure land tenure and mining operations which take much of the agricultural land undermine all efforts to eradicate poverty. Instead, the indigenous people now have to rely on governmental social grants. Previously rural households produced the majority of their own food, but recently, the evidence suggests that there is a rise in market reliance for both urban and rural households (Baipheti & Jacobs, 2009).

The post-apartheid government has redirected significant public spending towards rural development and poverty alleviation. Presently a noteworthy portion of public spending is committed to social grants and improving services in these impoverished areas (Perret, Anseeuw & Mathebula, 2005). However, social grants make people dependent on the grant provider. With unemployment on the rise in the country, estimated at 26.6% in 2016 (Stats SA, 2016), the danger is that more people will be dependent on social grants and fewer people will be paying tax, eventually eroding the tax base which means social grants will not be sustainable in the near future. The problem is compounded by meagre

enhancement in rural livelihoods as many policy intercessions such as land reform, smallholder support and rural development have proved unsuccessful.

4.15.1 Land Tenure in Pre-colonial South Africa

Land tenure can be defined as “the term and conditions on which land is held, used and transacted” (Christoforakis, 2008: 9). Whilst land tenure reform applies to “a planned change in terms and conditions, for example the adjustment of terms of contracts between land owners and tenants, or the conversion of more informal tenancy into formal property rights” (Adams, Sibanda & Turner, 1999: 2). The main aim is to improve and protect people’s rights; something felt as imperative to evade random evictions and landlessness. Furthermore, this is imperative if rights holders are to capitalise in the land and have sustainable use. In Southern Africa, tenure correction addresses a range of problems arising from settler colonization and dispossession of indigenous populations.

Southern African communal land supports the bulk of the rural population, many of whom are living below the poverty line. Recent findings reflect that “land and natural resources within these multiple-use communal systems play a significant role in the livelihoods and household economies of rural dwellers” (Shackleton, Shackleton & Cousins, 2000: 1). This in spite of the former colonial and apartheid regimes’ labour reserve policies which focused indigenous communities onto inadequate and marginal lands, successfully eroding the agrarian foundation for rural existence and generating a substantial dependence on migrant payments and the formal economy.

The right to lands for indigenous peoples is as important for some that it has become associated with some features of the right to life (Barume, 2010). Many who live on traditional lands and territories have robust cultural, historical and emotional links to these lands and territories, which have, over time, moulded the way of life of the associated communities. These indigenous communities would be unable to survive as culturally different groups without these lands, (Barume, 2010). South Africa’s indigenous people had plentiful land, with farming and herding being the predominant economic activities in pre-colonial times (Du Plessis, 2011). Environmental factors such as rainfall, topography, soil and the availability of water affected the economy of the indigenous people, with the result that agriculture was problematic and precarious and not envisioned as a means to wealth creation. It was cattle that were most valued; often being used in ceremonies and

celebrations to create or re-affirm social connections. In spite of cattle exchange and other products, there were no consistent traders and marketplace “material possessions had more social and ritual importance than economic value” (Bennett, 2004: 373).

Indigenous people usually lived on lands ruled by customary tenure and other community arrangements. Obtaining access to natural resources and ratifying land tenure privileges is a vital basis for susceptible indigenous peoples to preserve their livelihoods; avail themselves of their civil, social and cultural, political, and economic rights; and subscribe to local, and global sustainable development (UN, 2009). Legal identification and delineation of tribal areas, territories, or domain are the ways to empower indigenous peoples. Unfortunately, legal security does not often exist. Indigenous people are reliant on availability of natural resources and certain landscapes to live; to maintain a distinctive sense of identity, and to offer livelihoods (FAO, 2011). To attain this they embrace a variety of livelihood tactics, including “nomadic hunter-gathering and herding combined with seasonal agriculture; slash-and-burn rotational agriculture combined with reliance on forest products; fishing and gathering; farming and hunting combined with trade; and other unique and complex mixes of strategies adapted to particular natural and social conditions” (Bhattarai, 2017: 30).

Indigenous people naturally shape their rights inside their collective rights over resources overseen by customary tenure, which are administered by their own self-organised governance institutes developed over time. These local institutions make allowance for the maintainable removal and usage of resources (Ostrom, 2009). The rules steer the internal separation of property in the groups’ territories with family rights to agricultural fields in which the individuals have imbued their labours, as well as rights to grazing, fishing, hunting and forest areas. However, Alcorn, (2013: 2) writing on behalf of LandLinks for US Aid indicates that “tenure rights for women and adolescents under customary law tradition are often limited, constraining the ability of women and young girls to reap the benefits of tenure security”. Indigenous peoples’ tenure problems are progressively being connected to mounting global matters that encompass biodiversity conservation, natural resources management and global climate change. Lacking any form of protected land tenure and water, indigenous people can simply be deprived of their legal rights to natural resources in a simple moment.

According to a World Bank study, some investors, especially in the extractive industry, have exploited the absence of legal protection for local communities to coerce people off

their land (World Bank, 2010). The lack of any recording, recognising, and enforcing of land and resource rights for indigenous peoples makes it easy for these people to be dispossessed or evicted (FAO, 2011). Possibly, the biggest dispute between indigenous peoples and others relates to the extractive fields. Inevitably forested lands are held through state ownership, and the state then awards concessions for logging and plantations to companies. These awards are imposed onto the traditional land of indigenous peoples and lack any recognition of customary rights that indigenous people have employed (Alcorn, 2013). The defencelessness of indigenous people intensifies when their land and resource tenures are not valued and protected.

The concept of 'ownership' was imperfect in pre-colonial South Africa and usually "embedded in status relationships...African indigenous law on property was more concerned with people's obligation towards one another in respect of property than with the rights of people in property" (Du Plessis, 2011: 49). Relationships amongst people were considered more significant than any individual's ability to assert their interest in property against the world. Entitlements to property tended to be in the form of obligations that derived from familial relationships than as a means to exclude people from using certain property (Bennett, 2004). Property in pre-colonial Africa was entrenched in social relations rather than creating an "individual's exclusive claim over it as private property" in keeping with basic tenets of *Ubuntu* (Cousins, 2007: 60).

Lack of ability in land administration organisations; "lack of transparency and corruption; and insufficient participation of vulnerable groups in land deals creates situations that exacerbate conflicts" (Alcon, 2013: 4). Throughout Africa, chiefs have relinquished ownership of land without any consultation with their people, a situation which underscores the necessity of creating solid governance controls and assisting local people in protection of their land and resource rights. Legal rights often develop without any thought of statutory systems, or those rights lack cognisance of legal pluralism in suitable ways. When statutory laws are levied over customary tenure norms and practices, this frequently undermines existing systems and has the unintentional result of generating a calamity of open access that side-lines indigenous peoples whilst at the same time, aggravating conflict (Alcorn, 2013: FAO, 2011).

The struggle for Africa in the late 19th Century included major European powers seizing large expanses of the African continent. The colonial economies that came after characterized a basic reorganization of land and labour usage, determining the

“agricultural peasant, settler farms, and mining sectors for which the continent is identified with the present” (Bryceson, 2002: 725). An insistent theme in land and agrarian studies is the acquisition of land and natural resources by frequently Western outsiders and the unbalanced partition of these resources between the indigenous peoples and the white colonisers (Ramutsindela, 2010). It was this explicit racial inequality in land ownership and the associated arrangements of persecution that led to the advent of Africa’s liberation movements.

Indigenous law in Africa has had restricted opportunities to progress at its own rate and founded on its own principles, as colonial subjugation initiated a market economy. When property was involved African indigenous law was formally substituted by common law. Thus common law brought with it “a new vocabulary that made it difficult, if not impossible, to interpret African indigenous law land tenure” (Bennett, 2004: 374). The idea of ownership is especially challenging, as the concept that before “ownership” everything was commonly held with everyone having equal rights to the same thing, or that ownership lay with no particular person. It is probable that prior to the concept of individual ownership emerging, only rights use was secured.

The persistence on employing common law theories to elucidate and describe indigenous land tenure exceeds just intellectual error and contained within the larger plan of the colonial authorities to validate land expropriation, in this structure land is seen as “dead capital” (Okoth-Ogendo, 2008: 98). A consequence is that tenure uncertainty exists for the majority of land holdings under African indigenous law, particularly in South Africa’s former homelands. However, this is not because African indigenous law property systems are necessarily doubtful, but instead because of the “dislocation of these systems from social and institutional context that defines and sustains them” (Okoth-Ogendo, 2008: 98) and the implementation of the indigenous law within a colonial legal framework.

The power of access to land should be regarded within the framework of social relations. The validity of customary leaders originates from the founding fathers and they are regarded as a conduit through which to communicate with the ancestors (Cousins, 2010). They also have certain authority with respect to land, in that it is the chief who allocates land to families, including fields for pasture and agricultural use. Overall it is the chiefs who have authority to assign land; to control the use of common resources; and to appropriate and repossess land in various circumstances. Traditionally, this exercise of power in resource regulation means that the chief chooses when and how these resources can be

used. In framing the access rules the chief should use his judgement for public good, “especially in connection with the environment” (Bennett, 2004: 385).

South Africa endured a long history of colonization, racial dominion and land removal that contributed to the majority of the agricultural land being owned by a white minority. Dispossession was fought but the black people were overcome by the superior arms of the settlers (Rugege, 2004). Indigenous San people were virtually eliminated by progressing white farmers and, in spite of their struggles, other African tribes lost their land through fighting or through being pressured into surrendering their land through what was for them, unintelligible agreements. Both the colonial and apartheid regimes restricted the indigenous African people to areas of predominantly unproductive land and with reduced rainfall patterns whilst more productive land was given over to the white farmers’ commercial agriculture. Therefore, Dispossession of indigenous people originally happened through the auspices of conquest and trickery, this later became state policy bolstered by various laws from the earlier days of colonization. The most methodical state land dispossession occurred after 1913.

4.15.2 Land Tenure in Rural South Africa

The customary legal nature and the tenure in which indigenous people hold land under the tribal and chieftainship authority are among the vulnerability concerns that arise when mining takes place on their communal land (du Plessis, 2011). This is because the communal ownership title under which indigenous people hold land seems to conflict with the land use and ownership legal system which currently prevails and informs mining legislation, such as the MPRDA, the Mining Title Registration Act 16 of 1965, the National Water Act 36 of 1998 and other legislation applicable to mining in South Africa.

Even after twenty-four years after democratic dispensation there is a lack of comprehensive legislation available that secures tenure rights for those who suffered under the land acts and forced removals. The proposed government system of communal tenure with *Magoshi* (chiefs) retaining title to the land with the inhabitants being given only use rights is still in play. The same people trapped by the apartheid government into poverty are still being segregated by judicial and legislative regimes within the old enclaves (Claassens & Boyle, 2015).

4.16 Institution of Traditional Leadership

During the past two decades legal and policy processes have given traditional authorities expanded powers, frequently conflicting with constitutional provisions (Hall, 2014). These traditional leaders are recognised through the Framework Governance Act 41 of 2003 which also provides for the establishment of traditional councils. Land ownership transfers of communal areas to 'traditional communities' is now administered by these chief-dominated councils, in accordance with the Communal Act 11 of 2004.

Much of the areas designated as communal were purposely formed to further colonial policies as supplies for cheap migratory labour for the mining and agriculture industries. In South Africa, "agriculture contributes about 3% of the GDP and employs about 7% of the total labour force...it has been estimated the majority of South African youths live in rural areas...this means that the rural areas are characterised by high rates of youth unemployment" (Mbambo, 2012: 4). Unemployment is compounded by an economy where there is absence of legal means for interface with businesses and for property rights communication, thus making it impossible for business and land owners to use the land that they occupy as a resource for leverage.

As a precious commodity on one on which our very existence depends land is thought to be a source of life and vital for the very survival of all. It has economic, social and political value that has an interwoven and complex relationship (Saidu, 1987). On their first arrival in South Africa the colonists identified productive lands and forcibly uprooted the indigenous people from their land. In the pre-colonial era, traditional leaders and traditional authorities were significant institutions which gave effect to the traditional way of life and played a critical role in the management of rural communities (Claassens, 2006). The connection between traditional leaders and the community was integral. Pre-colonial leadership was founded on authority of the people where the traditional leader was answerable to his subjects. Traditional leadership personifies the conservation of culture, customs and values (Khunou, 2007).

In South Africa, land has constantly been the property of the community with the chief being the custodian. Many traditional leaders successfully changed themselves from defenders of their people into curators of the colonial order (Keulder, 1998). Many acted for the benefit of the colonial order which set them directly against other, more progressive, social forces that opposed that same order. This gave rise to the ascension of the inter-elite in the postcolonial order.

The community now has to depend on the chief to provide them with the land that they occupy or use for production. In the rural areas communal land ownership has always been entrenched as a way of life for indigenous peoples (Claassens, 2006). The rapid development of the extractive undertakings in communal areas corresponds with post-apartheid efforts to consider former homelands' inhabitants as subjects of traditional communities under chiefs. Since the 2000s enacted legislation has heightened the powers of traditional leaders, and allowed them to have an increasingly substantial role between rural communities and the mining industry. Traditional leaders, according to Keulder (1998: 161) "continue to control most of the important rural survival strategies: allocation of land, natural resources, communal labour practices, and in some instances law and order" (Cousins, Pollard & Toit, 2007).

Chiefs were considered by the colonial authorities as the place for integrating the people as well as a means of communicating. Previously, chiefs had led their people into battles, carried out the administrative functions of the day to day through the management of their chieftdom, made laws, and resolved disagreements amongst their people (Yire, 2012), accordingly the functions of the three government spheres were placed in them. Chiefs are then the representation and guardians of culture and peace in the land as well as agents of development, including negotiating complex mining deals of which many do not have expertise.

The leadership domination of traditional leaders altered when colonial authority and rulers brought their dominion to the arena of traditional governance. During the 19th Century colonial period, traditional authority was a method of indirect rule instigated to administer indigenous people as opposed to granting them the right to vote (Acemoglu, Chaves, Osafo-Kwaako, & Robinson, 2014). In turn these leaders became reliant on the colonial government for their resources and authority, they were given instruction on how to administer and control their subjects. Despite appearing to support and maintain the pre-colonial construction of traditional leadership, the purpose of the colonial government was to have authority over the economic, political and social system, in addition to maintaining white dominance (Mamdani, 1996). The authorities often interfered in matters involving tradition and custom and they established chiefs where there were none and removed those traditional leaders that were at variance with them (Keulder, 1997). The colonial, and later the apartheid, government weakened, misrepresented and, to a degree but without success attempted to wear down traditional leadership. This was executed "through the passing of various legislations such as the Land Act of 1913 and 1936, the Native

Administrative Act of 1927; the Bantu Authorities Act of 1951 and the Promotion of Bantu Self-Government Act of 1959” (Kompi, Twala & Selesho, 2014: 169).

Through this system, traditional leaders became colonial governments’ proxies and created answerability to that power rather than to their people (Khunou, 2007). Under the migrant labour apartheid system, indigenous men engaged to work in the mines from the rural areas were required to have their passes and permits validated in their home village by the traditional leaders annually. Traditional leaders managed the “pass book” system and oversaw the labour office where the permits were renewed; for this task they were allocated a registration fee (Van Kessel & Oomen, 1997). The 1986 abolition of the pass laws resulted in the traditional leaders becoming more authoritarian, as the cancelling of the law allowed the rural population work in cities without a pass. Subsequently, traditional leaders were without a substantial source of revenue previously provided by the registration system. Traditional leaders replaced this loss of income with the despised tribal levies, which means that rural communities are taxed differently or more severely than the rest of the country.

Consequently, the institution became subject to manipulation. State recognition became more important for the chieftaincies than popular support, chiefs had “become civil servants to be hired, fired, paid and, if necessary, created by the government” (Van Kessel & Oomen, 1997: 564). Traditional leaders were required to provide services with no real sources of income, and they employed some of apartheid’s most brutal laws to reinforce their enterprises (Murray, 2004).

Traditional leaders became the tools of the “divide and rule tactic” of the colonial and apartheid governments (Khan & Lootvoet, 2006: 1). They managed to enter into alliance with a number of political authorities during the apartheid era, as they often aligned themselves with powers that seemed to present the best opportunities for safeguarding their positions, wholeheartedly or for tactical reasons (Van Kassel & Oomen, 1997). This of course is not the exclusive preserve of traditional leaders. Many view the system under traditional leadership as oppressive and a curse, which relegate them to the status of second citizens in a democratic country.

As a consequence of the various legislation enacted to weaken and erode traditional leadership, the validity and legitimacy of some South African traditional leaders is a contested terrain and, to a degree, generates a political discourse because of the nature of the ANC’s governance of the country. Owing to the financial benefits and status

advancement of traditional leaders in the post-apartheid era, the need to scrutinize the whole sphere of traditional leadership exists (Kompi *et al.*, 2014). The problem has been compounded by successive colonial and apartheid governments that created and enforced their “own traditional leaders” at the cost of legitimate traditional leaders in various communities (Murray, 2004: 3-4). This created pressures within the affected communities which carry on rising as a result of government incentives associated with traditional leadership.

Under the notorious Bantu Authorities Act of 1951 “undemocratic structures of governance were established, commonly known as traditional authorities” (Meer & Campbell, 2007:4). These ‘structures’ were comprised of council members selected by a traditional leader, who the majority of situations would retain their relatives as members, who invariably had insufficient leadership abilities. Most commonly these were simple “puppet-governments” functioning on the part of the apartheid regime (Meer & Campbell, 2007: 4). Traditional leaders were frequently given token or partial power within the homelands to further the indirect rule of the apartheid government within these areas, to acquire support of traditional leaders and their communities and to limit any conceivable “reactionary forces” in the area (Kyed & Buur, 2006: 1).

Van Kessel and Ooman (1997: 563) make it clear that “power rested with a hierarchy of compliant chiefs, who were made utterly dependent on the patronage of the Department of Native Affairs”. No longer were the traditional leaders accountable to their subjects, but to the department, as their powers increased their legitimacy was eroded (Van Kessel & Oomen, 1997). Furthering their unpopularity was their part in policy implementation of agricultural betterment, which involved cattle, goats, sheep culling and land demarcation. Yet it should be noted that not all traditional leaders willingly allowed themselves to be incorporated into this new exemption. South Africa experienced a series of rural revolts during the 1950s and early 1960’s. For example “paramount Chief Sabata Dalindyebo spearheaded the revolt on Tembu land in the Eastern Cape. In the Northern Transvaal (now Limpopo Province), the acting paramount chief of Sekhukhuneland, Morwanche Sekhukhune, and his people actively defied the Bantu Authorities system. Both chiefs were deposed and sent into exile” (Van Kessel and Ooman, 1997: 563). The imposition of Bantu Authorities altered the connection between the chiefs and his subjects and upset the equilibrium within the tribal hierarchy.

The problem that confronts current traditional leadership in South Africa today results directly from colonialism and “apartheid meddling in the affairs of traditional leadership, culminating in an association that was not pure but rather more a product of the colonial and neo-colonial models, as well as the invention of custom, culture and tradition” (November & Wessels, 2002: 136-137). This political situation caused difficulties for the institutions of traditional leadership in post-apartheid era South Africa as some traditional leaders became leaders by default as they were foisted on the indigenous communities. In an attempt deal with historical tensions and reinstate the gravitas of traditional leadership the former President of the Republic of South Africa, Thabo Mbeki appointed a commission to deal with traditional leadership disputes and claims in 2004. This Commission was known as the Nhlapo Commission, named after its chairperson, Professor Thandabantu Nhlapo, was constituted in line with Section 25(4) of the Traditional Leadership and Governance Framework Act of 2003 (TLFA) (Kompfi *et al.*, 2014: 172). However, the Commission has not been able to live up to its mandate. The Commission’s attempt to purify the institution of traditional leadership of its colonial accreditations has exacerbated the problem, with almost every determination of the Commission being challenged either politically or in court. This has led to provinces establishing their own commissions, creating processes of contestation of positions of power, the end of which is nowhere in sight.

4.17 Traditional Leadership and Mining Communities in the 21st Century

Traditionally, indigenous South Africans were deprived of tenure rights; with many living on lands held by parastatal trusts, frequently known to as communal or tribal land. This is a legacy that has persisted, as indicated by Kitchen & Ovens, (2013: 8). into the “democratic era in South Africa, with government yet to adopt appropriate tenure reform legislation...despite this shortcoming, communal land is managed and administered in accordance with the tenets of customary law”. Communal land tenure reform has been “particularly contentious and politically sensitive”. The concept of tenure in South Africa is extremely complicated with over 100 different tenure types and of the approximately 16 million South Africans who live in rural areas; in excess of 90% of them are situated on communal land (De Villiers, 2003: 1). The South African Constitution acknowledges traditional rights and traditional tenure, but what this means and how it is enforced lacks clarity. The legal framework recognises “procedural rights such as the guarantee against dispossession and eviction, and also makes provision for compensation”... fortifying

people's tenure in rural areas to enable them to "sell their land, obtain loans and invest with security" is of paramount importance (Kitchen & Ovens, 2013: 5).

Section 25 (6) of the Constitution provides "that a person or community whose tenure of land is legally insecure as a result of past racially discriminatory laws or practices is entitled to tenure which is legally secure or to comparable redress... Section 25 (9) provides that Parliament must enact the legislation referred to in Section 26 (6)" (Claassens, 2014: 1). Twenty-four years later, statutes to safeguard the tenure rights of the approximately 17 million South Africans still living in the former homelands has not yet been enacted. The wait is connected to disagreements about the content of chiefly control over communal land comparative to the rights of families and individuals who are heirs to residential sites, fields and have had access to browsing land over the generations (Claassens, 2014). Many rural people maintain that they are the legal owners of the land in accordance with history and customary law. The substance of customary law is intensely debated relative to the range of chiefly power and to the indigenous claims to land lying with individuals, families and groups.

As a constitutional democracy, South Africa now has an "independent judiciary and three independent spheres of government, namely, national, provincial and local government" (Kitchen & Ovens, 2013: 2). The constitution describes these spheres as "distinctive, interdependent and interrelated, with all having legislative and executive authority in their own spheres". Traditional leaders create the national and provincial advisory bodies, and have a represented presence on the municipal council in their specific area. However, the exercise of local powers by traditional leaders has been thrown into doubt by the establishment of municipalities across the country (Murray, 2004). Two pertinent issues have emerged that are concerned with the role of traditional leaders and local government, namely, the demarcation of municipal boundaries and the alleged usurping by municipalities of the functions customarily exercised by traditional leaders. Traditional leaders claim, with some justification, that the contempt of the central government for traditional leaders is displayed in the fact that the boundaries of traditional communities were frequently ignored in the process of demarcating new municipalities. In accordance with its obligation to a democratic government, the Constitution gives to local government many of the service delivery responsibilities that chiefs presume is theirs. In order to create productive local government, it is of paramount importance that the authority of municipalities and those of traditional leaders are clarified.

The presence of two analogous governance systems functioning inside a single country often weakens economic development, growth and the construction of workable African democracies. The previous colonial and apartheid governments would sanction or support the most oppressive features of 'traditional customs', sometimes the traditional authorities would then invent their own new African 'customs', 'traditions' and 'cultures' to cover-up misconduct, protect against censures or to bolster their political support and thus their capability to obtain backing amongst the poor, uneducated and uninformed communities (Gumede, 2015). Colonial, apartheid and white-minority regimes in Africa purposely operated a dual governance system and at the demise of these governments, African liberation and independence movements took over the double system, this time permitting traditional authorities to govern their local 'subjects', on the proviso that these 'subjects' voted for the relevant independence or liberation movement governments. The question is that patrimonial structures which weaken individual human dignity, value and rights must either be eliminated immediately or transformed.

4.18 Conclusion

As an industry, mining is a vital feature in the expansion of local and foreign economies; "it contributes to Government's GDP, economic growth, job creation, revenues and skilling of personnel" (Mathabatha, 2011: 7). Conversely, mining lacks a good record of contribution to either sustainable development or poverty reduction. South Africa still contains the characteristics of underdevelopment in that the bulk of its citizens exist on the edges with less than adequate access to rudimentary necessities; sometimes the provided services are of dubious standard and quality. An analysis of the legal directives of South African mining reflects that the emphasis of laws and policies was and still is to assist extraction whilst paying minimal attention to its impact on the environment. Self-regulation and corporate social responsibility intercessions by mining companies show that these were mostly meant to facilitate mining rather than support any "philanthropic community development gestures" (Murombo, 2013: 39). These enterprises have, in some cases, signified much welcomed developmental assistance yet they have had minimal effect on the original grounds of the social problems influencing the mine community. Twenty plus years after democratic dispensation, "no comprehensive legislation exists to secure the tenure rights of those who bore the brunt of the Land Acts and forced removals"...specifically the people in former Bantustans...the "government has proposed a system of communal tenure in the former homelands, with *Magoshi* (chiefs) holding title to

the land and the inhabitants promised only a form of institutional use rights” (Claassens, 2015: 2). In the context of political ecology this chapter has demonstrate how those who are in the position of power are able to oppress poor rural masses. Policies which are meant to improve the lives of these people are the same policies which trap them in poverty. The next chapter deals with mining in the context of development theories.

5. Mining In the Context of Development Theories

5.1 Introduction

Different theories which influence mining development are discussed in this chapter. These theories were developed in Europe together with capitalism to aid and defend the interest of capitalists with an aim to exploit non-European countries and to perpetuate colonialism. The function of countries that produce raw materials was to supply cheap labour, minerals and agricultural produce at low cost. The political and military powers strove to impose inequality to maintain the status quo. The attitude prompted developing countries to conceive development in terms of European replication. Consequently, the theories helped to undermine African development. African deficiencies are said to be internal and therefore the solutions must emerge internally. This prompted African intellectuals to develop their own theories which are discussed and analysed towards the end of this chapter.

5.2 Classical Political Economy

Development theories have always had an uneasy connection with mining. Harvey and Press (1990: 2), two business historians, state it concisely when they described a "... problematic relationship between mineral wealth and sustained economic development..." The heritage of the nineteenth centuries' classical political economy entrenched a normative opinion of exclusion in connection with mining which was concerned with the theme of the Western world's economic development rather than that of the colonial and overseas territories (Bhangnati & Eckaus, 1990). Economic developments of the 20th Century that talk to the subject of mining have been unable to create a steady normative view with respect to it. By itself, the theme of mining and metallurgy was not of primary concern to the early classical political economists.

The three factors considered for this exclusion by the early economists are that mining was, until lately, detached from economic development primarily because the finding of minerals was a matter of 'chance' or 'instant luck'; mining was thought to be a phenomenon profoundly and naturally based in the 'history of empires'. Themes of

economic development in the 20th Century that addressed the “topic of mining have not been able to build a consistent normative view with respect to mining” (Graulau, 2008: 130)...“since the economics of the early classical political economy were not concerned with the topic of underdevelopment, mining was not explicitly discussed in connection to national economic growth”, which is further reinforced by Psalidopoulos & Mata (2002). This constituted the period’s normative view of the scholarship for which the economic development of colonial territories was not a significant concern; rather, the issue of mining was tackled by dominant scholarship in terms of its connection with international trade relationships (Graulau, 2008).

During the 18th to early 20th Centuries industrial capital development in Western Europe and the United States increased and they extended mineral commodity trades with the previous European colonial territories of the developing world (Vidrovitch, 2002). Two novel concerns that emanated from the experiences of World War I and later World War II impacted thoughts around mining, namely war economics and peace economics. Raw materials were deliberated in relation to the aims, methods and requirements of a war economy on one side and of a peace economy on the other. Thus, “minerals and mining in colonial territories and developing countries were studied as part of the international relations of developed countries” (Graulau, 2008: 137). Mining was studied in conjunction with the underdevelopment economics that arose from the post-war period, predominantly in the critical schools of development.

Mainstream development economics argues that mining is of benefit to development. David Ricardo advanced the theory of comparative advantages from which a new validation for international free trade appeared. It claimed that each country had the skill to discover a particular commodity it could make at a lower cost in comparison to others or its relative advantage (Screpanti & Zamagni, 2005). Exporting such goods in trade for others would have ramifications of welfare growths for every country, with the understanding that countries make and disseminate those commodities they can produce more competently. Ricardo claims that provided the cost ratios contrast amongst countries in the unavailability of trade, each has a comparative gain. This philosophy of comparative advantage was utilised to validate the specialization of European colonial territories in mining and extractive products (Furtado, 1982).

The Great Depression and World War II generated several international crises and social scientists began to question if the incorporation of Latin American economies into the

international markets was of benefit to those countries in the way that the theory of comparative advantages indicated. In response to the crises and by the late 1940s, an alternate school of thought emerged which alleged that the theoretical stream of comparative advantages paralleled the needs and characteristics of the development of capitalism in the final part of the 19th Century up to the mid-20th Century (Graulau, 2008). Gralau (2208: 140) states that it “saw the economic constraints of non-industrial countries as the structural failures of the export-oriented model of economic growth”. Raul Prebisch, an Argentinian economist, studied the “economic expansion and progress of Latin America as a structural issue of the specialization of the ‘periphery’ in raw materials and industrial centres in manufacturing within the context of unequal international trade relations” (Graulau, 2008: 140). Further, he contended that the “international division of labour”, built on comparative advantages, functioned to the “disadvantage of the countries specializing in the production of agricultural and mineral commodities” (as is the case with South Africa) due to the deep-rooted propensity towards reducing terms of trade for raw material exports. He concluded that countries that specialised in principal products could never assume to follow a path of export-led growth (Bracarense, 2016).

5.3 Dependency Theory and Mining

Dependency approaches begin with the premise that the chances of the developing world replicating capitalism that was prevalent in the industrialized world were minimal, and that the former could only circumvent their situation by limiting or even stopping interaction with the latter. One of the foremost figures for the dependency movement was Celso Furtado, the Brazilian economist who contended that the traditional international partition of labour, which limited the periphery to the generation of raw materials and the hub to the manufacture of industrial goods, maintained the procedure of conditions of the lack of development of the margins. Furtado’s believed that the mineral and agricultural product export sections hindered the creation of strong domestic markets for goods and services. As mining, in contrast to agriculture, concentrates its export operations in geographically remote areas further intensified the duality between the centre and the periphery. Furthermore, mining development necessitated large investment and the compensation of the labour force could not be attained from the lands assimilated into mining operations. Thus mining initiatives are seen as a typical expression of the exploitation and control of foreign monopoly wealth as is the case in Limpopo Province and elsewhere in South Africa.

In underdeveloped countries their industrial sectors were characterised by restricted and even static investments. Mining investments specifically had a crippling effect in underdeveloped countries as foreign mineral corporations had no augmenting investment effects and had diminished facility to expand the capacity and variety of investments and economic growth. Furthermore, the regulation of natural resources that supplied the input for industrial enterprises was achieved by seizing the local and indigenous populations' land. Investment in new equipment and human resources is recouped in the developed countries, as heavy capital goods are not generated in the periphery. Additionally, he criticized external mining companies for the minimal wages disbursed to unskilled workers. This is attributed to the fact that the labour force being compensated by higher-income salaries was by and large of foreign origin and engaged for administrative tasks. This created the situation that many underdeveloped countries face, which includes the appropriation of their excess by foreign mining companies and foreign capital's investments in the host countries. The state collaborates with foreign companies by consenting to extraction of the periphery's resources and surpluses without any substantial recompense.

5.3.1 Analysis of Dependency Theory

Dependency theory asserts that the achievements of the developed industrial economies do not act as an exemplary for developing countries. It advises that the success was a "highly contingent and specific episode in global economic history, one dominated by the highly exploitative colonial relationships of the European powers" (Ferraro, 2008: 63). These relationships are not likely to be repeated for the poor countries and they therefore, should rather endeavour to follow procedures of self-reliance. In contrast to the neo-classical models backed by the International Monetary Fund and the World Bank, more assimilation into the global economy is not automatically the best alternative for developing countries.

5.3.2 Criticism of Dependency Theory

While dependency theory provides a useful point for analysing structural changes, particularly changing class structure, created within underdeveloped nations or regions (Wayne, 1975), its difficulties become apparent once one moves beyond the historically

observable consequences of the dependency relation within individual satellites or dependencies. Gunder Frank and many other theorists set themselves the task of analysing the world system of relations in order to understand the causes and structures of underdevelopment. As Frank (1972) argues, only a complete, holistic analysis will be an effective guide to the understanding of exploitative system, under developed relations among national economies.

Having set this standard for itself, however, dependency literature has not lived up to it. Beginning with the presupposition and data based on dyadic relationships between nations, dependency theorists have come up against formidable challenges in their attempts to produce an adequate model of the world social and economic structure. In the dependency perspective, the world system is seen firstly as an accumulation of bilateral relationships between nations; secondly as a hierarchically ordered set of roles; thirdly as a confused product of relationships which are in part geographical and in part social; and lastly as a product of exchange relations rather than relations of production (Friedmann, 1976).

Frank and other dependency theorists have had difficulties in developing a coherent picture of a world system for which the analytical starting point is bilateral relationships among nations. If the analyst takes a set of two nations in which one nation exploits the other, then adds to that a second such set, then a third such set, and so on until all nations are included, the picture is an unorganised aggregate of sets, not a coherent structure. Thus, attempts are being made in dependency literature to gather these bilateral relationships using different strategies for linking the sets of nations.

5.3.3 The Influence of Dependency Theory on African Development

The canon of African socialism and its related development policies can be connected with dependency theory. Notable African leaders who have promoted socialism are people such as Kwame Nkrumah of Ghana, Julius Nyerere of Tanzania, Kenneth Kaunda of Zambia, Ahmed Ben Bella of Algeria, to name just a few. Nkrumah will be used as an example to indicate importance of this approach for this research.

5.3.4 Kwame Nkrumah's Communalism

Nkrumah's struggle and commitment to winning freedom for Ghana and Africa embraced the mantra of 'service before self' (Owusu, 2006). This became the guiding principle of his life as he was convinced that the best life worth living was one of service to his people. He emphasised service to the people as a mark of political leadership. When addressing his party supporters, he invoked an ancient Chinese admonishment to people and service - "Go to the people, live among them, plan with them, start with what they know, and build on what they have". Nkrumah's liberation, though, was firmly established in what he calls 'philosophical consciencism'. By consciencism he meant a theoretical assertion and application of African humanist values that aimed at liberating Ghana and Africa politically, culturally, economically and for national and continental integration within a socialist environment. As a socio-cultural and political ideology for liberation, consciencism asserts 'the unity of nature', and suggests that there is an intuitive unity and basic common identity of human beings in society. Africa needs an Africa-centred ideology to order to develop as an independent continent.

The problem for African underdevelopment is the inherited traditions that constitute African identity. He argues that the alien cultures must be indigenized and synchronized with the traditional African cultures. Nkrumah lamented that the peasantry in Africa still lived under conditions which were not visibly different from conditions in pre-colonial and colonial periods (Annang, 2012). The fundamental constitution of African societies in varying periods of history demonstrated collectivism. "Humanism founded on egalitarianism was the philosophy underlying this communalism...this was aimed at the reconciliation of the individual's aspirations with group welfare" according to Ajei (2007: 45). African socialists have two claims - firstly that each human being is "an end unto him/herself, not a means"; and secondly that it is essential to warrant each human "equal opportunities for their development" (Ajei, 2007: 45).

Nkrumah's communalism is the theoretical equal to communitarianism which is a concept of social organization that has been articulated differently by its proponents. There is agreement among various African philosophers that the communitarian ethic underlines "social organisational principles and practices in the indigenous African setting" (Ajei, 2001: 19). Underlying this ethos is the philosophy of the human as being an intrinsic part of the community. Ontologically, the individual is judged as an important and unassailable fibre of social fabric. Consequently, there is pressure on social organizational principles, structures and practices to afford credence to the society's claims in its affiliation with the

individual. In Sesotho this communitarian ethic is articulated as '*motho ke motho ka batho*' meaning that when the choice rests between preservation of another's life or wealth, the former should be the decision. Beneath this concept of the relationship between an individual and the community is the opinion that an individual's involvement in society cannot be elective, this is an essential part of '*Ubuntu*'. Mbiti (2005) outlines five vital components of *Ubuntu*:

- i. Respect for the dignity of others
- ii. Group solidarity
- iii. Teamwork
- iv. Service to others in the spirit of harmony
- v. Interdependence where each one of us needs all of us

The need for community is an indispensable attribute of human beings. For example, if there is a wedding in a particular community and all community members are invited to the party, a white flag is hoisted in the homestead to announce to the community that there will be a wedding. A beast or beasts will be slaughtered to feed all of the community members. This contrasts with the Western cultural tradition where only a select few are invited to a wedding. Like a wedding, a death in the community affects all of its members. The community members, excluding children, are expected to attend the funeral. However, the exclusion of children does not apply to every community.

As part of a community, each individual has an inherent connection to others community members. Intrinsically, one must be cognisant of the part that one's life may contribute to the welfare and interest of others. The Sesotho then, say of a person whose behaviour does not show compassion, generosity or concern for other human beings, '*ga ana botho*', meaning that such a person or individual is inhuman and lacks respect. Societies that follow communalism look for the support of humans rather than clashes, and agreement in creation and implementation of decisions rather than disagreement (Wiredu, 2004).

Nkrumah's communalism caused him to be regarded as a socialist and through this, his expansion agendas were aimed at "diversification of the Ghanaian economy through import substitution industrialization" (Ajei, 2001: 46). This was to be realised through active state involvement in economic development within a socialist paradigm. These

programs did not always have an exclusive goal of macroeconomic prudence but they raised the levels of medical and educational facilities and enhanced the road infrastructure and rail network. His socialist views caused him to oppose all forms of capitalism and as part of his development strategy he supported the liberation struggle against colonialism and neo-colonialism.

5.4 World-System Theory and Mining

The 'world-system theory' advocated by Immanuel Wallerstein (1989) states that the modern nation occurs within a wide economic, political and legal framework which he calls a 'World-System'. Accordingly, the system has "an economy that is based on the extraction of surplus goods and services from outlying districts...much of this tribute goes to pay for the administrators who extract it and for the military to ensure continued domination; the rest goes to the political rulers at the head of the empire" (Elwell 2013: 166). It is argued that the capitalist world economy was constructed through the establishment of long-distance business in commodities and connecting production processes world-wide, all of which made allowance for the considerable acquisition of capital in Europe. Economic relations were not generated in a void; they were actualized in Europe together with capitalism to aid and to defend the best interests of the capitalists (Wallerstein, 2003). The objective of early European capitalists was the formation of a world-economy founded on a highly disproportionate partition of labour between European states and the rest of the system. The political and military powers strove to impose this inequality to maintain the status quo.

Wallerstein (1985) views the capitalist world-economy as divided into "core states, semi-periphery and peripheral areas, in which the peripheral areas are the least developed...are exploited by the core for their cheap labour, raw materials and agricultural products" (Elwell, 2013: 167). The function of countries that produce raw materials was merely to supply cheap labour, minerals and agricultural produce at low cost to Europe. The amalgamation of the Atlantic triangular trade in the 16th Century formed the peripheral zones of the capitalist world-economy. Within this West African slaves were shipped to work in the Caribbean and South American mines and sugar plantations as cheap labourers. Europe received the exported sugar and for its part, exported at high cost, manufactured goods and guns to West Africa were (Goucher, 1981). Prices for the

exchanged goods were determined in European terms. All these were meant to destabilise African development socially, economically and politically.

5.5 Neo-Structuralism on Mining and Underdevelopment

Historical linkages between nature, the environment and underdevelopment are analyzed through neo-structuralist theory with the purpose to consider the long-term structural connection between the development of the productive ability of natural resources and the possibilities of Latin American countries to seek out innovative ways of inclusion into the world-wide economy. The Italian agronomist, Nicolo Gligo's work is pertinent in the discussion around this theory's views about mining. His key belief was that with the growth of the peripheral countries, the emerging social and economic division of labor was supported, which materialised in the advent of informal economies, dualistic agricultural development, high demographic pressures, and high demands on water and energy. Gligo (1980) maintains that within under-development and a hierarchic social structure, people apply tension on the environment, creating environmental degradation that habitually affects urban and rural marginal populations. Further, he maintains that mining operations have traditionally promoted patterns of extreme environmental degradation. Mining requires large tracts of land as well as wood and energy all of which have impact on the environment. In addition, agricultural was orientated to assist mining objectives and new agricultural products and livestock were assimilated hinged on the requirements of the mining industry while the needs of the mining communities, whose people were compelled to work in agricultural and mining areas, were discounted.

5.6 Mining and Feminism

Warren (2000) states that in a broad perspective, a feminist issue is anything that adds in some way to comprehending the subjugation of women. Feminist theories seek to analyse female subjugation, its motivations and significances and to recommend plans and guidelines for women's deliverance. In the mid-1970s, feminist writers had mooted the idea that patriarchal styles of thinking not only stimulated the widespread diminishing and colonising of women, but also that of people of colour, animals and nature. Patriarchy, or male-dominated culture, is supported by "four interlocking pillars...sexism, racism, class exploitation, and ecological destruction" (Collins, 1974: 161).

Feminist scholarship in development has directed awareness to the gendered partition of labor in mining and women's adversity against economic exploitation in mining (Harcourt, 1994). They also deal with the concept of femininity and the part played by women in cultural rituals of peasant miners; and women's subservience to the sexual and patriarchal constructs of the mining industry (Rodrigues & Sheldon, 2010). This scholarship has brought forward the gender and development deliberation, and the necessity to research women's work in the mining economies of the developing world. The feminist political economy has made substantial contributions to the reading of women's work in primary and peasant production. However, they have not contested the normative view against mining in critical development theories. Ecofeminists see a relation between the environmental degradation and subordination of women. Mies and Shiva (1993) argue that women have a special affinity with nature which capitalism "maldevelopment" is destroying along with many sustainable structures and increasing poverty...they link inequality and environmental degradation to capitalism's exploitation of the poor people and the environment (Hopwood *et al*, 2005: 24).

5.7 Different Development Theories and their Influence in Africa

5.7.1 Modernization Theory

According to Gare (2001: 77) modernity is the "cultural era that began in Europe in the 15th, 16th and 17th Centuries with the Renaissance, the Reformation and the triumph of the market economy over feudal social relations, the rise of science and the origin of the liberal democracy". During the 18th Century 'Enlightenment' these advancements were honoured as the success of reason and in the 19th Century this new order produced industrial capitalism (Roche, 2009). From its European inception this ethos and its allied social systems have come to govern the world, producing the global market ordered through a global system of nation states with governments supposedly on behalf of the people of these countries. From the outlook of conventional modernists, modernity has brought about considerable technological developments that have permitted "humans to dominate nature as never before, liberated people from political, economic and social restrictions, and united the world into a global community" (Gare, 2001: 78).

The theory was only put into effect near the close of the 18th Century. This ethos is unified by the idea of progress. To have faith in progress is to see humanity applying a story in which past, imperfect forms of knowledge, technology, art forms and social relations are

overcome (Kaas, 2001). People are released from uncultured and “oppressive traditions, diseases, shortages of food and housing and ushered into an increasingly exciting world of high technology, breaking down barriers of both space and time” (Gare, 2001: 78). The future reflected by the predominant representation of progress is one in which the whole world will finally espouse liberal democracy, maintaining the sovereignty of the individual in the marketplace. The modernisation theory held influence after the Second World War until the 1960s as a result of specific unhappiness with the veracities of many ‘Third World’ political economies, as compared to those of the ‘developed world’. These developed economies were seen as having situations of European modernity which the rest of the world should hope to copy.

The modernisation movement of 1950s and 1960s is an economic theory based on capitalism (Matunhu, 2011). The notion of modernisation includes the full range of change and radical conversion that traditional society has to experience in order to become current (Hussain & Tribe, 1981). Modernisation is about Africa emulating the European development trajectory. Modernity maintains that policies envisioned to lift the quality of life for the poor invariably consists of distributing knowledge and information about more effective methods of production (Matunhu, 2011). Generally modernisation has been responsible for the “introduction of hybrids, green house technology, genetically modified food, use of artificial fertilizers and insecticides, and the application of other scientific knowledge to substitute for indigenous agricultural practices” (Smith, 1973: 61). For agriculture, modernisation is all about exchanging indigenous agricultural practices for European practices. Agricultural and mining communities are considered modern when they exhibit certain European characteristics.

Modernisation theory applies to the change which occurs when a traditional or pre-modern society transforms to the degree that new methods of technological, organizational or social traits of advanced society emerge (Mouton, 2001). This encompasses a variety of fields as it attempts to elaborate how society advances, what parameters affect that development, and how society can respond to that improvement. According to this concept, Third World countries were considered underdeveloped in contrast to First World countries. The solution for this retardation was through an evolutionary process culminating in modernisation, which Himmelstrand, (1994: 37) states includes a “phased, linear, irreversible, progressive, and lengthy process modelled on the development paths of the developed world”.

When assuming that Third World countries can be assisted in developing in the same manner the more developed countries have requires an evaluation of their internal factors. The theory tries to categorize those social variants which assist social progress and the growth of societies, and hopes to clarify the system of social evolution. Modernisation theorists considered underdeveloped countries' traditions as obstructions to economic progress. Moreover, whilst modernisation might bring violent, radical modification for customary societies, it was considered well worth it. A crucial facet of this process is free trade; consequently, each country would flourish if it sold the "goods for which it had a comparative advantage on a competitive market" (So, 1990: 36). If they assimilated If Western values and resources in the form of investments, loans, policies and aid were absorbed then Third World countries would attain modernisation.

Consequently, a task for Europeans on arrival in Africa, was assuming the responsibility for modernizing the continent. The shape and approaches for Africa's development have constantly changed in view of the developments of the technological and ideological opinions of the developed world. The West saw the development of Africa as falling behind other countries due to the inborn inadequacy of its indigenous people to understand the socio-economic and technological environment with a view to improving their social and economic circumstances (Matunhu, 2011).

The previous opinion is regarded as malicious and misdirected by the proponents of modernity. However, Rodney (1973) shows that in the time of the first experiences between Europeans and Africans, the 15th Century, in the east, central, west and south of the continent there were existing empires, which were the empires of Mali and Songhai in West Africa, and Mossi to the east of Mali, Tshaka in Zululand, and the Kingdom of Dahomey in the central part of Africa who were strong in terms of wealth and territorial expansion. Their farmers, gold and silver smiths, weavers, wood carvers, cloth makers, medicine men, and experts in naturopathy were responsible for the economies of these states who had advanced methods of preserving food and used advanced technology and techniques (Samir, Chitala & Mandaza, 1987). However, when the Portuguese arrived in Africa in 1444 they had serious impact on Africa's development and invalidated the cultural worth of indigenous people (Matunhu, 2011). The West's arrival in Africa brought with it a paradigm shift on how the continent should grow as they wanted to alter Africa's development course in support of their own.

European modernity grew from ideas that emerged out of the neoliberal and Marxist theories, hinting at a "...dramatic and unprecedented break between past and present..." (Appadurai, 1996: 3). These theories were deeply dependent on evolutionary schemes as guides for the change of societies from the primitive to the more civilized. The notion of traditionalism arose in criticism of this inescapable process of modernity. Many theorists of underdevelopment found flaws with the supposition that all societies followed the same development trajectories as the West (Crewe, 2011). This came about in reply to the noted inability of many of the developing world to lift themselves out of circumstances of poverty. Thus the thought of modernity was basically Eurocentric and faulty.

In response to the censure of 'European modernity' and the collapse of this modernisation model, a new form of 'bottom up' engaged development has arisen; advocated by several leading academics. This highlighted a more all-inclusive process of needs assessment within the practices of development followed by a concept of "government through community" (Li, 2005: 4). Community development is not only about imposing state control over a certain socio-economic sector but additionally about causing collective existence to be more "intelligible and calculable". This involves achieving a better insight of explicit community requirements and creating a greater context-specific for bringing about development. Within this notion, issues are problematized in relation to characteristics of the communities, their cultures and pathologies (Ashratis, 2007).

However, critics argue that customary societies were often devastated prior to benefiting from any assured benefits if, *inter alia*, the economic gap seen between advanced societies and such societies really extended. Modernisation's effect for some was, merely the exchange of traditional poverty for a more modern form of misery, as set forth by these critics (Sorensen, 2001). Furthermore, the tenets of modernisation theory largely ignored the ecological effects of economic growth and industrialization. As such, the world is currently faced with an ecological crisis. The practice of development based on modernisation theory has thus largely failed to benefit those upon whom its tenets were intended.

Traditional values are not always the obstacles to modernisation they are considered in some traditional values have actually stimulated modernism. An example of this is in Japan where the Samurai's values of devotion to the emperor were easily transmuted to allegiance to the firm. This promoted workers' productivity and the reduction of the turnover rate of Japanese firms' employees. The concept is also censured for not being able to

reflect the poor as the focus of poverty-reduction enterprises (Slater & Bella, 1998). Modernity can achieve the marginalization of its commitment, creativity and support of the intervention strategies through the disregard of the involvement and contribution of the target community. Thus, the intervention strategy becomes nothing more than a compulsory strategy and therefore lacks the ability to create satisfactory ideas of the causal powers of social structures and the part played by human agency in modelling social relations in general (Mahuntu, 2011).

Criticism of the modernisation theory also stems from its base in a deterministic reason which maintains that within the linear representation of socio-economic development, changes are started from outside. The determinist reason leaves minimal space for the common relationship of causation that emanates from the developing area and from that that emanates from outside. Ideas of modernisation directly impoverished Africa as they were unable to appreciate the creativity and enterprise of the indigenous African people. Rather value was placed on externally sourced aid without taking cognisance of the restrictive conditions that invariably came with such aid. Africa requires a paradigm shift if it is to regain its right to create new pathways to development.

Critics of the modernisation theory, such as Washbrook (1988:59 cited in Osella, 2006: 584) emphasises the “need for an alternative discourse within development...and...the virtues of a more multi-centred approach in which no centre is explicable except in terms related to others”. It is necessary to examine the relationships within the development tracks of different countries rather than having a model based on one single world view. The new global cultural economy has been regarded as a complicated, overlying and non-connective order that cannot be comprehend in terms of current centre-periphery models (Appadurai, 1996). These alternate models appeared equivalent to ideas of the post development theorists. Because of these shortcomings Escobar (1995), proposed that modernisation theory was basically a method of upholding Western influence and domination.

Sahlin’s term “indigenisation of modernity” follows the alternative discourse where defines a course of incorporation of industrial technologies into indigenous repertoires in an effort to assist survival of their particular indigenous culture (Robins, 2003). This indigenous modernity concept is a critical response to such as Escobar, a post-development thinker. Robins was dissatisfied with their viewpoint, and emphasised that there is an over reliance on language, labels, text, culture and meaning in postmodernist criticism of development

that takes attention away from material realisms. In many cases significant opinions about what interventions actually mean to people's lives are frequently disregarded. Many post-development theorists only discuss criticisms and omit any reference to effective alternatives.

The proponents of indigenisation observe that hybrid-conditions between technological and societal advances ('European' modernity) and traditional knowledge should be assumed; Robins proposes that the wishes of traditional people to modernise does not necessarily label them as passive, detribalized consumers and neither does it infer Western cultural homogenization and superiority. It is necessary to connect with current means of production, though not be manipulated by homogenising traits of modernity and globalisation. For their survival traditional groups need to adopt certain modern technologies but it is not necessary for them to take on aspirations of Western culture.

5.7.2 The Influence of Modernization on African Development

Ajei (2007: 34) indicates that the "influence of modernisation on the development course of Africa lasted until about the mid-1960s and was characterised by two trends." Firstly as per Nkrumah (1966: 85) is "investment, financed by private capital, to facilitate production of mineral, agriculture and forestry resources for American and European industries and economies". In pursuance of their economic development strategies, several newly independent governments vindicated these investments based on the supposition that they would assist in generating capital for an industrial base. They argued that this would assist Africa develop at the same level as countries in the developed world. The second trend involved the "establishment of large, capital-intensive projects incorporating the latest in foreign technology and [established]...near major cities" (Pearson, 1992: 22).

In the late 1950s and early '60s, exploitation of Africa's primary products for export gained vast impetus. The exploitative tendency in agriculture, mining and construction companies included the usage of cheap labour and land purchase at trifling prices by the capitalists. However, the export of these products by African states to American and European countries failed to bring about the expected return on investment (Rodney, 1973). The current economic regime, with its basis in the neo-liberal Washington Consensus, virtually criminalizes any attempt by mineral and raw material exporting countries to emulate the industrialization paths followed by developed countries including state intervention towards

diversification and manufacturing (Reinert, 2007). The prevailing neo-liberal approach not only ignores the history of development in industrialized countries, but it also denies the interventionist role that the state played in that history. It fails to realise the interrelations of global dependence and how this functions to replicate patterns of development and underdevelopment. Development was conceived basically in terms of the European capitalist version. This attitude prompted developing countries to conceive of development in terms of European replication or imitation. This inaccurate development thought can be held accountable for Africa's current state as development can be thought of as a transmission of "European economic and technological prowess into Africa" (Chukwuokolo, 2009: 26)

This view is supported by Buthelezi in Matunhu (2007; 2011), who maintains that Africa contains adequate economic resources. Nevertheless, the fact that continent suffers from poverty is shown by the high incidences of famine, disease and ignorance. It is argued that Africa's modernisation requires emulating the Europeans who were predominantly the former colonizers of Africa, by creation of production techniques such as agriculture modernisation. The West posing as a civilising mission has had a detrimental effect on Africa (Chukwuokolo, 2009); there was a total distortion of African values which benefited the West and which has increased as the political and socioeconomic trends have been dictated across the globe by the invaders. Chukwuokolo, (2009: 24) feels this apparent "lack of benefit from the passing phases of European experimentation with developing countries dominates the Afrocentric circles, especially as globalisation is the latest stage of imperialism". Resultantly, questions such as – "what is actually meant by development, are raised: when faced with competing choices which path should be followed, the African or European; which is the best option for Africa if it desires to develop; what should guide African choices; should it continue to trail behind Europe and its values based on the evolution of society?" These are just some of the questions scholars such as Chukwuokolo (2009: 25) are posing about the African development challenges.

There are different views on how to respond to some of these pertinent questions. For instance, Gordon discusses development from a Fanonian perspective. Gordon, through Fanon's classical works '*The Wretched of the Earth*' and '*Black Skin, White Mask*', (Fanon, 1963) stresses the key features of colonialism and neo-colonialism, the psychological aspect which regulates the political and economic world outlook of African direction. He argues that the obvious outcome of Western normativity, with respect to underdevelopment, is the making of what he terms "problem people". He feels that the root

problem experienced by 'problem people' is how to be actional. He also argues that development theory is a reflection of Western narcissism and finishes by expressing a development theory he refers to as "postcolonial phenomenology", which merely means that development needs both empirical and actional output.

That development in Africa needs to be considered relative to the previous decolonization of the African mind is another aspect argued by others. Chukwuokolo (2009: 27) placing emphasis on Hountondji (1983, 1989) observes that this stems from the "radical observation of the dependent and marginalised relationship between intellectual research in Africa and that of Europe as needing separation if actual development is to be met for the African". For instance, Nyamnjoh (2011) views the development problem as a result of the "alienating education forced on Africans through colonialism [where] European education is a concourse of empiricist and materialist epistemology" (Chukwuokolo, 2009: 27). This explanation is a paradigm shift in African educational orientation.

The above view is shared by Keita (1991) whose attempt is seen as holistic, where conventionally, Africa is felt to be a "special case study for development plans as it has never attempted to develop" (Chukwuokolo, 2009: 27). However, this point of view echoes Africa's antique history as the cradle of civilisation. He has provided an assessment of what the development outline for Africa should economically and politically look like. He feels that "only when the discourse is predominately African within the context of theories in African universities and research centres that maximal and concerted progress will be achieved" (Chukwuokolo, 2009: 27). Such a view is a foundation for Afrocentrism in the development debates which are discussed below.

5.8 Afrocentrism and African Development

As the founder, Molefi Asante is the primary Afrocentrism theorist whose main aim is to free African people's research and study from the hegemony of Eurocentric scholarship (Turner, 2002). Afrocentricity argues that the "current methods of inquiry, logic and research in academia are inappropriate methods to study African people... such approaches to knowledge are based on an ideology of racial superiority and racial privilege" (Asante, 2006: 653). These theories deliberately oppress and undermine Africans, through their empirical research, by imposition of racist and sexist interpretations of knowledge. Additionally, academia's deliberate language use is a significant tool for

maintenance of hegemony. Oyebade (1990: 234) sees a need for the creation of an “African-centred perspective that takes Africa as a point of departure for African studies stems from the nature of the Eurocentric paradigm, which has been used in many previous studies”. The Eurocentric paradigm has often taken on a hegemonic universal character in the history of intellectual thought, and this culture has positioned itself at the social structure’s centre, creating ‘the reference point’ through which all other cultures are determined.

Two notable experiences were bequeathed to Africa by imperialism; the disavowal of African identity, and the foisting of Western thoughts, cultural realities and perspectives. The Nubian culture, essentially African achievements, was appropriated as European along with those in science and philosophy, African philosophers such as “St. Augustine, Origen, Philo, Plotinus, and Porphyry became part of Western intellectual tradition and achievement” and “the great achievements of Egyptian thought were largely appropriated as European achievements” (Nwala, 1993: 1). Colonial mentality still holds influence and Africans still deny and reject their intellectual and cultural expertise. Those impoverished in Europe and America throughout the slave trade developed low self-esteem (Chukwuokolo, 2009).

Nationalism and the spirit of freedom adopted two forms, “the struggle and subsequent freedom of Africa politically, socially, economically, and the search for an African identity in pages of antique history” (Chukwuokolo, 2009: 32). Resultantly, in the pursuit for identity, different intellectuals emerged, among those William Dubois, Anta Diop and Martin Bernal are pioneers of Afrocentric ideas. They urged that as the originators of civilisation, Africans should be awarded their intellectual pride of place. Their work resulted in the Afrocentric movement which calls for “African and African American scholars and educators towards achieving the particular end of ensuring that the African heritage and culture, its history and contribution to world civilisation and scholarship, are reflected in the curricula of every level of academic instruction” (Onyewuenyi, 1993: 39-40).

According to Dei (1998) African people are querying why the worth of indigenous African knowledge is not recognized and why it is that Euro-American values and norms are advantaged in the development process. Attempts are being made by indigenous and local people to recover and revive their marginalised knowledge, and are challenging conventional views about international development (Dei, 1998). It is fundamental to recognise that local communities’ real and effective control over the development process

is only conceivable if the development agenda looks to centralise IKS in the quest for answers to human problems. Dei (2000: 73) maintains that “local input must be from the grassroots and should fully respect women’s knowledge; should be ecologically sound; and should tap the diverse views, opinions, resources, and interests manifested in the cultural values and norms of local communities”. The African world view is based on the personal “understanding and appreciation between humans, society and nature” (Mbiti, 1982: 197).

Development is about the social ecological unity of people and their habitats. Ecological unity focuses on the responsible use of land and natural resources according to the principles of sustainability (Dei, 1998). The view of African cosmology is that humans are part of Nature. Consequently, any development approach that negatively impacts on the natural environment is certain to have social relations’ repercussions. Dei (2000: 75) goes on to say that “an emancipative approach to development should be able to build on the ability of local peoples to generate and apply their own knowledge and cultural and social histories”. The biased seizing of the African mind in all spheres of development has emerged through Eurocentricism. Chukwuokolo (2009: 33) maintains that as an “ideology that arose as reaction against Eurocentrism, Afrocentrism perceives authentic development as that which should be grown and bred in Africa”. According to the proponents of this ideology, African development could only be achieved when the discourse is mainly that of the “African theorist within the context of African environments, universities and research centres” (Chukwuokolo, 2009: 33). However, the leadership in Africa do not all necessarily share the Afrocentric visions.

5.9 Post-Modernism

The precise definition of postmodernism is disputed as the label encompasses many different intellectual inclinations. Best and Kellner (1991) state there is no united postmodern philosophy, or even a comprehensible set of positions Featherstone, (1988: 207) goes as far as cynically remarking that “there may be as many postmodernisms as there actually are postmodernists”. It is this very diversity that is one of postmodernism's unique features. Postmodernism has shown an increasing influence in the social sciences despite its relatively newness to the field of organizational studies, and covers a range from “sociology and psychology to women's studies and history” (Rosenau, 1992: 85), and

is thought by several to be one of the 20th Century's greatest contestations to recognized knowledge.

Post-modernism involves rejection of the core doctrines of modernism and embraces of post-modernity. The postmodernist criticism of science is made up of two interconnected arguments - epistemological and ideological, both of which are founded on subjectivity. Firstly, according to LaPine (2007) quoting Melford Spiro (1996) "because of the subjectivity of the human object, anthropology, according to the epistemological argument, cannot be a science, and, in any event, the subjectivity of the human subject precludes the possibility of science discovering objective truth...secondly, since objectivity is an illusion, science according to the ideological argument, subverts oppressed groups, especially indigenous people in general, females, and Third World peoples". Post-modernism is a declaration of the indulgence of the Social Democratic State, categorized by the collapse of "cognitive and ethical developments" on which people have formed communities founded on mutual acknowledgment. They have revealed the assumed actions which allow some to control others, the "notions of truth, identity, order, rational being etc." (Gare, 2001: 79). They have exposed how vital thinking has been employed to sustain prevailing hierarchies of power. In its place, they have inspired those marginalised peoples to articulate and affirm themselves.

In a postmodern society, the grand narrative is abandoned, and social development is regarded as a logical affair of creating new rules whose legitimacy lies in their feeling rather than in their rapport with some validating discourse. Postmodernism esteems "mini-narratives" which are "stories that explain small practices and local events rather than universal or global concepts...these mini-narratives are situational, provisional, contingent and temporary and they make no claim to universality, truth, reason or stability" (Vandeleur, 2010: 50 citing Klages, 1997). Postmodernism is valuable in reflecting an increasing disbelief with the "grand narratives" which give modernism its character and achievements.

Technologies applied in traditional societies are often seen by modernists as non-innovative because of their understated nature and minimal cost. Local knowledge systems have been labelled as 'primitive', 'unscientific' and 'backward' in comparison with the Western system which is considered to be 'uniquely scientific' and 'universal'. Modernism endorsed the theory that Western science and technology assumed the lead in development as this was thought of as the motive behind the North's superiority and as

such, was an assurance of development and success in all domains of life. In the 1970s, development became equated with the achievement of Western material prosperity through the adoption of Western technologies, but this has chiefly resulted in “monocultures, the devastation of nature and the destruction of cultures” (Vandeleur, 2010: 51). The approach of postmodernism queries the perception that certain ideas and practices have predominance over others. It also tackles power relations such as the agency to generate and the confirmation of knowledge (McGovern, 1999). According to Vandeleur (2010: 51) there is a “relationship between power, knowledge and culture in terms of the perceptions and practices associated with modern scientific knowledge...the dominance of a knowledge system makes alternatives disappear by erasing and destroying the reality which they attempt to represent” (McGovern, 1999: 27).

The focus of postmodernism is on distinct local goals and situations that are seen as “fluid and unpredictable” despite being affected by global drifts. Social development in the postmodern era, otherwise known as post-development, “can no longer be seen as fulfilling some metanarrative, but that it should be a pragmatic matter of inventing new rules whose validity will reside in their effectiveness rather than in their compatibility with some legitimising discourse” (Boyne & Rattansi, 1990: 18). Various post-development scholars highlight the potential variances of the human practice and see development strategies as mechanisms for enforcing cultural consistency.

The fundamental aspects of IKS are epitomised through the mini-narratives, the notions of community and the transfer from content to context of postmodernism. Postmodernism queries modernism’s assertion of a universal truth and it endorses the defence of local cultures. Lyotard sees postmodernity as a set of partly separated social orders, along with Foucault and Derrida (Boyne & Rattansi, 1990). IKS is entrenched in individual experiences and local culture, and the inherent worth of IKS is shown through the frequent application by the local communities of these knowledge systems. Understanding of the value of IKS is growing and finding its rightful place together with other knowledge systems in the postmodern world. Nevertheless, Dei (2000) warned that a crucial position is necessary and that it is imperative to use and question postmodernism that results in “over-subjectivising, individualizing and privileging certain narratives and subject voices”. Postmodernism is censured for its abandonment of bigger political-economic interrogations and for its creation of the world into distinct entities lacking relationships.

5.10 Postmodernism and African Development

Generally contemporary Africa is portrayed as a disappointment; that throughout the 20th Century, progress has escaped the continent, and in spite of new manners of thought for the reasons behind this dereliction and options for achievement, insinuations to the “natural weakness and incapacity of Africans and their social realities remain evident in theoretical, policy and political discourse on development in Africa” (Andreasson, 2005: 971). There is minimal feeling that since then much advancement has been made as African states are defined as having become “criminalised”, “predator states”. Some states have fallen and societies descended into “warlordism”, the overwhelming impression is that of a “quagmire of failure” (Andreasson, 2005: 972; Freeman, 2015).

African deficiencies are said to be internal and therefore the solutions must emerge internally. The Western modernist project has patently been unable to effectively overcome the African continent. The necessity to insist on Africa’s basic shortfalls becomes progressively crucial. Consequently, Africa is unsuccessful is because it is incapable of incorporating Western thought and practice into its confused societal structures. The above opinion is supported by Etounga-Manguelle (2004: 67-77), who contends that “African culture is progress-resistant, and is to blame, hence the need for African culture to undergo some fundamental transformation, a cultural adjustment program to become readily [open] to Western values and thus development.” Even if lives of Africans themselves are not of major worry, accessibility to their natural resources and to emergent entrepreneurial openings continue to show significance post-decolonization. An example is the USA who progressively needs to acquire sympathetic long-term contracts with the continent for its increasing oil and strategic mineral exports. The World Bank indicates that the main problem is the incapability of governments in Africa to properly connect with (Western) idea of “law and order, markets, good governance, transparency and pluralist democracy that are, according to development orthodoxy, prerequisites for development to proceed” (World Bank, 2001).

Some scholars do not share the above view with respect to African development in the postmodern era. One of the challenges facing Africans today, they argue is the need to think about Africa in a different way. Consequently, the old ideas about Africa have let the continent down and now these notions are being analysed as myths. For example, Mudimbe (1998) contends that the idea of Africa and the African was conceived by the “colonial library” to act as the “other” for the West and the Westerner. As it is defined in the colonial library, Africa needs to be rethought. Foucault (1980) maintains that

postmodernism gives scope to think in other ways about Africa, this is because “postmodernism clears free space at the margins of Enlightenment reason where true alterity can be sought and expressed” (Mabiala, 2002: 324).

However, Lyotard (1984: xxiii) dismisses the above view, he argues that postmodernity is “the condition of knowledge in the most highly developed societies”. Africans themselves have shown a great deal of reluctance to embrace postmodernism as a way of understanding what it is to be African. They routinely dismiss postmodernism as a characteristic Western sickness which engenders sorrow and misery rather of assisting political action and conflict (Loomba, 1998). They charge postmodernism with being an imperialist strategy for disempowering Africans. Consequently, Africans scholars show a patent predilection for “post colonialism, which they perceive to be more concerned with pressing economic, political and cultural inequalities” (Mabiala, 2002: 324).

5.10.1 The Natural Resource Curse

For some long time, since Adam Smith and David Ricardo, there has been the understanding that natural resources should be considered a blessing; that those amply granted with natural resources have the advantage over those that do not. People relocated to where natural resources were in abundance for centuries; to the Americas, to Australia, to the Middle East oil-rich states. Natural resource endowments has assisted several countries, including Australia, Canada, Finland, and Norway, to advance and expand, partly through provision of a base for emerging related technologies and other capital goods productions (World Bank, 2001). Simultaneously, the part that energy occupies in development today is arguably different to that which it “played in the late 19th and early 20th Centuries in the United States, Australia and Canada” (Badeeb, Lean & Clark, 2017: 1). Over the past few decades, economists have noticed that those Africa, Latin America and Middle Eastern resource-rich nations, have a tendency to grow at a slower pace than those with fewer natural resources. It has been noted that the custody of natural resources, such as minerals, forests, water and fertile land, is neither required nor enough to give economic success. Many Africa and Middle Eastern countries are rich in oil and other natural resources and yet their people remain experiencing weak per capita income and an inferior quality of life as is the case in many parts of South Africa.

These countries are said to suffer from what Auty (1993) referred to as a 'resource curse' (Badeeb *et al.*, 2017: 1) while 'oil curse' has been "attributed to countries whose economies are heavily reliant on oil production". The term 'Dutch Disease' relates to the adverse effects of manufacturing on natural resource discoveries. According to the Handbook of Development Economics (1998), the Dutch Disease is defined as "...the deindustrialization of a nation's economy that occurs when the discovery of a natural resource raises the value of that nation's currency, making manufactured goods less competitive with other nations, increasing imports and decreasing exports...".

Hostility to this conservative wisdom has been developing since the 1950s first it was focused on the "downward secular trend in commodity prices and limited linkages from primary exports to the rest of the economy, associated with Prebisch (1950) and Singer (1949)" (McMahon & Moreira, 2014: vii). Dutch Disease maintains that a resource increase is the cause of appreciation in a national currency in real terms, consequently damaging exports and import-competing industries and moving resources from "high-tech, high-skill intensive manufacturing industries to low-tech, low-skill intensive primary production" (McMahon & Moreira, 2014: 6; McMahon, 1997). The difficulty is that it is hard to find a country that has had "long-term negative impacts from Dutch Disease and, moreover, mining is very high-tech, high-skill intensive industry".

However, the 1970s and 1980s witnessed the rise in of the resource-poor 'Asian tigers'-namely, Hong Kong, Singapore, South Korea and Taiwan – in comparison to those resource-rich countries, particularly oil, which created an overall re-evaluation of the task of natural resources. Several empirical studies have shown that countries with abundant natural resources, particularly non-renewable ones, fared less well than was expected when compared to less-endowed countries at comparative points in their development (Aunty, 1990; Sachs & Warner, 1995). The *natural resource curse* became the acknowledged understanding by the late 1990s, which led to a large and expansive body of knowledge that attempted to confirm it or clarify why it happens. While some of this explanation was economically oriented, such as "Dutch Disease and export price volatility, socio-political effects dominated the discourse" (McMahon & Moreira, 2014: vii). Much of the research connected with this method focused on pathologies inherent to countries that are dependent on natural resource, such pathologies include: "rent seeking, corruption, lack of democracy, and conflict" (McMahon & Moreira, 2014: vii).

The empirical evidence has exposed a seeming inconsistency, where resource-rich countries also suffer from the resource curse. Many of the richest countries are generally somewhat ill-endowed with natural resources and this opinion has been reiterated by Ross (1999) who states that there is substantial proof that plentiful “natural resource-rich countries perform worse than their natural resource-poor counterparts”. However, not all rich countries follow this pattern. Unlike other rich countries, Norway, which has abundant natural resources, has not advanced in the same manner as other developed countries. For some countries in Africa, natural resources have both been a blessing and curse, for example, thirty sub-Saharan African countries were studied and a negative correlation between economic performance and the share of minerals in total exports was established (Wheeler, 1984). Although Zambia is rich in mineral, particularly copper, resources the country faces high poverty levels, with many of the population living below poverty line, unemployment, environmental degradation, and poor access to healthcare services (UNDP, 2001). In South Africa, the Limpopo Province sits on the vast mineral reserves of the Bushveld Complex with rich resources in the eastern and western parts of province of extensive coal, iron ore and platinum reserves. However, the province is confronted by high levels of poverty and unemployment.

Overall literature that endorses the natural resource curse is popular but is now coming under increasing censure from those who disagree with some of the early empirical findings and others who contend that it is too deterministic. Interestingly, to date, there has been little importance placed on the fact that since 2000, some of the “fastest growing countries in the world have been resource-rich countries, particularly in sub-Saharan Africa” (McMahon & Moreira, 2014: viii). In spite of its confines, the resource curse approach has “brought much needed attention to developmental differences across countries and facilitated accumulation of substantial amounts of data on the variety of different development paths” (McMahon & Moreira, 2014: viii). However, some analysts fail to be persuaded that “pure economics” on its own can describe the resource curse, and in their analyses, several merge economic and socio-political effects and validations. By highlighting the drawbacks of natural resources, this tactic may also assist countries to create more knowledgeable plans and more sustainable policies.

5.10.2 Critical Development Theory

After the destruction of World War II which largely destroyed Europe, leaving cities in absolute ruin and thousands of people impoverished, the Western world instituted the idea of 'development' and human prosperity and thus the theory of Critical Development emerged. This happened through the Bretton Woods financial and trading regime constituted by the International Monetary Fund (IMF), the World Bank and the International Trade Organisation. These institutions were established to fund the reconstruction of Europe and set in motion a path of development that was founded on state-led industrialization and economic growth.

The first period of development theory was therefore based on a form of 'state-led' capitalism. It came into prominence during the 1950s and was promoted by modernisation theory, which conceptualised development as economic growth, and the state as its prime agent (Leys, 1996). During the 1970s, development theory shifted from state-led capitalism to a form of market-led capitalism. The second period of development theory remains and is dominated by neoliberalism. This form of capitalism strengthened market forces and diminished the power of the state to control capital movements. As a result the free market is seen to be the prime mover of development, economic growth and liberal trade (Kotz, 2008). The third period of development theory ran parallel to the second period, which emerged in the 1970s. Resultantly, the evolution of neoliberalism has been influenced by a variety of contested theories, which include dependency theory, feminism, counter-modernism, ecology, post-development theory, and critical development theory. Neoliberalism is, therefore, not a static theory but one that is constantly recreating itself (Feraro, 2008). As a result, neoliberalism is the creation of a complex interaction between many competing and emerging developing theories. These 'other' development theories, however, do not interact as equals, but rather compete in a contested terrain of power. As such, 'other' development theories have had varying degrees of influence on the theoretical developments of neoliberalism.

Development scholars and practitioners have been tussling for some decades with the ideas and practices of constructing the human environment, and by extension, changing it to satisfy human requirements. In order to transform the world, the scholarly debate has been dominated by European ideas and as a result the remainder of the world has been influenced. The "accumulation of European infrastructures and some Western technological skills in the developing world are clear indications of such influence" (Munck & O'Hearn, 1999: 1). Tucker (1999) regards development as an imposition into the lives of

people of the developing world by the industrialized 'North'. He gives a rough reflection of the associations that endure between the developed and developing countries when he states "...Development is a process whereby other peoples are dominated and their destinies are shaped according to an essentially Western way of conceiving and perceiving the world. The development discourse is part of an imperial process whereby other people are appropriated and turned into objects. It is an essential part of the process whereby the 'developed' world countries manage, control, and even create the Third World economically, politically, sociologically, and culturally..." (Tucker, 1999: 1).

Tucker does not value the North-driven contribution of development programmes as essential for the permanence and enhancement of those countries of the South. In the process of the imposition of Western development ideas on the developing world, mistakes are made by both those from advanced nations as well as those from the host countries "because the concepts have no significant validity for the indigenous peoples of the Third World" (Munck & O'Hearn, 1999: 2). He further argues that the explanation for why the developing world occasionally repels Western development strategies and ideas is that the development, "when accelerated, financed and engineered by outsiders, seems to come under the guise of progress and civilisation". The development effort is founded on the assumptions that peoples of the developing world require progress and must to be *civilized* and the final outcomes are "biological and cultural racism" (Tucker, 1999: 5).

In support of the above view, Munck and O'Hearn (2008) argued that development has as a practical and intellectual project, been imbued with hopefulness. Three decades of development has not helped as many countries of the world are worse off today than they were before, in spite of all the development programmes and aid. Thousands of indigenous African people suffer and die from hunger and associated malnutrition. With such failure, deterioration and destruction, it is not possible to continue the discourse on development as the solution to human emancipation. It appears that the development model so widely followed is as much part of the problem as it is the solution. The development discourse is part of a sovereign process where people are appropriated and treated into objects. For this reason the Western economic policies and socio-economic accomplishments cannot be replicated in the Third World, in spite of the transfer of goods, services, capital, or technology. The second concern is the production of structures of power and ideology. Discourses of progress and civilisation have been used to "legitimize confirm slavery, genocide, colonialism and all forms of human exploitation" (Guan 2008: 9, quoting Tucker 1999: 2-5) perpetuated on African people. Modernity also had critical and

liberative dimension that was expressed in a concern for individual human rights and gave rise to critical movements challenging slavery, forced labour and other forms of human domination. However, these liberative movements replaced biological racism with equally malicious forms of cultural racism which bases its judgement of dominance on fundamentally ethnocentric standards, thereby labelling other cultures as inferior, especially African culture.

At the end of the 20th Century a striking features of social science was the growth of interest in culture and as averting from the economy (Ray & Sayer, 1999: 1), “post-structuralism and post-modernism rest on this cultural turn”. The United Nations had proclaimed by 1988 the World Decade of Cultural Development which put culture and development squarely in the conceptual and policy-making arena. It is posited that economic development cannot be separated from the cultural setting in which is entrenched. Culture was then seen as an integral part of the management of development as well as being part of the argument of conventional development concepts. Tucker argued that development thinking should be supported by a “conceptualization of culture as a dynamic and conflictual process” (Tucker, 1999: 17). In the current world of neoliberalism, ‘underdevelopment’ is believed to be the greatest cause of human deprivation and environmental degradation. As such, neoliberalism is believed to be the main contributor to ‘underdevelopment’. In the process the cultural, spiritual, ecological and communal knowledge of the ‘underdeveloped’ world is distorted and often destroyed. This has resulted in a plethora of critical development theories that challenge dominant development theories.

Some critical development theories reject development and argue for radical alternatives (Rahnema & Bawtree, 1997; Redclift, 1987). These critical theories are commonly categorised as post-development theory. Others argue for the critical reconstructions of development using a plurality of alternative and marginalised definitions of development. Considering the devastating social and environmental outcomes of development, it is no surprise that post-development theorists want a radical break from development. However, this reality is highly unlikely given that development has affected every conceivable aspect of human society. As such, the reconstruction of development advocates for a much more realistic option. Critical theory is specifically concerned with substantive normative issues, as objects of research, such as injustice and poverty, without connecting that choice unambiguously with a particular theory or meta-narrative. Critical theory is concerned with the criticism of modernity. The theory seeks “human emancipation to liberate human

beings from the circumstance that enslave them” (Horkheimer, 1982: 244) and tries to “explain the circumstances that enslave human beings and provide the normative basis for social enquiry that will decrease domination and increase freedom and all its aspects”.

5.10.3 The African Renaissance Theory

In opposition to the modernisation and the dependency models is the emerging “African renaissance theory”, which developed because of the failure of modernisation and dependency theories. Matunhu (2011: 71) explains that the theory is “founded on African values and norms which are the very building blocks of African life, that it is about reclaiming the African identity, and the strength of the theory is in its ability to be adaptable to change and innovations provided they are initiated within the social and value systems of the average African”. The theory inspires Africa to operate in a world controlled by cosmopolitan countries through the suggestion that the main emphasis should be micro-level development and poverty reduction.

The fundamental concern of this theory is that “transformation for the future depends on achieving the transformation of institutions, technology, values and behaviour consistent with ecological and social realities in Africa” (Matunhu, 2011: 71). Further it evaluates failure of earlier Eurocentric development theories and posits that future development theories should be guided by Africans themselves. Additionally “development policies and interventions should be centred on the poor and utilise their cultures, values and traditions in order for them to shape their own development path out of poverty” (Tarawali, 2013: 8). Colonial control has completely changed the established mechanisms of African regions and put in systems and institutions modelled on their own. Since the “1950s until the contemporary Washington Consensus, Africa has been the recipient of many policy and ideological prescriptions, most of which have worsened the condition of the continent” (Andrews & Okponachi, 2012: 186).

Development theories, which can be attributed to the history of colonialism, allowed Western domination of global knowledge production, and are characterised by an epistemic disparity. This involves, according to Tarawali (2013: 19) an “academic dependency of Africa on Europe, a Euro centrism of academic scholarship and a lack of African publications and theories describing the African development experience”. African social scientists have “found themselves in the difficult situation of addressing African

realities in borrowed languages and paradigms, conversing with each other through publications and media controlled by foreign academic communities, and producing prescriptive knowledge” (Zezeza, 2002: 9). Thus, African scholarship, having arisen from the setting of colonialism, like modernisation theory and the Structural Adjustment Programmes (SAP), was not necessarily suitable to serve Africa, but rather “Europe and European objectives” (Andrews & Okponachi, 2012: 92). The faulty manner of earlier development theory has contributed to the present socio-economic circumstance in many African countries. Africa must “learn from these experiences and move forward, constructing its own disciplines, theories, world views and approaches that are based on the pillars of African history, culture, and experiences as well as their perceptions of what development should entail” (Andrews & Okponachi, 2012: 92).

5.11 Conclusion

The tradition of the 18th and 19th Centuries classical political economy determined a normative opinion of exception with respect to mining. This custom was absorbed with the Western world’s economic development rather than that of colonial and overseas territories (Bhagwati & Eckaus, 1990). The economic developments in the 20th Century that do deal with the theme of mining have not been capable of building a consistent normative view for mining. By itself, the theme of mining and metallurgy was not a primary concern of the early classical political economy thinkers. As industrial capital in Western Europe and the United States during the 18th Century to early 20th Centuries developed it deepened and extended the mineral commodity exchanges with former European colonial territories of the developing world (Vidrovitch, 2002). International crises launched by the Great Depression and World War II, caused a variety social scientists to question if the integration of Latin American economies into the international markets was of benefit to these countries, as some theories claimed. It viewed the economic restraints of non-industrial countries as organisational failures of the export-oriented paradigm of economic growth.

Thus mining initiatives are viewed as typical evidence of the exploitation and control of foreign monopolist capital. Industrial areas in “underdeveloped countries were characterised by limited and even stagnant investments” (Baran, 1957: 240). The concept has been that Western science and technology has taken the dominant position in development as they were seen as being responsible for the dominance of the North and

was an assurance of development. In the 1970s, according to Vandeleur (2010: 50-1) “development became synonymous with achieving the material prosperity of the West by adopting Western technologies, but this has resulted primarily in monocultures, devastation of nature and the destruction of cultures”. The postmodern line queries this perception of certain ideas and practices having precedence over others. It also looks at power relations such as the authority to generate and knowledge validation. The predominance of a knowledge system makes substitutes fade by removing and extinguishing the reality which they attempt to characterize. The following chapter discuss research findings which are analysed using critical theory lens.

CHAPTER 6: RESEARCH FINDINGS

6. Research Findings

6.1 Introduction

In this chapter the research findings are discussed and analysed. The findings are based on interviews with affected communities, literature review and participant observation. The findings touch on relocation of villages, the mine's expansion programme, workshop and leaderships skills, mining and secret deals. The discussion also covers the following sub-topics: social and environmental impact of mining, social and cultural impacts of mining and people's perceptions of the environmental impact of mining. The impacts are analysed in the light of mining regulations discussed in chapter 4.

6.2 Results and Discussion

The official engagement between the Mapela community and MPM began with the signing of Memorandum of Agreement of the lease between the traditional leadership, Lebowa government, and Anglo American in November 1993. In terms of the agreement, the Mapela community agreed to cede four farms to MPM for the purpose of open cast mining. In return, the Mapela community received compensation of a lump sum of R1.3 million and an annual rental of over R5 000 with an escalation clause. A second agreement was concluded in 1996, but this agreement and its contents were kept secret. In 2006, MPM informed the community that they would make the following arrangement for the community - that the community would receive an annual sum of R13 million and that they would also receive a mine within a mine valued at R45 million per annum. The community was not consulted with respect to the selling of the four farms mentioned above. One the interviewees expressed these words:

"The chief did not consult us regarding mining activities in our land. We were just informed that mining is going to bring 'tsholopele' (meaning development) in our area. We were promised that there will be jobs and our men who are migrant workers, (working far away from home) will now work at home and see their children grow. However, he did not disclose to us that he had already sold communal land to the mine. Neither did he disclose what will be paid to the community and how? Since there were no financial reports about

community funds and how they are used. The only thing we know is when he will slaughter a cow and call the people to eat and said the cow comes from the mine. Deals between the mine and the chief are never disclosed to the community. It was only when the youth and other community structures confronted him; he was able to disclose that the land (some farms) was sold to the mine. Details of the transaction were also not divulged”.

The ceding of the four farms had adverse effects on the communities living in these areas. More agricultural land for ploughing and grazing of livestock was taken away from the people in favour of mining expansion. This further put the people at risk. The problem was compounded by the fact that the people who were affected were not given anything in return to substitute for the lost land. The people were further marginalised and the ceding of the farms drove the majority of them to the brink of poverty and destitution. The money accruing from the mine was only enjoyed by a privileged few. As with the colonial and apartheid regimes, the mine continued to erode the indigenous people’s cultural and economic base in favour of so-called ‘development’ that was viewed through the Western lens. Historic land-based livelihoods that had performed a pivotal role in the livelihoods and subsistence of those rural households in the area were now undermined and eroded by the introduction of mining. The community has not enjoyed proper legal protection over the land they own. While Chaba is underdeveloped on the surface, below the surface is rich mineral wealth (platinum). Although the mine has proved profitable in many instances, the community has generally suffered disruption without due compensation.

6.2.1 Relocation of Villages

The residents of two villages, Ga-Pila and Ga-Lebelo, were forcibly removed from their ancestral land. Initially, the residents resisted the forced removal but eventually, the chief, the mine, and the government colluded, and used the police to enforce the relocation. Whilst the majority were relocated, there were some who remained behind and were adamant that they would not be forced out. In order to further save costs, the mine did not move the ancestral graves, to the dismay and consternation of those who were relocated. Graves and ancestors form the core of the African traditional religion and spirituality and this failure to relocate the graves further alienated the people from their ancestors and eroded their cultural belief system all the while imposing a foreign culture which further advanced the interest of the mining company. The Ga-Pila community members now have to travel 15 km to visit the graves and to speak to their ancestors.

In an attempt to intimidate the remaining villagers and force them to move, the mine began heavy blasting close by to such an extent that the walls of those houses adjacent to the mine started to crack. To intensify the relocation process, the local municipality cut the water and electricity supply. But the community was determined not to relocate or to be intimidated. Those who agreed to relocate were compensated with the sum of R5 000. Because of the high unemployment rate in the area many of the people reluctantly accepted the compensation with the belief that the mine would continue to look after their needs. The two villages were relocated to Sterk Farm 15 km away from the ancestral land. To their dismay, the new houses at Sterk Farm provided by the mine were of poor quality. The houses were also built on a shallow ground water table. There was an inadequate water supply to the area. The villagers tried to relay their challenges to the mine and to the chief but their pleas fell on deaf ears.

Failure by their chief to discuss the concerns faced by the community led to them engaging both the mine and the Mogalakwena Municipality. A dispute erupted between the mining company and Mogalakwena Municipality over who should be held responsible for provision of services at Sterk Farm. The municipality argued that Sterk Farm was private land and did not fall within its municipal jurisdiction. On the other hand, the mine insisted that Sterk Farm was not their property and that it should be serviced by the municipality. As a result of the non-delivery of services in the area many people resorted to returning to their ancestral land from which they had been forcibly relocated. The government failed to subdue the Ga-Pila people and finally allowed Eskom to reconnect the electricity in the village.

The role of the municipality in a rural setting is also questioned by many who do not see any benefits of falling under municipal jurisdiction. No services are offered by the municipality in the area except a water tank that delivers the water. There has been serious shortage of water since the introduction of the mine and the water situation is used by politicians as a way of buying village and community votes during election time. The propaganda and the threat to the communities is that *“if you do not vote for us, we will stop supplying water”*. Water has thus been used as a bargaining tool by politicians in the area. The municipal system duties and traditional authority duties seem to overlap and clash in many instances and both parties are reluctant to take responsibility for a lack of service delivery. However, they are more likely to be involved where there are mining interests from which they are likely to benefit. Generally, the people in the area feel that the municipality and the chief do not have their interests at heart.

6.2.2 The Mine's Expansion Programme

In 2010 MPM began its expansion programme northward. The process is called de-bottlenecking and involved adding new infrastructure and the building of two tailings storage facilities, while on the northern side, parallel to two Mapela villages, two new opencast mining activities were taking place. The expansion of the mine meant that more community land would be required. Four villages, Motlhothlo, Puka, Sekiming, Chaba and the local cemetery of the people of Sekuruwe were standing in the way of the mine's expansion programme. The residents of these villages were very vocal against relocation having already been made aware of how the mining company had dealt with the Ga-Pila people. The villages became more belligerent and rejected out of hand the nuances related to relocation suggestions.

For the mining company to achieve the mission of relocating the villages, it had to circumvent customary laws which are protected under the Bill of Rights in the Constitution of the Republic of South Africa. The mining company and the chief concluded a secret agreement which led to the mine occupying the disputed land. The colonial and apartheid tactics of 'divide and rule' were applied in the face of community resistance. Preparations for the relocation of two villages, namely, Mothlothlo and Puka began before the villagers were fully aware of it and both responded violently when they were relocated. Finally, Mothlothlo and Puka were relocated to the Rooibok and Armoed farms respectively where the mine had constructed new houses and public buildings such as schools and churches for them. There were, however, some families that refused to relocate, as punishment for this lack of co-operation, Mogalakwena Municipality cut off both the water and electricity supplies to the families. The mine was then allowed to proceed with its expansion programme. Some of the families fled when flying debris, the result of explosives detonations, crashed through the roofs of their houses. Nonetheless, there were still families who refused to be relocated.

Having succeeded in relocating two villages, the mine turned their attention to the two other villages, namely, Chaba and Sekiming. The residents of Chaba refused to entertain any suggestions of relocation. The mine tried using a variety of ruses to entice them; promising employment to young people in the village and offering development projects for the villages, but Chaba would hear none of it. The mine even constructed a tar road that connected to the district road, but all of these gestures were futile because the village remained firmly on its land.

To counter resistance in these communities, the chief adopted a vicious strategy used by both the colonial and the later apartheid regime in South Africa of dividing the community in the affected villages. Where an *ntona* (headman/headwoman) would not cooperate with the chief, they would be removed and a new *ntona* who supported the chief would be appointed. The chief appointed new *ntona* so that a portion of the community would support the new *ntona* who would in turn agree with the chief and the mine with regard to the relocation of the villages under their control. The existing, or old *ntona*, would not be recognised by the tribal authority, making it easier for the chief to pass resolutions that appeared to have been accepted by the affected communities. The Chaba people continued to refuse relocation despite the new *ntona* agreeing to it. The result was that the majority refused to relocate. In an effort to frustrate and compel the people to move, the mine detonated mining explosives very close to the village, houses cracked and the entire village was continuously covered in a heavy cloud of dust.

“The mine has trembled our rights, we cannot sleep at night because of the mine trucks that make noise day and night, it is nightmare! During the day we are covered by dust. People are sick here because of dust from the mine. We have lost ploughing and grazing land to the mine”.

The people of Chaba lost ploughing and grazing land to give way to the mine’s expansion programme; they could no longer plough the fields nor keep livestock. Instead of the mine providing any alternative source of livelihood, streetlights have been installed around the village under the guise of ‘development’. The people are up in arms and are demanding adequate compensation for the loss of their land and amenities.

“People cannot eat streetlights, streetlights cannot pay school fees for our children, and streetlights cannot help bury our love ones. We need land and not streetlights”.

This kind of development is an affront to the dignity of the Chaba people and is viewed through a Western lens that fails to take into account the real needs of the people. Within the hierarchy of needs of the Chaba people, the streetlights are the least of their needs. This also supports the consistent theme in this study that the mine does not consult with the people subjected to the mining operations. For the development initiative to be meaningful it should be initiated from within. The needs of the community are defined solely by the mine and the affected community’s opinion is not taken into consideration.

The mine does not understand that sustainable development is necessary for all, that it is something that is defined “differently in terms of each and every culture” (Redclift, 2006: 67). The bulk of the mainstream debate encompassing sustainable development has largely disregarded culturally specific definitions of what is sustainable in favour of the exclusive system of knowledge favoured by the dominant culture (Norgaard, 1988). Redclift (2006: 69) indicates that “the defence of common property resources in the face of relentless market pressures has been a source of considerable political struggle, much of which has intensified since the 1980s, and the triumph of the neoliberal agenda in international policy circles”. The leading approach in which socio-economic development is determined by the West and Western terms has been the neoliberal economic canon. By following this paradigm, according to Gumede (2015: 95), “African leaders have failed to grasp the salience of ideological dominance, historical trajectories of political economies of the dependent and micro-states that make up the continent and the reality of power relations that continue to define the way in which the West relates to the African continent”. On the whole, it is argued, African states were created for extractive purposes, domination, exploitation, and violence. It is within this framework that Oloruntoba (2016: 20) argues that “...unless Africa secures knowledge and economic autonomies from the hegemony of European controlled global capitalist order, the continent and its people will continue to occupy a peripheral position in the global scheme of things.” Mining has had an exceptionally harmful result and has increased the struggle for power by some traditional leaders who wish to have control of mining revenue for their own personal enrichment.

In Sekuruwe, the chief gave the mine permission to relocate the local cemetery to which the people objected. In the end the cemetery was removed and relocated to a new area. To placate and stifle dissent in both villages, the mine established a very small agricultural project and also promised to employ people from Chaba village. In Sekuruwe the mine built a clinic but people consider this as a bribe to placate future relocations. The mine’s expansion programme resulted in more and more land being taken away from the people. There was subliminal dissatisfaction among the people about the chief’s conduct and the mine’s violation of the Mining Charter, and the inability of the mine to implement its social Labour Plans as promised including encroachment of the mine on communal land, the fencing off of traditional grazing lands and general breakdown of the environmental conditions in these areas.

The mine’s expansion programme meant that more and more people were losing their land, the only source of their livelihood. The programme has driven many to the brink of

starvation. The community has complained that 23 years ago, when the mine first came, they had access to running water, now the rivers have dried up and it has become necessary to tank in water once a week. The mine advises the community members to complain to the municipality, which in turn tell them to complain to the mining company. There is currently an absence of any meaningful dialogue, with companies largely paying lip service to engagement with communities. There are no enforcement mechanisms in place that would hold the mining company accountable to the community. There is no land audit nor monitoring and evaluation of mining impact by the government let alone the mining company.

The mine had no clear policy to guide its relocation programme. There were no clear policy guidelines on how affected communities would be compensated in terms of service delivery or development in the new areas in which they would be settled. The affected communities complained that the chief entered into agreements that resulted in settlement amounts being paid into trust funds designed for a particular community. The settlement amounts, thus differed from village to village. For example, according to both the chief and the mine's reports, the people of Ga-Puka received R27 million, but people from that village have disputed the figure. The people of Ga-Pila were reported to have received R22 million but a few years later that money depreciated without ever having been used or withdrawn from the account. The chief as well as his allied *Mantona* (headmen/headwomen) failed to inform their respective communities how the funds were used. People did not understand why the trust accounts should be controlled by the chief and people they neither knew nor elected to administer those trust funds. The community could not access any of the funds for their development needs.

The villages that were not yet settled onto new areas discovered that lawyers organised by the mine were already negotiating deals on their behalf without their consent. They found it strange that lawyers who were paid by mine should at the same time be entrusted to strike a fair deal for people who were resisting the relocations. The community faced grossly skewed and distorted power relations with the mining company only having access to a range of expertise and specialist consultants. Communities were left on their own to defend themselves. Access to information, especially digestible information which they could use to make informed decisions, was non-existent. This illustrates how the chief had allowed the mine to steal the people's land, thereby destroying their livelihood. It also calls on the powers of traditional leaders to be reviewed, especially for those matters that relate to mining and development. The chief displayed all the characteristics of the absolute

monarchs of 15th Century Europe an attitude which has no place in a democratic South Africa. Because of his blatant conflict of interests the chief should not have been trusted to lead any meaningful negotiations between the mine and the community. Land issues such as these have played a crucial part South Africa's history, and effective settlement is vital for stability and development (Resane, 2015).

6.2.3 Workshops and Leadership Skills

The community's opposition to the mining development resulted in the mining company offering community leaders workshops to enhance their leadership skills. Affected villages formed a task team to negotiate with the mine regarding their plight and various workshops were organised in different hostels across the country under the pretence of training the task team. However after attending these workshops, it appeared that the task team was no longer interested in pursuing community issues with the community believing that the team members were bribed in order to silence them. Many regarded them as agents of the mine involved to further exploit the community and subsequently it was rumoured that some of the task team members benefitted from tenders offered by the mine.

Anglo Platinum appointed the Development Bank of Southern Africa to train all 185 senior traditional leaders in the Limpopo Province on a programme known as Visionary Leaders. Because the mine used its resources to train the traditional leaders, this can also be interpreted as a way of influencing them. Government pays these traditional leaders and many have other sources of income, and it was therefore felt that they should seek other ways of paying for such courses to enhance their leadership skills. While the mine's efforts to pay for these workshops was welcomed, it was felt that it should be viewed with caution as this allowed the mine to use such gestures to manipulate the traditional leaders all the while negotiating with them. Traditional leaders should not depend on the mine as such dependence is open for abuse and exploitation by the mine at the expense of communities and opens the door for corruption of those community leaders.

6.2.4 Mining and Secret Deals

In September 2016, the chief convened a tribal meeting in which every village was represented by its *ntona* and *kgoro* (general meeting). By custom that type of meeting allows village representatives to make decisions that will bind both the chief and villages

within the jurisdiction of the Mapela tribal authority. For the decision to be binding to all people, issues must be discussed in a transparent and democratic way. The chief, as the main link with the government and the mine, had to be able to communicate the correct information to the people so that informed decisions would be taken in the best interests of the people. The views expressed below are those of the interviewees: The views expressed answer the first two questions in chapter 1, namely:

- What are the policy and actor contexts underpinning mining in this sector?
- Are the power relations, cooperation competition, and conflict between the different interest groups currently responsible for driving policies and access to resources?

“The chief informed pitso that the mine was prepared to give R175 million to the community and that the release of that money was subject to attached conditions. He informed the pitso further that if a decision to accept money was not forthcoming then the mine would withdraw their offer. The most important condition from the mine was that the community agree to let the mine expand its programme to two more villages, namely Phafola and Sekuruwe villages and for the two villages to relocate.”

People who were supposed to be relocated were not consulted so that they could be afforded any opportunities to intensively discuss this life-changing situation. The representatives of the affected villages ordered the chief not to sign the agreement before the affected parties were afforded opportunity chance to interrogate the matter. While the chief nominally conceded he still proceeded and signed the agreement without the consent of affected parties entering into frequent contracts and concessions with the mining company. Consequently, there was rising opposition against the chief by members of the community because of his lack of transparency and answerability in corporate dealings and accusations of corruption were levelled against him.

The *Mantona* who opposed these deals were constantly threatened with removal from their positions if they did not support the mine’s expansion programme. The *bakgomana* (extended royal family) was prevented from holding meetings at the traditional council’s grounds to discuss the matter, despite these grounds being the customary venue at which all meetings of *bakgomana* are held. To add insult to injury it was reported that the chief had not resided in the area since he was inaugurated. Instead, he was living (in the city, removed from the mine community) and any attempts to organize meetings with him were a tedious process.

The Limpopo Provincial government had to enter the fray in order to protect the community from the unlawful agreement signed by the chief and the mine. It was discovered that the settlement agreement had already been signed by the chief and the mine without the tacit approval of the community. The mining company, on its part, claimed non-disclosure over the terms of agreements entered into with the community, often refusing to allow individuals access to information except through their traditional leader. This means that all interactions and engagements with the mining companies and the traditional communities were arbitrated and managed by the chief. As the often, self-appointed, custodians of the rural land and other tribal properties (Mnwana, 2014: 22), “chiefs see themselves as legitimate mediators and gatekeepers through whom mining capital can gain ‘easy access’ cheap local labour and communal land”. This approach has magnified the chiefs’ authority and formed a lack of transparency, unaccountability, heightened inequality, deepened poverty and local tension (Mnwana, 2015; 2014: 22),

The community insisted on acknowledgement of their own development requirements, justice and comprehensive results, particularly where the mine had badly impacted on the community and its environments. The community questioned if the minerals belonged to all as the resource was not benefitting the wants of those who had borne the brunt of the extraction. The chief appeared to ignore the most acute requirements of the society when handling the mining question, closely fixated on attracting and assuaging corporate business interests to the detriment of his community. The silence by the South African government on the impact of mining on indigenous communities meant that the government allowed the interests of European mining companies to be put before the interests of its citizenry.

6.2.5 Customary Law and the Local Chief

Customary law in Mapela is based on an inclusive, democratic decision making structures and multi-layered participation in traditional governance. The system provides for several accountability mechanisms. Most importantly, it requires informed consultation at all levels of the community before any decisions and actions are taken, and it obliges traditional leaders at different levels to provide regular and detailed feedback to the people on those decisions and actions. The powers of the chiefs are limited by a number of customary checks and balances. He is assisted by several functionaries and different councils in the community. In order to make contentious decisions affecting the community, the

customary law of Mapela requires that all community structures be consulted. The chief is required to consult with both the *bakgomana* and the *mantona*. Each *ntona* is then expected to discuss the issue with their *kgoro*. This a very important level of engagement as it is only at village level that most people are able to participate directly and effectively in the customary decision making process. The community members do not regard the current, very authoritarian top-down style of chieftainship as being consistent with the traditional institution. Finally, the chief's absolute power to make binding decisions is not subject to appeal regarding the community's law, custom and practice and is not in keeping with the community's living customary law. Supporting structures serve to mediate the chief's powers and also allow for a broad community participation in decision making. They include:

- *Lekgotla la bakgomana*: The council of the elders of chief's immediate family, described in the Limpopo Act as the royal family that customarily advises the chief on day-to day basis.
- *Lekgotla la bakgomana*: A wider collective of elders of the ruling lineage, including *bakgomana*.
- *Lekgotla la bakgomana le mantona*: A wider collective of elders of the ruling lineage, including the *bakgomana*, but including the *mantona* (headmen)
- *Kgoshi le mantona*: The chief and the headmen. Each *kgoro* (a largely kin-based territorial subdivision of the broader community) represents his or her constituency in meetings with the chief.
- *Khudu-thamga*: The headman's cabinet. These are advisers to each headman or headwoman.
- *Pitso*: A mass community meeting to discuss very important or contentious issues
- *Pitso* at *kgoro* level: A community meeting of all members of a particular *kgoro* called by the relevant headman or headwoman, to discuss important issues in the *kgoro*.

The above structures and protocols have been blatantly ignored in order to drive a self-enrichment agenda and have treated everyone else in the community with contempt. The above description of customary law in Mapela demonstrates the democratic practices

inherent in the community's traditional governance. The system values a multiplicity of voices and provides for inherent checks and balances in the flexing of unilateral power. In order for the chief to have authority to represent the community, it is required that the he must adequately consult and the members of the community have the procedural right to participate in any decisions that affect them.

The chief's involvement in mining deals resulted in the breakdown and disintegration of community development and customary law. Under his rule the mine was given unprecedented power to encroach on tribal lands through secret deals signed with the chief. In violation of customary law, the chief often claimed to be the sole community representative in the negotiation process with the mine company. "The colonial and apartheid conception that every African was a member of a tribe and that custodianship of African land solely rested on the authority of local chiefs was deeply flawed...pre-colonial chiefs did not have control over the property rights of their subjects" (Curtis, 2008: 10; Delius, 2008). This understanding is a misrepresentation of the nature of the power of chiefs used to further the process of indirect rule and dispossession, in terms of which the institution of chieftaincy was controlled and manipulated by colonial and later apartheid authorities to further their own causes (Myers, 2008).

Customary law in South Africa can be apportioned into two main groups - the 'official' and the 'living' law. While "official" customary law is a creation of the state and its legal experts, "living" law alludes to those laws actually practised by the people who fashioned it (Bennett, 2004: 138). Official customary law is a "product of colonial formalization of indigenous people's law, which imposed rigid, Western rule-oriented conceptions of law and order"...living law, on the other hand, evolves organically out of ever-changing African socio-cultural processes of dispute resolution (Comaroff & Roberts, 1981; Mamdani, 1996; Mnwana, 2014: 22). Local environmental stewardship categorized by humane and sustainable society-nature connections have been pushed out by the Western informed traditions of socio-economic progress, despite them being of benefit to the poor who are the most reliant on the environment (Museka & Madondo, 2012).

The procedure of formalization of custom heightened the authority of chiefs during the colonial and apartheid periods. The supposition that chiefs are guardians of rural land and mineral wealth and therefore can allocate and isolate land rights and agree to complicated mining deals on account of their indigenous rural communities has no pre-colonial antecedent. Distributive authority over land does not lie solely with the chiefs. There are

many levels of control that lie in the differing social units, families and the individuals contained within. First and foremost, chiefs have never been granted the power to remove land rights from ordinary residents (Mnwana, 2015). Centralizing this authority into the hands of chiefs is yet another type of dispossession of the rural masses. In such instances, chiefs served to fortify colonial and apartheid legacies. By overlooking consultation with the community, the mines undermine the fundamental custodians of the land in favour of the chief. The chief cannot claim to represent his subjects if no consultation was undertaken with the community.

This is an attitude to customary law that opposes the abundant anthropological works on the collaborative and democratic features of living customary law (Molema, 1981). Literature stresses the many stages of power and decision-making ranging upwards starting at the household, going up through the extended family, the clan and the village to polity. Within these structures, which have mutual aspects across traditional communities, authority is arbitrated by opposing centres of power that exist in a state of constant tension (Delius, 2008). These interweaving levels of discussion and decision-making enable a layer of answerability that is essentially weakened when authority is lies solely with the chief.

Legislation enacted after 1994 has legitimized the arbitration of mine-community relations by traditional leaders, and expressively heightened the authority and position of chiefs (Mnwana, 2015). Parliament does have power to stop this double dispossession by revising understandings of custom and traditions that have the effect of endorsing policies and laws that weaken human rights, equality before the law and principles of sustainable development. The Traditional Leadership and Governance Framework Act 2003 (Act 41 of 2003) is the main piece of legislation in this regard, hence it “remains extremely difficult for indigenous rural communities to challenge the chief to account for the vast mineral revenues that he controls on their behalf” (Mnwana, 2014: 23). Traditional leaders acquired powers not only to make and implement law, but also to adjudicate it; thereby fusing the functions of the legislative and judiciary in institutions without formal accountability to the people they preside over (Hall, 2014). Local Developments and Social Labour Plans

“The Social and Labour Plan (SLP) system in connection with Broad-Based Black Economic Empowerment (BBBEE) schemes under the Mining Charter, are the primary mechanism through which the mines are supposed to channel the profits of mining”

(Curtis, 2008: 47) for the assistance of communities and the transformation of society in general. According to Snyman and Krause (2012: 1) “SLPs contain the principal measures required by mining rights holders to address the socio-economic conditions of mine workers and communities”. The purpose of the SLP model is to make it a “statutory licensing requirement for mining companies to develop a range of human resources development and local economic development programmes” (Curtis, 2008: 47). The programmes contained in the SLP document, are obligatory on the company on the granting of mining rights by Department of Mineral Resources (DMR). The Mine Works Program (MWP), the Environmental Management Plan (EMP) and SLP are prerequisites for the granting by the DMR of a mining right.

In order to be eligible for a mining right, mining companies are required to submit an SLP, developed in consultation with affected communities to the DMR. The SLP and its five year cycle gives both a good chance and time-frame for the mine and the community to work together towards reaching sustainable development results connected to the mining program which has the ability to permit a mine to acquire a Social License to function (Ndaba, 2016). On the granting of the mining right, these commitments become binding conditions. Non-compliance with the SLP can lead to the suspension of the mining right. Before the end of each cycle, companies need to draw up a new document for the following five years. This repeats itself until the end of life of the mine. To maintain the SLP, the mining company is required to connect with the surrounding community and develop a strategy on how it intends to satisfy the community’s desires. As soon as the community’s “expectations plan” has been planned and ratified, the mining company is required to follow through on its promises and the expectations of the community.

The “objectives of the plans are namely:

- I. Promote economic growth and mineral and petroleum resources development in the Republic (section 2 (e) of the (MPRDA);
- II. Promote employment and advance the social and economic welfare of all South Africans (Section 2 (f) of the MPRDA);
- III. Ensure that holders of mining or production rights contribute towards the socio-economic development of the areas in which they are operating as well as the areas from which the majority of the work force is sourced (section 2 (1) of the MPRDA, and the Charter); and

- IV. To utilize and expand the existing skills base for the empowerment of HDSA and to serve the community. “ (DME, 2008c)

A critical analysis of the MPM's SLP of July 2010 shows that it has not met all of its five year targets. Interestingly, the company claims that it has made an effort to engage with the local mine community and major labour source areas. However, the interviews with these communities point to the contrary. Accountability to communities remains evidently absent throughout the life cycle of the SLP and they are often not afforded access to the SLPs and the mine's annual reports. The SLP projects are not always directly related to the developmental necessities of these communities. The SLPs do not have a baseline from which to function and targets are regularly changed which make it difficult to track their effectiveness. While the local populations speak predominately Sepedi, the language of the SLP is always in English and is not translated into the local language of the mine community. The views expressed below are those of the interviewees: The answers relate to the research two research questions in chapter 1, namely: How could policy and regulatory instruments be influenced to protect the rights of the indigenous communities towards mining activities? What is the role of traditional governance systems and indigenous natural resources management in mitigating mining impacts?

“The mine did not consult on when formulating the SLP. We were told that the SLP is very complex and as such we will not understand its contents. It is also voluminous that it will take a very long time to read and understand it. What frustrate us is that we did not know its contents since we were not consulted when it was formulated. The chief cannot claim to represent us as he is not involved in community's affairs. He is far removed from us. He rules us by remote control. Why does he not want to relinquish power if he does not want to live in the village but wants to enjoy revenue accrued in our land? The government is not doing anything to ensure that the chief is accountable to his subjects”.

Incidences when failure to deliver on SLP commitments “leads to significant enforcement action, such as the suspension or withdrawal of a mining right are extremely rare” (Snyman & Krause, 2012: 6). A direct result of lack of any consequences means that the mining companies do not take their commitments seriously. Communities experience the DMR as absent during the licensing process and this absence is felt more generally and in relation to issues that arise later in the life cycle of the mine. There is no monitoring of SLP projects and furthermore the community is negatively affected by mining activities. The mine has to make a concerted effort to mitigate the challenges associated with its

operations but this does not apply to MPM. Local communities were usually not even aware of what these plans intended, reflecting the fact that the mine does not take the community's development agenda seriously (Action aid, 2008).

The introduction of the Mining Scorecard has given a potential standard against which companies must attain their "transformational and socio-developmental targets" (Morris & Baartjies, 2010: 295). This scorecard gives both an administrative and legislative tool to guarantee that a practical structure is given to establish if the mining company's processes deliver on what is intended by the MPRDA and Mining Charter. "Target dates for implementation of socio-development programmes were mid-2009, and impact is expected to be visible in years to come"...however..."the current economic crisis means that the planned interventions will be further delayed or may never take place" (Morris & Baartjies, 2010: 296). As such, the mining industry is given a free pass to further exploit indigenous communities, take away their land, their only livelihood, in exchange for misery. The communities are left with health problems, environmental degradation and poverty. As a result, indigenous communities feel an increasing form of social alienation, economic inequality and environmental destruction due to mining operations (Renner, 2007). Meeran (2003) believes that an absence of accountability by corporations has a harmful effect on society.

The mine has documented agricultural development as one of its main successes in rural development. Below are some of the projects the mine prides itself in:

- Poultry farming in Ga-Puka at R4.5 million
- Vegetable production farm at Chaba at R10 million
- Nguni livestock project at R4.5 million.

The vegetable farm at Ga-Puka was touted as an entrepreneurial project that would create 300 jobs and bring unprecedented financial benefits for unemployed youth. The structure has been erected but the project has failed to start. The same has happened at Chaba and Molekana with no job opportunities being created. The Nguni livestock project document exists only on paper. All of these projects epitomise a mining company's desperate window-dressing and their marginalization of the community.

Interviews with community members reveal also that the mine did not consult them in the formulation of the SLP. They argue that consulting with the chief does not mean that the

mine has consulted with community. Community members were highly critical of the role of the mine and the manner in which it dealt with issues affecting them. It was alleged that the chief was benefiting from the SLPs in a number of ways and there is no “fair and transparent sharing of the mine’s benefits with the community” (Ndaba, 2016: 3)...South Africa, as with most mature mining jurisdictions, the most problematic feature faced by the mining industry stakeholders has been to ensure that the collaborative efforts made in developments projects yield the desired results”. Inadequate programme and project planning is one of the problems. Results Based Monitoring and Evaluation has been recognised as having a vital part to play in guaranteeing that promises between the community and mining company are realised as it can allow for the continuous checking of activities versus results (Ndaba, 2016). Monitoring and evaluation can be used to promote good governance in the administration of SLP projects and promote accountability. Ndaba (2010; 2016: 4) points out that a mine can find itself in a “favourable position with its immediate community when its SLP projects are directly linked to the developmental needs of its community and are implemented successfully”.

6.2.6 Social and Environmental Impact of Mining

Mining has brought a range of negative impact, including damage to houses through blasting; the disturbance of ancestral graves; and the loss of arable land. The negative environmental impact in the area has become a source of concern. The majority of the people in the area rely on the land for food security and further, land dispossession relates to an access loss of other natural resources such as firewood, herbs and indigenous wild fruits. The adverse impact is particularly severe on the local food economy since the ploughing of fields, which is a critical resource, is no longer there for most community members. Mining-related land dispossession has destabilised food security of many of the households. It also destroys the traditional way of life and livelihoods through loss of agricultural land for the majority of the people. The views expressed below are of the interviewees in the study area regarding mining impact: which also answer the first research question in Chapter one. What impact has mining had on African small-scale agricultural production?

“The mine does not do anything for us to compensate for our land. We cannot be employed in the mine as we are told we do not have the required skills to be employed. But when the mine started we were promised that we will be better off because the mine

will improve our lives, offering job opportunities and development. What we experience is misery and nothing else. We were better off before the mine started and we have now lost everything that we cherished (our land, livestock and clean environment). We are now experiencing many challenges: many young, old men and women have died of HIV/AIDS, crime has increased alarmingly and children and women are the people most affected by crime. Drug abuse including alcohol is rampant since the introduction of mining and influx of migrant workers in the area. Nothing is being done to address these challenges”.

Acid contamination is also a source of concern. The entire community has been deprived of access to drinking water through serious water pollution that is linked to the mining operations. Before mining operations commenced, people did not complain about strange smells in their boreholes. Streams that were perennial began to run dry through the blockading of rivers in the highlands. In turn, vegetation that livestock such as goats and sheep depended on disappeared. What also enraged and saddened the community was that their cattle started to develop strange sores on their bodies and teats. Cows began to experience stillbirths and abnormal births, thought to be linked to their drinking water contaminated with chemicals from the mining operations still remaining in the rivers.

The community suffered the disruptions of the mine operations with restricted and poor compensation that invariably been mishandled and lacks any significant share in the mine's profits. Ordinary people become vulnerable in such circumstances. Because of the secrecy surrounding the mine deals with the traditional leader in the area, it became very difficult, if not impossible, to obtain the environmental impact assessment (EIA) of the mine operations. Any information was obtainable only through the traditional leader and the process for obtaining such information proved onerous. The community overwhelmed the mine management with their experiences and the mine appointed various contractors to close cracks in damaged housing but the workmanship was so poor that the cracks reappeared in the same places. People have lost trust in the mine and the chief. The community members have found mining companies and government unresponsive to their needs and concerns and have therefore mobilized in defence of their rights. So far, nothing has been done to resolve these issues and the mine and government have used private security and the police to quell prevailing discontent. There is substantial dissent between mining communities and the mining industry with respect to the physical health impact of the industry, in addition to the differing accountabilities of the role players.

6.2.7 Social and Cultural Impacts of Mining

The unfavourable impact of opportunities for local employment at a time when there is a serious skills shortage seems paradoxical. Several of the participants voiced concern about local people being passed over for jobs in favour of non-residents. The mine does not support local businesses and the mine does not source its products from the local area.

“The projects that the mine has introduced in our area are not of any relevance to the community. Worst still, people who are employed in these projects come from outside. Some of the project structures have been burnt down by the youth since they do not see any relevance of the project to the community. The community does not want to hear anything about the mine because it has affected our lives very negatively. The mine must close and go away so that we can live in peace”.

Many of the corporate assertions of social responsibility have been exposed as superficial as less than 1% of profit is spent by the company voluntary community development, education, health and welfare (Mark, 2008). South African's mining companies, especially in the platinum industry, have shown some fidelity towards their CSR responsibilities, but they lack honesty towards the social well-being of the communities on whose land they work. By itself, the character of CSR has shown itself as charitable strategies “remised on competitive efforts at gaining an improved image and reputation” (Hamann, 2004: 288). These perceptions still hold sway in many mining companies in the 21st Century, especially in the Platinum Belt.

Despite the industry's CSR and sustainability policies, there is minimal indication that the industry is confronting its long-term responsibilities, particularly with respect to health and environmental impact. The Bench Marks Foundation (2012) maintains that the mines on the Platinum Belt care little about “water impacts that cause health and livelihood problems; air quality issues that led to respiratory problems; or the overall development of communities on whose land the mines operate” (Cronje, *et al.*, 2013: 8). The MPRDA through the Mining Charter has put matters of CSR and sustainable community development into the hands of the mining industry at national level; it has failed to elaborate what this means in practical terms. The problem is further compounded in that the DMR does not have a measuring tool or benchmark to establish the extent to which companies are implementing their CSR and how that subscribes to sustainable community development (Yakovleva, 2005). Extractive industry companies with sizable social,

physical and environmental impact footprints, have influential inducement to put money into their host communities. Therefore, the role of mining and CSR specifically, for sustainable community development needs a more methodical analysis (Bendell, 2005).

6.2.8 Indigenous People's Perceptions of the Environmental Impact of Mining

A pair-wise ranking of problems, which provoked the community's observations on the issues encountered in the area, indicate that the most important problems relate to the "pollution of water sources from mercury and cyanide, dust, mine pits, cracking and the collapse of buildings" (Kitula, 2005: 409). Mineral extraction involves excavating underground pits and the destruction of rocks using explosives which has caused land degradation. Agricultural and grazing land has been devastated in the process. Opencast mining, as is the case in this study, has the potential to generate large amounts of waste. The waste produced contains toxic material which can interact with water to produce contaminated liquids that can poison soils, rivers and large water bodies (Kitula, 2006). This poses serious health threats to the mining community. Managing and assessing the social impact of mining operations will ensure stronger relationships with affected parties. If mining activities are to contribute to sustainable development in the affected communities they should embrace Social Impact Assessment (Killan, 2008).

Rural communities should be given power to refuse companies permission to extract minerals from their land since literature has shown that mining in many instances results in the mass displacement of indigenous communities and the destruction of their traditional way of life. The right of people to say "NO" to mining of any kind on their land should be guaranteed in the Constitution. Government appears to only be concerned about revenue and less concerned about the impact of mining on indigenous communities. The people have been pushed to the extremes of poverty because of mining extraction. Where communities refuse to allow mining extraction in their ancestral land, DME should not issue mining rights without their consent.

6.3 Discussion

6.3.1 Law Governing Mineral Extraction

Lack of information on the rights and laws that are applicable to mining is a challenge that communities in rural areas face. Mining law and governance is complicated and heavily influenced by the racial injustices of apartheid. The differing laws that apply to mining are governed by three national departments as well as by provincial and municipal government. Resultantly, persons affected by mining find it difficult to determine their rights or to identify who can help. On occasion mining companies deceive communities by supplying minimal or invalid information. Some mining companies have employed the use of tricks to evade proper consultation with the community such as convening meetings in places and at times that are unsuitable for the community. It is alleged that the mining companies bribe community members to supply misinformation at public meetings or to disseminate lies about the meeting. For this reason it is prudent for government to facilitate such public consultation meetings to ensure the process is fair and transparent. When mining companies are left alone to facilitate the consultation process, as is the current situation, mining companies are given the license to become both a referee and a player at the same time. Rural citizens are frequently incapable of obtaining basic information on the choices made on their behalf, it is the chief who generally negotiates the mining agreements, not necessarily favourable for the wider mining community. He is not obligated to either consult or explain to, affected community members. Within this context sustainable development cannot be attained.

Extractive industries do substantial permanent damage to the environment. Sadly, the affected communities have no information about what the state receives from these operations or how much money is paid back into the mining community. The impact of the mine on the community has been extensive. The community has suffered disruption from the mining operations while receiving only limited or inadequate compensation that has been mismanaged. The “problems concerning transparency and accountability are recurrent and systemic” (Pickering & Nyapisi, 2015: 32), the community continually “struggle to achieve transparency regarding deals entered into between the chief and the mine, ostensibly on their behalf”.

The absence of transparency and accountability is apparent from the inadequate legal structures and the chief’s growing abuse of power. Only consultation with the community and the mining company reporting of the consultation outcome to the DME is required by

law. Permission from the community is not required, and the DME is under no obligation to consult with the community, further the community has no legal right of access to the report sent to the DME. Even worse, the compensation offered to them for the loss of land is presented as the only offer. At times such offers are accompanied by acts of intimidation on part of the mining company (Mark, 2008). The compensation does not take into account the agricultural value of the land and the homestead. The compensation is not linked proportionally to the value of the minerals under the ground (Claassens, 2014).

6.3.2 Regulatory Frameworks and Local Economic Development in Rural Areas

The involvement of traditional leadership in economic development strategies is at least as old as the development industry. During the pre-colonial and apartheid years, traditional leaders were the primary contacts as mediators and spokespersons on all community-related matters. Throughout the pre-colonial and apartheid periods, traditional leaders were engaged in the mobilization of unremunerated labour, the construction and application of the migrant system and the collection of taxes (Dusing, 2002). Thus, traditional leaders were supposed to implement top-down government policies and the success of development projects largely depended on the support or disapproval of these leaders. These leaders, according to their individual, financial and infrastructural capacities and their respective party political alignment, have been both the facilitators of and obstacles to local development. Consequently, traditional leaders have been labelled as a relic of a conservative past with little relevance to the present. The apartheid regime expanded on those colonial misrepresentations of customary law that had previously given unidentified authority to traditional leaders, and deprived those living within in the former Bantustans of their South African citizenship rights; justifying this denial land ownership for indigenous people as the upholding of customary law (Claassens and Boyle, 2015). This is the case with the Chaba people. The Constitution states in Clause 25 (6) that "A person or community whose tenure of land is legally insecure as a result of past racially discriminatory laws or practices is entitled, to the extent provided by an Act of Parliament, either to tenure which is legally secure or to comparable redress". Twenty-four years after the adoption of the Constitution there exists no comprehensive legislation to secure tenure rights of people in rural areas. Instead, the government has offered the people in these areas a system of communal rights controlled by traditional leaders.

The dispute that arose as a result of the conclusion of the settlement agreement is itself an illustration of the dangers of refusing to hear more than one community group or treating only one group or structure as the 'legitimate' voice of the people. Several of the frustrations expressed from people in the study area have come into being through unsatisfactory or lack of any consultation on conclusions reached that affect the community. The chief cannot rely on customary authority in claiming to represent the community while breaking the fundamental principles of customary law. The chief and his predecessors have previously negotiated lease agreements over community land without the consent of land rights holders and with no transparency regarding the use of the lease payments. The problem has been compounded by the fact that rentals payable to the community since the inception of the mine have not been used for the benefit of the community. Finally, the chief's absolute power to make binding decisions not subject to appeal regarding community's law, custom and practice is not in keeping with community's living customary law or the constitution of the country. These laws are denounced for their bolstering the local chiefs and tribal councils' authority over tribal property, in particular land and mining revenues, and for creating downward responsibility unrealisable (Claassens & Matlala, 2014). Chiefs are seen as the sole intermediaries of mineral-led development and mining arrangements. The lack of any direct community power persists as a main instigator of communal opposition and socio-political conflict (De Koning, 2008; Ikelegbe, 2005; Obi, 2008).

The pervasive lack of transparency results from a variety of factors. Firstly, the government endorsement of the distorted colonial version of authority for the chiefs that devolved exclusive decision-making power down to the traditional authorities and which excluded people who occupied the land, thus subverting customary-law systems that endorse collaborative decision-making and transparency. Secondly, the absence of and transparency is intensified by flaws in the regulatory structure that ensures consultation, agreement, and downward responsibility in mining companies. Thirdly, issues are further deepened by the apparent inability to maintain the constitutionally defended, informal land rights of local people living there who are susceptible to manipulation by traditional leaders and mining companies (Pickering & Nyapisi, 2015). Lastly, the traditional leaders' powers and duties have not been transformed to keep pace with 21st Century South Africa. In the end, leadership has to be about seeking all-encompassing development, whilst development is about including the people instead of thinking about what it is that

constitutes development and following those programs that they think advances development. Development should include the people themselves.

6.4 Conclusion

Traditional leaders' powers and duties still resemble those of the colonial and apartheid eras where traditional leaders were seen as absolute rulers of their people, serving the interest of their colonial and apartheid masters in the exploitation of the indigenous people. Their role in the 21st Century appears to be to serve the interests of mining companies and the ruling ANC elites. The government's failure to transform the system of traditional leadership has led the mining companies and traditional leaders to exploit ordinary people. While the benefits are enjoyed by few elites and company owners overseas, the rest of the mine community are left in abject poverty. Platinum is a curse to the people of Mapela, especially the Chaba. While their land is rich in platinum, they are faced with massive unemployment, underdevelopment, environmental degradation, and erosion of their livelihoods. The framework governing traditional leaders must be amended to ensure that the rights of indigenous rural people are not infringed when valuable minerals are discovered on their land. South Africa's current legal structure is not effective enough to deal with increasing village poverty and marginalization as its present understanding of community, which currently is thought of as being a tribal or traditional community, fails to encapsulate the "complex character of residents who co-exist with major mining operations in the Platinum Belt" (Mnwana, 2015: 507). Additional research is required to examine varying impact of mining on local communities. Ultimately, the lack of clarification in a democratic South Africa of the authority and position of chiefs has provided them time to lobby, mobilize and push for recognition. The next chapter deals with the conclusion of the findings and recommendation. This followed by the policy analysis and policy development.

CHAPTER 7: CONCLUSION AND RECOMMENDATIONS

7. Conclusion

7.1 Introduction

Mining has historically had a critical part in South Africa's development having been the driver of the national economy for at least 50 years (DME, 2008). However, with respect to the GDP, the manufacturing and the finance and service sectors have both taken over the status of being the driving force of South Africa's economy from the mining sector. The profits and the costs obtained from the regions of production of the minerals have historically not been equitably distributed amongst the people involved in or affected by their production. Rather than mining companies being viewed as development agencies, they should be viewed as an aid in the process of poverty alleviation development for local communities (Carrol, 2008). The deleterious and negative effects of mining can be seen when there is a scramble for power over the revenue from mining by some of traditional authorities. The benefits of mineral resources will remain elusive if government and mining companies strike deals that are one-sided and narrowly focused.

Research into mining activities and their impact on South African local communities and livelihoods in has been minimal. Further research and analysis are required specifically on the transforming impact mining has had on local communities in South Africa. Of critical importance is a necessity for non-corrupt partnerships between the mining companies and the local municipalities that will allow for the analysis and plan development to address the issues between local service delivery and environmental issues. In order to deal decisively with challenges faced by rural communities, legislation that hampers rural development needs to be reviewed and amended accordingly and follow the policy development process in which affected and interested parties are consulted, especially rural communities who have been excluded from policy formulation that affects them daily. Recommendations outlined below should not be viewed as a panacea, but rather to help mitigate part of the mining impact on rural indigenous communities.

7.2 Recommendations

7.2.1 Minerals and Petroleum Resources Development Act, No28 of 2002 (MPRDA):

The MPRDA contains an essential regulatory requirement, which is the submission of SLPs. The SLPs are a precondition for obtaining mining or production rights and necessitates that applicants for these mining rights develop and carry out an inclusive programme on human resources development, which includes employment equity plans to facilitate transformation within the industry. Another SLP requirement is the formulation of local economic development programmes and processes intended to preserve jobs and administer any downscaling or closure. These programmes are directed at advancing employment and South African social and economic welfare which ensures economic progress and socio-development (DME, 2008). The preconditions set out by the DMR that allows for the mining rights include the Environmental Management Plans (EMPs), the Mine Works Program (MWP) and the SLP. The maintenance of the SLP requires the mining company to involve the immediate community and includes planning on how the SLP will meet the community's expectations. Once these plans have been constructed and approved, the mining company is expected to follow through with their commitments. The five year cycle of the SLP present an opportunity for the mine and the community to operate together to achieve sustainable development outcomes, which are linked to the mining project. The mining project has the potential to facilitate a mine to acquire a Social License to operate. These requirements are often ignored by the mining company.

The MPRDA needs to be amended to give the communities the right to refuse mining development in their lands. Currently communities cannot object to mining development even when research (MWP, EMP and SIA) shows that mining development will result in displacement of vulnerable people in the community. A setback that occurs is that consulting with the traditional leader is regarded as consulting with the affected community. The MPRDA should make it mandatory for the mining companies and the DMR and the Minister to discuss with the involved communities. These consultations include a two-part process between (the applicant of the mining right) and the community or interested and affected parties whereby, according to the DME guidelines (2002: 3) "the former is seeking, listening to, and considering the latter's response, which allows openness in the decision making process". Reports relating to the impact of mining operations should be accessible to the mining community. The SLP and related plans should be made public without the communities having to request such records through legal processes in term of the provisions of PAIA and PAJA. These records will enable the

communities to take informed decisions when negotiating with mining companies. If the SLPs are developed in conjunction with the affected communities, the plans will speak to real issues that affect the mining community and this will in turn encourage compliance and better working relationships between mining companies and mining communities. The SLPs responsiveness to the community's needs could be improved by providing for the formation of multi-stakeholder forums, which deal with the SLPs from the design phase all the way through to the closure of the mine. The inclusion of community-based organizations should be compulsory.

There should be a written lease agreement between the mining company and the community before mining operations can begin. This is to ensure that the community is not exploited by the mining company. SLPs should be a joint venture between mining companies and affected communities. The community should have power to withdraw the mining rights when it feels that the mining company no longer meets the community's expectancies. This will ensure that mining companies implement SLP commitments.

South Africa can learn from Australia where there is regulation and monitoring of mining operations. Environmental and Social Impact Assessments are fully transparent, drafts reports are open for public comment, and the public is also given an opportunity to respond the final reports. A code of Environmental Management also exists which involves that each signatory produces an annual environmental reports to confirm application of the code and to highlight their obligations to excellence in environmental management.

7.2.2 Monitoring and Evaluation (M&E)

Currently there is a lack of monitoring and evaluation mechanisms to monitor the impact of mining. There ought to be consistent monitoring and evaluation of SLP implementation and mining impact on communities by DMR. In South Africa, as with most developed mining jurisdictions, the most problematical aspect encountered by mining industry stakeholders has so far been to ensure the collaborative endeavours made in the development projects yield the required outcomes. One of the difficulties is inadequate programme and project planning. The Results Based Monitoring and Evaluation plays an important role in ensuring the achievements of the commitments reached by the community and mining company. These allow for constant monitoring of activities against results (Ndaba, 2016). Monitoring and evaluations may be used to promote good

governance in the management of SLP projects along with promoting accountability. A mine will be located in an advantageous location with its surrounding community when its SLP projects are combined directly to the developmental needs of its proximate community and are executed successfully. Monitoring and Evaluations of mining operations should be mandatory and the reports thereof must be accessible to the affected communities. This will ensure that the impact can be monitored and mitigated at various stages of mine's life circle.

7.2.3 Constitution of the Republic of South Africa, 1996: Chapter 12 of the Constitution

Chapter 12 of the Constitution deals with the recognition of the institution, status and role of traditional leadership should be repealed in its entirety. South Africa acknowledges the institution of traditional leadership; however, the country faces a major problem. There is a lack of understanding on what the role traditional leaders should play in local governments and other spheres (Bank & Southhall, 1996). Traditional authorities compete with elected democratic leadership. Thus the traditional leadership authorities might be regarded as a fourth aspect at local level. The chief's involvement in mining deals resulted in the breakdown and disintegration of community development and customary law. Under his rule the mine was given incredible powers to encroach on tribal lands and also sign secret deals. In violation of customary law, the chief often claimed to be the singular community representative in the negotiation process with the mining company. Due to this it remains challenging for indigenous rural communities to contest their chief to provide an explanation for the mineral resources and revenues that he manages on their behalf. Traditional leaders combine the functions of the legislative and judiciary in institutions, which occurs without formal accountability to the people they preside over (Hall, 2014).

The colonial and apartheid conceptualisation that all Africans belonged to tribes and that curatorship of African land was dependent on the control of local chiefs is deeply defective (Delijs, 2008). This understanding is a misrepresentation of the essence of the control of chiefs and is utilised to advance the process of secondary rule and removal, through "which the establishment of chieftaincy was controlled and manipulated by colonial and later apartheid authorities to further their own causes" (Pickering & Nyapisi, 2015: 32). Traditional leadership is residue of the colonial and apartheid inheritance, which remains intact even now.

This practise is seen as a complicated system that erodes the democratic principles enshrined in the Constitution. Since traditional leaders hold their posts through hereditary means, and there is no democratic process consulted for selection. Legislation that has been enacted after 1994 has licensed the arbitration of mine-community relations by traditional leaders, and also meaningfully heightened the powers and rank of chiefs (Mnwana, 2014).

Parliament has the authority to stop this dual dispossession by revising and abolishing traditional leadership that supports policies and laws that weaken human rights, equality before the law and the principles of sustainable development. The consolidation of authority by traditional authorities is seen by Mamdani (1996), as giving them responsibility for a divided state, and a devolved form of autocracy. Traditional authorities are perceived as undemocratic institutions. The above view is shared by Ntsebeza (2004) who argues that customary rural authorities and headmen became agents and puppets for both the colonial and apartheid systems, and thus failed in their accountable to their communities. There are countries such as France, United States of America, and Germany, but to name just a few, who have abolished this undemocratic system of governance and these countries have developed and their citizen enjoy equal human rights.

7.3 Realization of the Objectives of this Research:

The objective of the MPRD was to ensure that the mining industry successfully benefited people, that industrial growth and sustainable development should succeed through mineral beneficiation, and that the minerals mined should be amalgamated into the remainder of the economy via further treatment before they are exported. In agreement with Marais (2010: 65), “historically neither the profits nor the costs of the production of the minerals of the region have been distributed equitably among the people involved in or affected by their production”. Twenty-four years after the new democratic dispensation, these difficulties still continue to hinder the majority of the population from becoming self-reliant and participating fully in the economy of the country. Because South Africa is gifted with vast natural resources, and as a result attracts an profusion of mining activity, yet, while billions of dollars in capital investment moves into mining operations, generating even more money in significant profits, very little is directed towards the surrounding mine communities. Mining rights are taken up by foreign investors in disproportion to the value of the resource wealth concealed beneath the ground, and the bulk of the money is then

transferred offshore as is the mined resource. These foreign investors not only exploit the natural resources of the country for the advantage of their countries, but they leave behind a legacy of a polluted environment which will affect mining communities for centuries. The mine workers suffering from silicosis and tuberculosis long after the mine operations have been terminated are constant reminders of the impact of mining on communities. Few South Africans have really benefitted from the wealth of the country's natural resources which has the potential to be of great economic advantage for its people.

This research will help mining communities to mitigate environmental and social impact of mining discussed above. This will guarantee that the expense of the mining industry's environmental impact is not devolved down to the mining communities. It is an inescapable fact that mining activities leave a vast and often irreparable print on the environment in manners that are progressively societally offensive, and for the effected communities in particular. The mining industry is considered by several as being economically too forceful, and that they have used this leverage to gain political control and to frustrate any profound improvements of its *modus operandi*. Additional matters of concern relate specifically to the poorer rural communities and include, as mentioned previously, "human rights abuse through the utilisation of unrestrained military and police forces" (The Economist, 2002); "harm to local communities and indigenous populations" (The Economist, 2005); "forced labour and involuntary servitude" (Oil and Gas Journal, 2000); "bribery and corruption" (Cockburn, 2003). Police brutality has been demonstrated by the *Marikana Massacre* of the 16 August 2012 which was an incident that involved the use of lethal force by South African security forces, the worst perpetrated against civilians since the 1960 uprisings. These shootings demonstrated how the government is prepared to guard the interests of the mining companies at the cost of its citizens. Extractive companies regularly find themselves in circumstances where the rule of law is weaker or non-existent, host governments governing institutions fragmented, and economic action outside the scope of current international and trans-national framework (UN, 2006). These extractive companies often take advantage of the situation and maximise profit to an extent that it will persuade governments to conclude long term agreements which will allow the companies to exploit mineral resources. In the process the local indigenous people are exploited and undermined under the disguise of job creation and development of the country.

Insecure land tenure and mining operations which take much of the agricultural land undermine all efforts to eradicate poverty. A unique lack of land ownership means that rural communities are not explicitly safeguarded by the Act. When minerals are discovered

on their lands they remain defenceless. The Act does not give them a firm footing from which to negotiate on an equal power basis with powerful and well-resourced mining companies. The result is that the poor rural communities are coerced into signing exploitative agreements with mining companies. This is because the communal ownership title under which indigenous people hold land seems to conflict with the land use and ownership legal system which currently prevails and informs mining legislation. The security tenure of these communities should be protected as required by the constitution of the country. Safeguarding access to these natural resources and ratifying land tenure entitlements is an fundamental footing for vulnerable indigenous peoples to uphold their livings; employ their civil, social and cultural, political, and economic rights; and give to local, and global sustainable growth (UN, 2011). This research work will help communities to be properly consulted and compensated for the loss of their land when mining development encroaches on their land, their only livelihood.

Traditional leaders will be discouraged from making secret deals with mining companies if the land tenure of these communities is protected. The Government is still very secretive on how the taxes are used and distributed, especially to the communities affected by extractive operations. It is important that the affected communities are aware of the contribution to the development of society and their country's economic status that these revenues make. The disclosure of payments by mining companies to governments will contribute to diminishing corruption. Mining revenues can be easily be aligned to the development needs of mining communities when these communities are properly consulted and involved on issues that affect them.

The regulatory frameworks made during the colonial era were concerned with advancing maximum resource extraction (Murombo, 2013), and were for the benefit of the mining communities. Rugege (2004: 1) indicates that the country has endured a "long period of colonization, racial domination and land dispossession that has resulted in the bulk of the agricultural land being owned by a white minority". The research will also help to eradicate some of the legacies of colonialism and apartheid, which continue to impoverish and oppress these communities. The communities will also be empowered in the process, as they will be able to assert their rights when deal with mining companies and traditional leaders.

This research aims to develop policy guidelines based on the process below:

7.3.1 Step 1 – The Policy Justification:

What is the aim, objective or purpose of the policy?

- i. The MPRDA needs to be amended to give the communities the right to say no to mining development, when research shows that mining will have an adverse effect on the mining community.
- ii. Government needs to guarantee that the expenses of the mining industry's environmental impact are not filtered through to the mining community.
- iii. There should be transparency with respect to the allocation of financial benefits accrued from mining.

According to CLS (2015: 1) the official guideline of the MPRDA is for “consultation with communities and interested and affected parties requires a consultation report, but it does not allow for a host community to say: No”. Currently communities cannot object to mining development even when research (MWP, EMP and SIA) shows that mining development will result in displacement of vulnerable people in the community. They continue to stay vulnerable on discovery of minerals on their land. Issues are increased because consultation with the traditional leader is regarded as consulting with the affected community. The policy will help to advance the rights of vulnerable rural communities. Currently the community cannot negotiate with mining companies on an equal level because of how the policy has been framed. Even when communities object to mining development in their area, mining operations still continue. The current policy is skewed in favour of mining companies. Government should work harder to guarantee that the rights of the mining communities are shielded.

In concurrence with the findings of Crawford (2015: 5) the “continued lack of transparency in the distribution of financial benefits remains a significant weakness, and an area where further improvements are needed...revenues are simply integrated into the national budget; how these revenues are then spent at the national, district and community levels is unclear”. Participants also routinely noted that it is necessary to have mining revenues more openly connected to evident local level development advantage. Many times, communities close to the mines see little concrete benefits coming from these operations, in spite of the large environmental and social costs experienced. Governments, for example, are reluctant to even intimate the revoking of mining permits when companies do not observe the applicable rulings. The “protection of indigenous peoples and cultural

heritage, guidance on resettlement strategies, and ways of ensuring community safety” are generally omitted from mining legislation (Crawford, 2015: 6). Community members have found mining companies and government unresponsive to their needs and concerns.

7.3.2 Step 2 – Research:

There are multiple meanings and descriptions of the concept policy, dependent on the context and meaning that is imparted. Public policy making is more than just a procedural government duty; rather it is a “complex interactive process influenced by the diverse nature of socio-political and other environmental forces...environmental forces that form the policy context lead to the contrast in policies and influence the output and impact” (Osman 2002: 38). Owing to circumstantial variances, public policies of the developed countries vary considerably from those of developing countries, for example South Africa. Whilst many developed countries’ policies have shown their efficacy, they should not be utilised for the awareness of the dynamics of policy process of such developing countries as South Africa. These public policies often contain “possess certain peculiarities of their own by virtue of being influenced by an unstable socio-political environment, and face various problems and challenges” (Osman, 1988:38).

Existing models of policy making can give useful guidance for developing countries’ policy analysis but they are inadequate for an exhaustive one. Most policy making theories were acquired “from studies of industrially developed societies” which, in many instances, are inadequate to “explain the policies of developing countries due to the contextual variations” (Osman, 1988: 37). Various policy scientists contend that public policy is best considered in terms of a process (Jenkins, 1978; Rose, 1976; Anderson, 1978). The reasoning here is that policy decisions are not “...something confined to one level of organization at the top, or at one stage at the outset, but rather something fluid and ever changing...” (Gilliat, 1984: 345). This public-private interface establishes the framework of the political system in which policy players steer the policy process and its application. The framework of the political system varies greatly from the developed to the developing countries. According to Osman (2002: 38) “this makes the existing theories or models of public policy making derived from the developed countries inadequate to explain the policy making process of developing countries”.

Attempts to implement an empirical approach followed the history of development theory, with a division developing between those seeing implementation as a “top-down” process and those supporting a “bottom-up” tactic. A rational management viewpoint directs the top-down model, where implementation is seen as a result of strong bureaucratic management which involves control, coercion, and compliance to warrant faithfulness with the policy goals (DeGroff & Cargo, 2009: 49). Conversely, the bottom-up model implies that efficacious application happens only when those “affected are involved earlier in the policy process” (DeGroff & Cargo, 2009: 49), in diverse phases such as issue description and policy preparation, as well as throughout the application stage (Berman, 1978).

The deliberation between the “top-downers” and “bottom-uppers” was basically solved in the 1990s and combined, contingency-based designs were planned giving augmented consideration to the part of intergovernmental relations, the political context, and how conflict contends in determining the implementation process (Goggin *et al.*, 1990; Matland, 1995). Simultaneously, some in the policy arena (Dryzek, 2000; de Leon, 1997; Fischer, 2003) began supporting a more democratic slant to public policy, along with “policy implementation and evaluation, recognizing the broader purposes of clarification, citizen participation, and social consensus” (DeGroff & Cargo, 2009: 50).

The study will reflect the significance of contributions from differing actors and stakeholders both outside and inside the government organisation for the improvement of attainable and sustainable policies. Efficacious access to these contributions does not occur routinely; it needs a working institutional operation. The lack of effectual institutional structure is a result of lack of regard for the significance of discussions with non-governmental groups, side-lined communities and a cause of their non-participation. Participation in the policy formulation procedure was, accordingly, mostly confined to the upper strata of the political and bureaucratic system. Even where some official discussion framework occurred, the system did not appear to work adequately, partly because of the sentiment amongst civil society members, particularly from marginalised groups, that no regard was given of their suggestions. Although consultation takes considerable time and is costly, the benefit of detection potential drawbacks and methods to circumvent them at the policy formulation phase makes it advisable to give these matters adequate consideration in the beginning of the process. Such collaboration between government and civil society may intensify the synergistic nature of policy formulation. Thoughts about viability, central judicial understandings, and concepts about groups affected by the policy, all have a hand in determining the policy alternates that appear.

7.3.3 Step 3 – Policy Design:

Policy design, as defined by Howlett & Mukherjee (2014: 58) can be understood as a “specific form of policy formulation based on the gathering of knowledge about the effects of policy tool use on policy targets and the application of that knowledge to the development and implementation of policies aimed at the attainment of specifically desired public policy results and objectives”, this is further substantiated by Bobrow (2006), Bobrow & Dryzek (1987), Montpetit (2003) and Weaver (2009). Policy design formulation utilizes the notion of policy design. Policy design occurred in reply to the implementation studies of the 1970s that held bureaucratic systems liable for policy failure (Fischer, Miller & Sidney, 2007). Its theorists maintain that researchers need to look earlier in the causal sequence to comprehend why policies are either successful or they fail, the fundamental policy processes, and the policy plans themselves, expressively assist with implementation results. Motivating several of these works is a supposition of constrained discretion, Fischer *et al.* (2007: 81) further argues that “limits to human cognition and attention, and limits to human knowledge about the social world inevitably lead policy makers to focus on some aspects of a problem at the expense of others and to compare only a partial selection of possible solutions”. Thus policy formulation research aims to understand the setting in which decision makers operate and to ascertain the discernment in attention that happens. The purpose is to bring “awareness of the ‘boundaries’ of rationality to the design processes” with aim of expanding the search for answers, in the hope of refining the resultant policies (Fischer *et al.*, 1997: 80). There needs to be an action strategy for implementation of the purpose as well as systems of assessing policy impact.

Policy designs can be understood by Howlett & Mukherjee (2014: 58) to encompass a “substantive component, a set of alternative arrangements thought potentially capable of resolving or addressing some aspect of a policy problem, one or more of which is ultimately put into practice, as well as a procedural component - a set of activities related to securing some level of agreement among those charged with formulating, deciding, and administering that alternative vis-à-vis other alternatives”. Public policies are the outcome of works carried out by governments to modify some features of their own or social behaviour with the view of carrying out some end or determination and consists of “complex arrangements of policy goals and policy means” (Capano & Howlett, 2015: 1). Within this opinion policy design contains the attempt to methodically advance capable and effectual policies by means of information about policy means acquired from

experience and reason, to the development and advancement of methods of action that are liable to be successful in reaching the required goals within explicit policy contexts (Bobrow and Dryzek, 1987; Bobrow, 2006; Montpetit, 2003). Those who develop policy should have the authority to implement out and when necessary, impose it. Public policy as a sum of government activities requires a broad structure of ideas and values inside which choices should be made to ensure responsibility and accuracy. The general plan should indicate the “aims to be achieved as well as the processes to be followed, to achieve the stated goals in a manner that should sustain the interest of the stakeholders” (Maselesele, 2010: 90). Government would be required to carefully consider those issues that are demanding to society and advance programs to rectify those situations. The declaration of objectives should be converted into a plan or program of action by stipulating the desired goals.

Design overlaps and delays “policy formulation, decision-making and policy implementation and involves actors, ideas and interests active at each stage of the policy process” (Capano & Howlett, 2015: 8). It also suggest a very specific type of interface amongst these features, motivated by knowledge and proof of alternatives’ merits and demerits in attaining policy goals rather than by alternate processes such as negotiating or campaigning among main policy players (Rixecker, 1994). It calls for a conscious inclusion of marginalised communities or groups in the design process. Contextual knowledge that is local has a significant part to play in cultivating policy solutions and in evolving democracy (Fischer, 2000).

7.3.4 Step 4 – Consultation:

The methodological approaches to consultation differ significantly, contingent on the breadth and objectives of the deliberation. Rohrer and Rajan (2016: 52) maintain that “each approach requires country-specific preparation, which may involve evidence and information gathering, targeted dialogue with special groups or a variety of other activities”. In this case study, the most common approaches to consultation included:

- i. Face-to-face discourse with large population sample(s);
- ii. Consultative methods with invited participants from different population groups;
- iii. Survey types and survey tools with invited/ selected population groups;

iv. One-on-one individual survey types and tools.

Consultation with the public must be honest, relevant, opportune, and equitable and with the paramount intention of reaching improved consequences and superior comprehension by all included of the advantages and ramifications of going forward with specific policy or legal proposals. Consultation should have the intention of achieving “real engagement” and “real listening” instead of being a perfunctory activity for administrative reasons. A sincere consultation procedure establishes that the actual effects of policy decisions are measured. Consultation should be aimed at and readily available to people with an obvious concern in the policy under discussion. There is no “one size fits all” method for consultation. The extent, category and range of the consultative procedure is dependent on the planned policy, the category and range of the possible effect of the proposal or agreement being made, the amount of people or groups influenced by them, and if necessary specific needs of the society’s marginalised or defenceless. Government departments and agencies need to make rigorous attempts to guarantee that concerned and affected groups have the chance to take participate in visible consultations at all levels of the policy procedure on notable policy, services and legal issues: development, implementation, evaluation, and review (Ireland’s Department of Expenditure and Reform, 2016). Potential bias and potential vested interests can be also circumvented through inclusion of stakeholders from diverse political parties and backgrounds at the introductory stage and within the consultation’s executive committee. To raise the integrity of the consultation, it is necessary to have open communication with all of the participants. To assist “transparency and fairness”, prior communication of the interests motivating a consultation should be made to all (WHO 2016).

As indicated by Maluleke (2011: 95) a determined attempt should be made to “stimulate public debate and discussions directed at confirming clarity of the problems, models to create public engagement and develop participation, and identification of stakeholders that play an influential role in policy development”. The favourable outcome of any policy should be assessed on its capability of addressing the bulk of the requirements of the proposed focus. Policies may have both positive and negative impacts, which in turn may have intended or unintended effects. Occasionally policies produce unintentional results or consequences which can be because of the situations that the policies want to effect or influence are characteristically multifaceted and could be seen as systems that should adjust to the demographic circumstances, since policy change can occasionally have contradictory results. “Multi-stakeholder deliberation is a collective and collaborative public

effort to examine an issue from different points of view as part of a decision-making process” according to the Risk Management Task Force (2015: 17). Further that “intended processes strengthen policy and program design by building recognition of common values, shared commitment and emerging issues, and by providing a comprehensive understanding of causal relationships” (2015: 17). The main aspect of this procedure is that it includes stake-holders in multiple-perspective sharing in an effort to establish an agreement on a pertinent decision (Crawford, 2015). This method goes further than participant consultation. Applicable societal stakeholders’ involvement in the policy process is also crucial for creating the foundation for satisfactory policy design and delivery (Andersson, 2000)

Direct engagement with rural citizens and communities must take cognisance of the fact that rural populations are frequently at a disadvantage in relation to their participation in national level policymaking because of their isolated locations and lack of communications infrastructure. Governments have an overall propensity to direct their concern more on the interests and worries of their urban areas. Policies designed with awareness of the needs of the local peoples will probably be more equitable and fair. This can be of particular seriousness when poorly designed policies have the potential to have negative impact on the poor or on other similarly disadvantaged bodies. The “participatory process can have wider ramifications for the ‘policy-owning’ body as it helps create an institutional culture of openness and service...and encourages greater public attention to the way in which the policy is implemented, thus promoting accountability” (Rietbergen-McCracken, n.d.: 6). Through the involvement of a larger collection of stakeholder groups in the creation or improvement of the policy, the process of involvement will assist with increasing ownership and backing for the policy, this will encourage more effective implementation. Where participatory policy-making has managed to bring ignored participant groups together or partially provided an opportunity for them to be heard, the process assists with empowering these groups in some way to stand up for their rights and make their fears known (Clark, 2003). The process also has the possibility to contribute to change in the power relations between the different constituencies involved, principally if special efforts have been made to make the marginalised groups more inclusive.

7.3.5 Step 5 – Finalization of the Policy and Impact Assessment:

Mbelu (2011: 27) sees monitoring as a “process that entails determining how the public policies implemented reach its intended targets...implies that public policy monitoring is the radar that guides and shapes the implementation processes in order for the pre-set objectives to be achieved”. There is a call for, according to SAGov (2018: Chapter 4) “ongoing research with a view to improving and strengthening the measures, standards and practices applied to managing the impacts on the environment and to control pollution”. The impact assessment will assist with enhancing and promoting the “contribution of the mining sector to sustainable development, and to provide governments with a forum in which to discuss the opportunities and challenges of the sector” (Crawford, 2015: 1). Social impact assessment (SIA) studies are typically carried out before endorsement of large projects in an effort to forecast and prevent “major social issues” (Dale *et al.*, 1997: 160). These studies are usually not able to contribute either “comparative analyses of multiple communities exposed to mine development or, of the cumulative impact on individual villages of multiple mine developments” (Petkova, Lockie, Rolfe & Ivanova, 2009: 212; Solomon *et al.*, 2007). Ex-post assessments are necessary for dependability and helpfulness of predictive assessments implemented in conjunction with other mining projects. These features mean that several mining communities have arisen with minimal assistance or participation from indigenous peoples, even when the mining was situated on land that had high cultural significance for them.

Recently, many OECD countries have become conscious of the significance of evaluation and taken measures to increase their effectiveness in this area. Andersson (2000: 6) makes mention of “techniques and methodologies have been elaborated to measure and capture the direct and indirect effects of programmes as well as their implementation...methodologies such as in-depth surveys, econometric techniques and cost-benefit analyses are being used either alone or in combination, depending on the nature of the programme and the scope of the exercise.” Reflecting briefly on the differing countries, Australia, Canada, the United Kingdom and the United States all have many evaluation practices in common. Evaluation has a moderately strong focus, the features of which is partially influenced by strict public budgets and associated efforts to justify government action.

Experience of these particular countries, reflects that improved access to micro data has assisted in the identification of the best policies. Frequently this innovative use of the data has been motivated by academics. The United Kingdom, United States and Canada, data

have freer access to data comparative to countries such as South Africa, thus allowing easier analysis of policies. Creation of public data permits independent corroboration of official evaluation findings, empowers sensitivity analyses and exploratory use of advanced methods, and boosts supplementary research of direct interest to government at minimal cost (Chapman, 2010; Sweetman, 2010). Quality analysis is strengthened by allowing a greater number of analysts' access in order to corroborate or challenge official findings. The motivation provided by input from data users is an added benefit for improving the quality and usefulness of the data sets.

Without a strong legal and policy framework these positive benefits are difficult to achieve. This framework must serve different functions in that whilst upholding strong environmental and social standards it needs to advance the economic and social development benefits of mining; without such a framework, the environment can be threatened through pollution and degradation, workers endangered, and the mining activities can result in non-inclusive growth all the while promoting corruption, among other things.

7.3.6 Policy Formulation and Implementation

Participation of key stakeholders is of paramount importance for policy formulation as well as for the implementation processes. It is the best way of bringing different viewpoints to a compromise and it gives all people involved a fair chance to be heard and to achieve improvements. It also helps stakeholders to identify needs and possible solutions to a problem. Interviews with mining communities revealed that policy makers exclude important role players in the policy formulation. Wittmann and Förstner (2007) argue that although during the past years mining has formed the basis of the South Africa's economy, very little is known about its adverse impact on African indigenous communities, especially on small-scale agriculture adjacent to the mining operations in areas such as Limpopo Province. Down and Stocks (2005) add that much more is known about direct effects of mining than about the exposure of African agricultural communities in these areas.

Existing environmental management practices in South Africa at national level reflect the power and authority of government agencies and policy makers whilst other important actors who often have an important role in the management of traditional environmental systems to play, such as local land users are rarely acknowledged. This happens in such

developing countries as South Africa where frequent lack of financial resources creates an unavailability of provision of even the very basic human environmental and social services for their citizens. In an economically depressed area such as Limpopo Province the offer of the creation of thousands of jobs, creates a situation whereby the mining companies are able to pressurise government into granting mining projects by positioning the communities against them.

Fiscal problems experienced by many rural local communities in developing countries are situations that are often exploited by mining companies, particularly when the local communities rebuff extraction projects. When local communities cannot count on national or provincial governments, the likelihood for the abuse of power by mining companies drastically increase (OECD, 2016). Local communities often “lack the right to prior informed consent and are therefore helpless to stop mining exploration or extraction on their land through legal means” (Whiteman & Mamen, 2002: 13). This is because, in developing countries, these communities are more likely to be rural and poor and are comprised of subsistence farmers. For many of the local people the advent of a mining operation means loss of land, through either government expropriation or “company negotiations in which they have little bargaining power”.

Literature shows that in the main efforts at moderating the impact of mining have focused primarily on the environmental impact and have wrongly assumed that dealing with the “environmental impact alone would inevitably reduce the social impact” (Revuelta, 2017: 580), although to a degree it may assist with some aspects of the problem due to the interrelated nature of the environment and social impact of mining. The fact that policy initiatives are typically aimed at environmental impact assessments by extension insinuates that social impact may not automatically be considered. There is a call for concerted efforts in addressing the social cost of mining interacts along with other cultural and environmental issues.

As with many environmental concerns, there is often a “stark difference between actual environmental impact and perceived impact - though policy decisions may not necessarily reflect this distinction” (Ali, 2009: xx). There are those local communities that view mining activities as harmful to their environment and health while others have the opinion that advancement in technology and stringent regulations can together make mining a means of sustainable development (UNEP, 2010). Many academics are sceptical about Western models of development, particularly sustainable development, which is prevalent with

development practitioners. Islam (2009), for example, finds the modern development discourse is a revived model to the long history of Western imperialism to perpetuate a system of dominance in the modernised world.

Grounded in the discussions above, it is apparent that processes of environmental change involve more than ecological changes and is influenced by social factors, including decision making by local land users (Oba *et al.*, 2008). In the light of the recognition of the close exchanges between social and ecological systems, there is a need to adopt a more holistic approach that goes beyond the disciplinary divides, and additionally co-opts local knowledge and practices using assessment and monitoring of environmental changes at local levels. Due to their complexity is acknowledged that environmental problems cannot be addressed satisfactorily by any single discipline (Tacconi, 2011). The study points to the necessity of conducting research which can integrate economic, political, social and environmental aspects to further improve understanding of environmental problems and further, to structure and implement relevant measures to address them.

Given the exploitative nature of the extractive industry, critical theorists are driven to attract “attention to injustices within society and to raising people’s awareness of these inequalities” (West *et al.*, 2012: 1586). Questioning the power relationships held within the indigenous-settler dynamic permits a type of praxis that searches for indigenous voices and representation with “research that has historically marginalised and silenced indigenous people” (Tuhiwai Smith, 1999). The methodology requires policy makers to critically contemplate about their research processes and outcomes, never forgetting that indigenous people’s interests, experiences and knowledge must for the heart of any research methodologies and structure of knowledge that concerns them. In Africa, some scholars contend that African communities’ ‘way of knowing’ has been marginalised by the dominant research paradigms and that this has resulted in the design of irrelevant research-driven development projects for the needs of the people.

The development should strive to eliminate poverty, meet human needs and guarantee a fair share of resources is available to all a situation that is very different from present. South Africa has minerals that were supposed to be helping its people. However, instead of helping people to develop and to eradicate poverty faced by many of the people, natural resources have been shown to be enjoyed only by the few elites. Revenues that are the result of natural resources exploitation should not be used exclusively for sustaining the interests of a few with personal enrichment and the building political support. The

government is still very secretive on how the taxes are used and distributed especially to those communities affected by extractive operations. It is important for the affected communities to be aware of how these revenues can and do have a contribution in the development of their particular society and to the economic status of their country. Corruption will be reduced by more transparency surrounding disclosure of payments by mining companies to government. It is also imperative for governments to use part of the income to budget for mine closure and rehabilitation, something which is often ignored and which exposes mining communities to all sorts of associated mining health risks.

Regulatory frameworks oriented towards promoting the maximum extraction of resources were developed during the colonial era. In South Africa many mining laws with their associated colonial heritage remain in place, and “consciously or unconsciously, local proxies and elites stepped into the shoes of the colonial powers and multinational companies” (Murombo, 2013: 39). It is only recently that South Africa has presented the mining code to include sustainability. Customary rights are frequently group rights based in common property rights and communal use regimes. Delius (2008: 218) maintains that the conception of “communistic or communal title” is deceptive and partially mirrors the problems experienced by outsiders in “understanding or naming African systems”, which resultantly has produced inappropriate comparisons and terminology which are often acquired from European rather than African history. The junction of legal systems has witnessed a displacement of local indigenous community’s licence to land and mineral rights.

The people of the former Bantustans who suffered under the Land Acts and forced removals still have no comprehensive legislation to secure tenure rights even twenty-four years since democratic dispensation. The government is responsible for the creation in the former homelands of a system of communal tenure, with ownership to the land held by the traditional leaders and the inhabitants given only a form of user rights. Whilst the apartheid government is responsible for trapping millions of people in poverty without the freedom to escape the misery brought about by the oppressive system, the current government has done nothing to release the same people from the segregated judicial and legislative regimes within the old enclaves they still remain in (Claassens & Boyle, 2015). Despite the presence of the rich minerals deposits many of these areas can be described as poverty stricken due to their underdevelopment. Studies show that “laws and bills on traditional leadership tend to impose colonial ethnic identities on rural residents by establishing the current traditional authorities in exactly the same boundaries as the

apartheid 'tribal' (*Bantu*) authorities" (Claassens & Matlala, 2014; Mnwana, 2015: 501). The laws are censured for strengthening the local chiefs and tribal councils' authority over communal property to the detriment of the indigenous people who live on the land.

The legislation affords the Minister the exclusive right to deal with the land as they wish, for example granting mineral rights. MPRDA revoked all preceding mineral laws to embrace former disadvantaged persons' involvement in the central business of mining. With their unique lack of land ownership, rural communities are not explicitly sheltered by the Act and they continue to be at risk when minerals are found on their land. The act fails to give them strong standing to negotiate on an equal power basis with powerful and well-resourced mining companies. The result is that the poor rural communities become coerced into signing exploitative agreements with mining companies.

Mining companies are required, through the auspices of a variety of laws, policies and official guidelines, to discuss with host communities any proposals for prospecting and mining, however if the company already holds a prospecting/mining license, they are permitted access the land in question. CLS (2015: 3) explain that:

- "Subject to this Act [MPRDA], any holder of a prospecting right, a mining right, exploration right or production right may (a) enter the land to which such right relates together with his or her employees...and may bring onto that land any plant, machinery or equipment...which may be required for the purposes of prospecting, mining, exploration or production... – MPRDA s 5(3)";
- "No person may...commence with any work incidental thereto on any area without... notifying and consulting with the landowner or lawful occupier of the land in question – MPRDA s 5(4)".

As previously stated, the Centre for Law and Society report (CLS, 2015: 3) stipulates that "MPRDA's official guideline for consultation with communities and interested and affected parties requires a consultation report, but it does not allow for a host community to say No",

In terms of MPRDA and NEMA regulations a mining permit applicant must also analyse the Environmental Impact Assessment (EIA) findings to enable it to design an Environmental Management Plan (EMP) and programme that will be used as a guideline for the protection of the environment (in future and or at present) by the permit holder and

to ensure that the environment and the existing biodiversity of the local community are not detrimentally affected by mining operations. With these provisions in mind it appears as if the consultation process with interested and affected parties and local communities to prepare EMP, EIA and other environmental management programmes, as described above, is a legislative pre-condition for a mining permit to be granted.

It also appears as if consultation processes and preparation of environmental documents - in terms of the requirements of the MPRDA and NEMA - are the mechanisms which should enable or ought to force mining permit applicants to meet and meaningfully consult with affected communities in order to jointly identify positive and negative impact of mining. It also appears as if the rights of “interested and affected” parties and communities to have access to information and to engage in a fair and reasonable consultation process - where each party has an opportunity to respond and to make informed decisions (procedural fairness) – becomes compromised by the almost secretive approach of government authorities and mining companies when the state ultimately decides on the allocation of mining rights (Mitchell *et al.*, 2012). The power relations are always slanted on the side of the mining companies in contrast to rural communities whilst consultation with the rural communities becomes merely a formality.

Additionally, companies are not obliged to have direct engagement with the rural communities before creating massive “open pits and multiple shafts” from their communal grazing and ploughing fields (Mnwana, 2015: 502). There is a vast disparity in “knowledge resources, wealth and power that underpin such engagements and in many cases communities are cowed by the semblance of expertise presented by [mining companies] in such engagements” (Ramatji, 2013: 27). Such consultative engagements work in favour of mining companies if rural communities are illiterate and have no government backing or any NGO propagating rights of vulnerable communities. Mining companies often negotiate with communities in a manner that is favourable mining companies and to the detriment of the rural community. In most cases traditional leaders have assumed custodianship of communal resources and have evolved into the intermediaries of mineral-led development and mining negotiations. Community leaders appear to be manipulated by mining companies and traditional authorities and community members appear to be lacking in-depth knowledge, financial resources and the skills to challenge and to question environmental and mining impact (positive or negative) expected to be caused during operations and any mitigating measures for the community should be submitted by the

mining company in the form of EIA, EMP and programmes and similar environmental instruments.

The proposed changes to the policies (MPRDA and NEMA) will help to provide new knowledge and awareness on the environmental and social impact of mining activities on African small-scale farmers and will also sensitise policy makers and develop specific policy measures to protect these vulnerable local communities from the adverse effects of mining. It will also help to contribute toward more informed development approaches, increased awareness for regional decision makers and local peoples alike, going forward in raising the standard of living of people affected by the extractive industry.

Consultation with the key stakeholders:

Following the consultation with the key stakeholders the following insights came to the fore:

- The colonial and apartheid legacy of denying the majority of the indigenous people the right to own land still remains in place. Many have lost their land due to mining and communities do not enjoy any of the benefits accrued from the mine. People need land and not mining which degrades their environment. African people cannot be free until such time that the land question is resolved.
- Mining companies show contempt for the rightful land owners by not consulting with them and only consulting with traditional leaders. Consulting with traditional leaders cannot be construed as consulting with the rightful land owners.
- The people have been critical of the role of the chief in negotiating mining deals and question the part played by traditional leaders in a democratic South Africa. Many did not see the relevance of traditional leaders in the current dispensation.
- Because there is no consultation with the rightful land owners, the SLPs do not reflect the real needs of the people. The SLPs are also not made public therefore the affected communities do not know what these plans contain. Non-involvement of the communities has resulted in development projects being unrelated to the requirements of the people.

- The people have lost land, their only source of livelihoods because of mining operations and there is no compensation for this loss. Environmental pollution is rife in the area and the mine and government is unresponsive to their needs.
- There are no tangible development benefits from the mine despite the rich mineral resources derived from their land. As a result, many people are opposed to mining development in the area.
- Mining development also undermined the people's traditional life. The chief behaves like an absentee landlord in the face of challenges brought about by the mining operations.

The lives of the people were better off prior to the advent of mining in the area. Mining has brought about a several challenges, such as shortage of water, loss of land, and loss of grazing land.

Therefore, the following policy framework was constructed using the policy guidelines:

7.3.7 Preamble

The objective of this research work is to provide guidelines and recommendations for the formulation, development and review of policies relating to mining development in the country. The recommendations and guidelines contained herein should be viewed as providing general directions rather than prescriptions for action, except if otherwise provided herein or in so far as specific actions are required by existing, institutional policies and regulations.

The goal is to ensure that policies are consistent with the vision, mission and values of the government, as far as mining and sustainable development is involved. Those government departments responsible for mining have an important function in respect of a given policy.

It is of critical importance that the implementation of future policies and re-evaluation of current policies have an important bearing in any government department, as well as existing policies to assist in channelling actions and behaviour, decisions and practices that endorse sustainable development.

7.3.8 THE PURPOSE OF THE POLICY FOR THE MINING INDUSTRY AND AFFECTED COMMUNITIES.

- a) Under colonialism and apartheid indigenous people lost land and remained vulnerable when minerals were discovered. Indigenous people's right to land is important and has been linked to the right to life. The customary legal nature and the tenure in which indigenous people hold land under tribal and chieftainship are among the vulnerability concerns that arise when mining takes place on communal land. Lack of land ownership has deprived the majority of people of dignity and livelihood. Land tenure of rural communities needs to be protected and the land tenure policies revised to provide people with dignity. This will also assist in eradicating the colonial and apartheid legacy that has continued to trap many people in poverty without land ownership despite mineral wealth being found beneath their land. Insecure land tenure undermines the people's right to land.
- b) Ownership of land will not only restore the people's dignity but ensure that mining companies consult with the rightful land owners and not self-appointed traditional leaders who purport to represent the interest of the community. This will help empower the community and provide it with have the right to say no to mining development when research reveal that mining operations will have deleterious effect on their environment.
- c) Mining development should not be permitted to proceed with operations if the affected communities have not agreed to the mining development.
- d) Few people in rural areas benefit from the wealth extracted from their land by mining companies. Legislation should ensure that the people truly benefit from the mineral wealth.
- e) Government is still secretive on how taxes are used and distributed, especially to the communities affected by extractive operations. Government should be more transparent on how taxes are used and how they benefit the affected communities. The tax percentage accrued from the mining that is spent on local development in the affected community should be clearly indicated.

- f) The SLP should be drawn up in consultation with land owners. The SLP should be made public so that communities can monitor its implementation, success and shortcomings. The SLP should be aligned to the community's requirements.
- g) Government should make a concerted effort to ensure that mining externalities are not passed on to rural communities. The government departments should constantly monitor mining activities and their environmental impact. There is extensive verification of disregard for social responsibility by mining companies. There is non-enforcement on the part of the government for non-compliance with mining regulations.
- h) Government must impose heavy penalties for non-compliance with the above recommendations.

7.4 Final Conclusion

Participation of key stakeholders is of paramount importance any for policy formulation as well as for the implementation processes. Government should endeavour to include the marginalized rural citizenry in the policies that affect them. This will also sensitize policy makers and develop specific policy measures to protect those vulnerable local communities from the adverse effects of mining. In turn, the research aims to contribute towards more informed development approaches, increasing awareness for regional decision makers and local peoples alike, going forward in improving their standard of living.

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APPENDIXES

Letter from the editor



14 November 2018

TO WHOM IT MAY CONCERN

This serves to confirm that the thesis for:

Doctor of Philosophy - Indigenous Knowledge System

By: David Modikana Solomon **Manamela** - North-West University (Mafikeng Campus)

Entitled: **THE IMPACT OF MINING ON INDIGENOUS AFRICAN COMMUNITIES IN LIMPOPO PROVINCE**

Was edited by one of our accredited editors

A & M Steyn

Ethics Certificate

Informed Consent Letter

Dear Participant

My name is David Manamela (Student Number: 22720872). I am a PhD candidate studying at North-West University, Mafikeng Campus. The title of my research is the impact of mining on Indigenous Communities in Limpopo province. I am interested in interviewing you as to share your experience and observations on the subject matter.

Please note that:

- The information that you provide will be used for scholarly research only.
- Your participation is entirely voluntary. You have a choice to participate, not to participate or stop participating in the research. You will not be penalized for taking such an action.
- Your views in this interview will be presented anonymously. Neither your name nor identity will be disclosed in any form in the study.
- The interview will take about an hour.
- The record as well as other items associated with the interview will be held in a password-protected file accessible only to myself and my supervisor. After a period of five years, in line with the rules of the university, it will be disposed by shredding and burning.
- If you agree to participate please sign the declaration attached to this statement (a separate sheet will be provided for signatures)

I can be contacted at: Email: dmanamela@webmail.co.za /Cell: 084 894 7172

My supervisor is Professor Abel Pienaar who is located at North-West University, Mafikeng campus. Contact details: Email: abel.pienaar@gmail.com / Cell 082 680 7642

Thank you for your contribution to this research.

Interview Schedule

I am a PhD student in the North-West University, South Africa. I am currently carrying out a research project entitled: The impact of mining on indigenous communities in Limpopo province. This study is purely for academic purposes and thus, no harm will come to respondents from participating in this project. Your identity will remain anonymous if you desire. Also note that your participation in entire process is voluntary and you are at liberty to withdraw your participation in this project at any time you wish to do so, with or without specific reasons. Your subjective as well as objective responses to the questions below are important for the accomplishment of this study. For ease of reference, this discussion will be tape-recorded. This interview will take approximately 30 minutes.

Are there any questions about what I have just explained?

Are you willing to participate in this interview?

Interviewee

Witness

Date

Questionnaire

A. Biographical information (tick the correct answer)

Alias.....

1. Gender

Male	
Female	

1. Age Group

14-20	
21-30	
30-40	
41-50	
51-60	
61	

2. Marital status

Single	
Widowed	
Divorced	
Separated	

Married	
Cohabited	

3. Educational level

None	
Primary Education	
Secondary Education	
Tertiary Education	
Adult Education	

4. Religious affiliation

African	
Christian	
Muslim	
Other	

5. Employment status

Subsistence farmer	
Government employee	
Miner	
Other	

B. General Questions

1. Questions on impact of mining on community

1. What is the history of mining activities in the community?
2. What is the historical environmental impact of mining activities on African small-scale agriculture and local communities?
3. What is the knowledge and perceptions of African local communities towards mining activities?
4. What legal and policy instruments are in place in the Limpopo province to protect African small-scale agriculture and local communities against the negative environmental impact of mining activities?

C. Questions on Indigenous Environmental Management

1. Who are those community members involved in mitigating environmental impacts of mining activities?
2. Where do they learn the knowledge and skills of deal with environmental management?
3. What are the advantages of utilising these indigenous methods of environmental management?
4. What are the limitations of utilising these indigenous methods of environmental management?
5. What is the perception of community members towards these indigenous methods of environmental management?
6. How can these indigenous methods of environmental management be improved?
7. What are the advantages and disadvantages of interfacing indigenous methods of environmental management and western methods of environmental management?

D. Questions of state-centred conflict transformation mechanism

1. What mechanisms does the government use in transforming conflicts in your community?
2. How accessible are these formal conflict transformation mechanisms to community members?
3. What are the advantages of these formal mechanisms to conflict transformation in your community?
4. Are there any disadvantages to these formal mechanisms to conflict transformation in your community?

E. Questions on interfacing both indigenous and modern state-centred mechanisms

1. In what ways can indigenous and western conflict transformation mechanism be improved by combining them?

Thank you very much for taking your time to answer my questions.

Benefits

The opinions and experiences documented in this discussion will provide empirical data on the nature and scope of impact of mining with your local community. It will also generate invaluable inputs on approaches mitigating mining impacts and will shed light on best practice towards mining and sustainable development in your local community.

Confidentiality:

During the discussions and recordings, you will be allowed to use aliases if you desire to remain anonymous. All recordings and transcripts will only contain the names that you chose during the discussions. Your anonymity will be observed and respected through all stages of this research.

Compensation:

You will not be compensated for participating in this study. Light refreshments may be provided if the need arises.

Freedom to withdraw:

You are free to withdraw from the discussion at any point in time without being prejudiced by the researcher.

Consent:

If you have understood the contents of this document and wish to participate in this study, kindly fill in your initials, signature and date at the spaces provided below. You will be provided with a copy of this form.

Initials and signature of respondents

Date:-----

Permission to conduct research: Letter from the chief/ Mapela Traditional Council