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Mining and local economic development: a case study of the Rustenburg local municipality

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DEDICATION

To God the almighty, my family, colleagues, friends and the staff from the University of the Witwatersrand School of Architecture and Planning. Thank you for all the assistance and guidance which enabled me to complete this study.

A special dedication to my mom who did not get the opportunity to experience the complete product of this study. May your soul rest in peace, **" U lale ngoxolo mama!"**

ABSTRACT

Mining is an economic activity that has the potential to develop a region that is impacted by its operations. The extractive industry also impacts negatively on the surrounding communities as it may introduce certain undesired practices which may effect the environment, disturb existing social practices, and promote gender inequality and the unequal distribution of economic benefits. The end of mining activities can become the end of a community's economic existence resulting in misery emanating from economic hardship or migration to another region that offers economic opportunities.

The majority of mining jurisdictions in the developing world still lack appropriate regulatory and management mechanisms that will enable their extractive industry to contribute to the economic well being of the region. The extractive industry has to be regulated in a sustainable manner that will ensure that its negative effects are well managed and reduced. This requires proactive solutions by all those who are affected by mining operations to co-operate in developing strategies aimed at steering the extractive industry to contribute towards sustainable Local Economic Development (LED).

This research report investigates mining and sustainable (LED). It also pays attention to international and local approaches in achieving sustainable LED in mining regions. A case study of the Rustenburg Local Municipality (RLM) has been conducted in order to ascertain the role of mining in contributing towards sustainable LED. The RLM is a municipal area which has mining as a dominant economic activity. The municipal area is currently experiencing an increase in economic activity as a result of its mining sector, mainly the mining of Platinum Group Metals (PGM). The municipality is struggling to develop an appropriate mining and LED strategy for its jurisdiction as a result of inadequate co-operation with stakeholders in the mining sector and insufficient capacity in the municipality. Owing to inadequate cooperation stakeholders in the mining sector are developing their own community development programs with limited consultations with one another.

The research report found that the development of sustainable LED strategies should involve all stakeholders; this process should ideally be headed by local authorities as their responsible with managing and administering development projects in their jurisdiction. The RLM municipality has the potential to develop sustainable LED strategies aligned to its mining sector. This requires the strengthening of cooperation between stakeholders and capacity building in the municipality. The development and implementation of sustainable LED does not only depend on being spearheaded by the public sector as the research reports findings reveals that private sector driven sustainable LED strategies are possible.

ACRONYMS & ABBREVIATIONS

ABET	Adult Basic Education and Training
AIDS	Acquired immune deficiency syndrome
ANC	African National Congress
BDM	Bojanala District Municipality
BEE	Black Economic Empowerment
BLCF	Business Linkages Challenge Fund
Bt	Billion tonnes
CEO	Chief Executive Officer
CDB	Chinese Development Bank
CSDP	Community Sustainable Development Plan
DBSA	Development Bank of Southern Africa
DEAT	Department of Environmental and Tourism
DFI	Development Financial Institution
DFID	Department of International Development
DPLG	Department of Provincial and Local Government
DTI	Department of Trade and Industry
GNU	Government of National Unity
DG	Director General
DPLG	Department of Provincial and Local Government
DME	Department of Minerals and Energy
DTI	Department of Trade and Industry
EC	Eastern Cape
EMG	Emerging Markets Group
ES	Equitable Share
EU	European Union
EZ	Enterprise Zones
FDI	Foreign Direct Investment
FESI	Friedrich Ebert Stiftung Institute
FSGDC	Free State Goldfields Development Centre
FTSE	Financial Times Share Index
GDP	Gross Domestic Product
GDT	Gencore Development Trust
GGP	Gross Geographic Product
GEAR	Growth Employment and Redistribution
GLC	Growth Local Committee
GNU	Government of National Unity
HIV	Human Immune Virus
HR	Human Resources
HRDP	Human Resources Development Program
ICT	Information and Communications Technologies
IDC	Industrial Development Corporation
IDP	Integrated Development Plan

IDT	Independent Development Trust
IFM	International Ferrochrome Metals
IIA	Integrated Impact Assessment
ILO	International Labor Organization
LED	Local Economic Development
LTD	Limited
KZN	Kwazulu-Natal
MIG	Municipal Infrastructure Grant
Moz	Million Once
MPRDA	Minerals and Petroleum Resources Development Act
MSA	Municipal Systems Act
Mt	Metric tonnes
MTEF	Medium Term Expenditure Framework
NEF	National Empowerment Fund
NFLED	National Framework for Local Economic Development
NGO	Non-Governmental Organization
NSDP	National Spatial Development Plan
NUM	National Union of Mineworkers
PFMA	Public Finance Management Act
PGDS	Provincial Growth and Development Strategy
PGM	Platinum Group Metals
PPP	Public- Private Partnerships
RBA	Royal Bafokeng Administration
RBEB	Royal Bafokeng Economic Board
RBH	Royal Bafokeng Holdings
RBN	Royal Bafokeng Nation
RDP	Redistribution Development Program
R&D	Research and Development
RPMR	Rustenburg Platinum Mines Rustenburg Section
RLM	Rustenburg Local Municipality
SADC	Southern Africa Development Community
SANCO	South African National Civic Organization
SC	Subsistence Committee
SD	Sustainable Development
SDI	Spatial Development Initiatives
SEA	Strategic Environmental Assessment
SED	Socio-Economic Development
SHM	Strategic Health Management
SIA	Social Impact Assessment
SLP	Social Labor Plan
SME	Small Medium Enterprise
SMME	Small, Medium and Micro - Enterprise
STD	Sexually Transmitted Disease
TB	Tuberculosis
US	United States

UK	United Kingdom
UNAIDS	United Nations Acquired immune deficiency syndrome
UNDP	United Nations Development Programme
VCT	Voluntary Counseling and Testing
VIP	Ventilation Improved Pit
WB	World Bank
WEF	World Economic Forum
WHO	World Health Organization
ZAR	Zuid – Afrikaansche Republic

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1. CHAPTER 1

1.1. Introduction

The mining industry contributes significantly towards the South African economy; in 2006 it contributed 6.4% to gross value added and 5.8% to total non-agricultural formal employment. It also contributed 27 % to total exports, making it an important earner of foreign exchange earnings (DME, 2006/2007). The majority of communities living close to mining operations have not experienced the significant benefits emanating from the domestic extractive industry. Poverty levels are still extremely high in most of these communities (DPLG, 2006, MPRDA, 2002).

Efforts made in the advancement of Local Economic Development (LED) in communities close to mining operations have largely been tied to contemporary issues pertaining to sustainable development. Sustainable development in the mining industry promotes the importance of implementing socio-economic development programs in a region where mining is a dominant economic activity (Otto & Cordes, 2002; Eggert, 2001; Rogers, 2004). To be specific, sustainable development for mining affected communities recognizes that the mining industry is concerned with the removal of non-renewable resources; these resources cannot be recovered at their native stage once they have been removed. The process of resource extraction is identified by both Otto and Cordes (2002) as having both negative and positive outcomes (Otto & Cordes, 2002; Eggert, 2001).

Furthermore the end of a mine's lifecycle may signal the end of a community that once had an economic existence (Rogers, 2004; Starke, 2002; Eggert, 2001). It is necessary that efforts are established aimed at enabling future generations to benefit from the present exploitation of mineral resources. It is also essential to develop sustainable local economies during a mines lifecycle to enable the community to be engaged in other

economic activities when mining operations discontinue (Rogers, 2004; Otto & Cordes, 2002).

The Government of National Unity (GNU) headed by the African National Congress (ANC) has introduced several initiatives aimed at promoting Local Economic Development (LED). The South African Constitution (1996) promotes the advancement of LED followed by South Africa's National Framework for Local Economic Development (NFLED) for the 2006 to 2011 period which offers a new approach for local economies. Its underlying objective is to stimulate and develop sustainable local economies that will create employment opportunities and reduce poverty through the implementation of government policies and programs. The Mining Charter promotes socio-economic development as it compels mining companies to contribute towards socio-economic development projects in the area in which their operations occur (MPRDA, 2002; Mining Charter, 2004; DPLG, 2006). Mining companies are therefore expected to play a role in the implementation of LED projects.

This research defines LED as a strategy that promotes the involvement of the local population in the development of local resources. Behind this backdrop LED is intended to enable the local population to be fully equipped with the necessary capacity required to stimulate and benefit from the development of new or already existing economic activity occurring within its jurisdiction (Nel & John, 2006, Blakely & Bradshaw, 2002; Malizia & Feser, 1999; Rogerson, 2006; DPLG, 2006; Neil & Tykkylainnen, 1998).

In South Africa LED is perceived as one of the ways of eliminating poverty with the aim of increasing employment opportunities by stimulating local economic growth. In theory LED should be part of the Integrated Development Plan (IDP) which enables stakeholders in a municipality to co-operate in the creation of projects intended to develop the local economy and create income opportunities for the local people,

especially the poor. LED is described by the South African LED network[1] firstly as a continuous process and secondly as a process that is driven by local actors from different societal sectors, which implies collaboration, and even co-responsibility between the public and private sector for the economic development of a region or location (South African LED Network, 2009). LED for a local economy dominated by the extractive industry is mostly concerned with diversifying the local economic base and securing local linkages and benefits during the lifespan of the mine, to enable the local economy to be sustained by other non - mining economic activities once mining ceases (Eggert, 2001; Otto & Cordes, 2002; Rogers, 2004).

The majority of South Africa's mining jurisdictions are situated in the rural periphery with a majority of blacks as inhabitants. Under the apartheid regime, black living areas (homelands) were administered by municipalities that were deliberately created to have dysfunctional local government systems, confined to racially biased jurisdictions, structures and programs (ANC, 1994; Atkinson, 2002) in fact there were often no municipalities in place (ANC, 1994; Bonner, 1989). Municipal structures were created to manage an unskilled labor force that served the interests of white farmers and industrialists. No substantial efforts were made to advance socio-economic conditions in these localities (Bonner, 1989; Terreblanche, 2002; Mamdani, 1996). Municipalities in mining jurisdictions are currently facing several obstacles in implementing effective LED strategies. There are many possibilities and potentials that have not been exploited (DPLG, 2006).

1.2. **Rationale and problem statement**

The new mining regulatory environment compels holders of old-order prospecting (exploration) and mining rights to convert their rights to new order rights under the Minerals Petroleum Resources Development Act (MPRDA)no 28 of 2002. Previously, mineral rights were owned either by the State or the private sector in South Africa. This

[1] The South African LED Network is an association for Local Economic Development (LED) practitioners in South Africa. The organization is dedicated to the promotion of good practice and dialogue in local economic development as well as connecting and networking practitioners (www.led.co.za).

dual ownership system represented an entry barrier to potential new investors. Government's current objective is for all mineral rights to be vested in the State with due regard to constitutional ownership rights and security of tenure (MPRDA, 2002). The MPRDA addresses primarily:

- Transformation of the minerals and mining industry.
- Promotion of equitable access to South Africa's mineral resources.
- Promotion of investment in exploration, mining and mineral beneficiation.
- Socio-economic development of South Africa.
- Environmental sustainability of the mining industry.

(MPRDA, 2002)

Besides complying with national legislation, the DME expects mining companies to comply with local development objectives, Spatial Development Frameworks (SDF) and Integrated Development Plans (IDP) of municipalities within which they operate. Mines are also expected to promote social participation by conducting their business in such a manner as to take into account local community needs. In order to ensure effective transformation in this regard, the MPRDA requires the submission of adequate Social and Labor Plans (SLP) as a pre-requisite for the granting of mining or production rights (MPRDA, 2002).

The Regulations set out in Section 40 of the MPRDA highlights the formulation of SLP which, to a large extent, addresses the issues that mines have to adhere to in terms of local social and economic development in the communities in which they reside before, during and after a mine has ceased activities. The SLP requires applicants for mining and production rights to develop and implement comprehensive Human Resources Development Programs (HRDP) including employment equity plans, LED programs and processes to save jobs and manage downscaling and/or closure (MPRDA, 2004).

Aspects of the SLP are based upon the Mining Charter, whose main aim is to address equity and broader participation of the historically disadvantaged in the mining industry,

and transformation at the levels of ownership, management, skills development, employment equity, procurement and rural development. The Charter draws on the imperative of redressing historical and social inequalities as stated by the Constitution of the Republic of South Africa, section 9 on equality (and unfair discrimination) in the Bill of Rights, and the policy objective stated in the MPRDA to expand opportunities for historically disadvantaged persons to enter the mining and minerals industry or benefit from the exploitation of the nation's mineral resources (MPRDA, 2004).

Of relevance to this research, the Charter requires mine compliance in terms of a HRDP, which forms a core concept of the SLP. A scorecard intended to measure commitments to the Charter has been developed. The Mining Charter scorecard is intended to reflect the "spirit" of the Broad-based Socio-Economic Empowerment Charter for the Mining Industry. The progress by stakeholders in achieving the aims of the Charter as articulated in the Scorecard can be measured by specific targets set in the Charter, and by the targets set by companies themselves (MPRDA, 2004). A full version of the scorecard is included as Appendix A.

The government's requirement for the creation of SLPs has had a big impact on local government. In practice, this requirement is not co-coordinated efficiently at local government due to a skills shortage, lack of adequate co-operation amongst stakeholders, inefficient administrative, management and budgeting methods. As a result of these deficiencies, a majority of South African municipalities that have mining as a dominant economic activity are struggling to work with key stakeholders in the formulation of SLPs in the advancement of LED projects in communities close to mining operations (DPLG, 2006).

LED in South Africa is mandated in a range of policy and development frameworks which complement and support each other. Overarching strategies include the *National Framework for LED (NFLED, 2006-20011),* which aims to, *inter alia*, support the development of sustainable local economies, enterprise support and business infrastructure development, and the *Provincial Growth and Development Strategy*

(PGDS, 2005), which allows provincial governments to play a leading role in ensuring that economic planning, infrastructure investment and development spending take place in accordance with the principles set out in the National Spatial Development Perspective (NSDP)(DPLG, 2006).

The PGDS is a critical tool to guide and coordinate the allocation of national, provincial and local resources and private sector investment to achieve sustainable development outcomes. Of particular relevance to this study is the Municipal Systems Act (2000) and municipality requirements associated with the formulation of Integrated Development Plans (IDP) (MSA, 2002). This research will investigate the problems and obstacles that are apparent in the development of sustainable LED projects in regions dominated by mining activities. The Rustenburg Local Municipality (RLM) has been chosen as a case study as its local economy is dominated by the extractive industry and stakeholders are battling to develop efficient sustainable LED projects for communities close to mining operations.

1.3. **Research question**

South Africa's mining industry experienced high mineral commodity prices from early 2006 up to the second quarter of 2008. The boom in commodity prices largely benefited mining companies, as it is not evident that communities living close to mining operations have benefited sufficiently from the mineral resource boom. The central question for this discourse is as follows: Is mining contributing to sustainable LED in Rustenburg? This central question is supported by the following sub-questions:

- What is sustainable development?
- What are the lessons to be learnt from international and local literature pertaining to LED in mining affected communities?
- Are mining company's SLP contributing to LED and community development within the jurisdiction administered by the RLM?
- Is the RLM's LED and IDP strategy linked to its mining industry?

- What is the impact of the mining industry on the communities that are administered by the RLM?
- How can the local community be involved in the formulation of SLP and a LED strategy?
- How sustainable is mining in the area administered by the RLM, can it be improved?

1.4. **Hypothesis**

The case study was conducted in order to understand the requirements for the implementation of a sustainable LED strategy for mining affected communities experiencing growing economic activity. The presupposed answer for this discourse is as follows: Sustainable LED in mining jurisdictions will emanate from the alignment of mining companies SLP with the local community's socio economic requirements. The hypothesis for this project is as follows:

- The RLM is ineffective in capitalizing on the sustainable LED potential offered by its mining industry.
- Mining company's social responsibility programs are insufficient in meeting the community's requirements.
- Local community members are not consulted and informed of mining company's social-economic development programs.

1.5. **Method of inquiry**

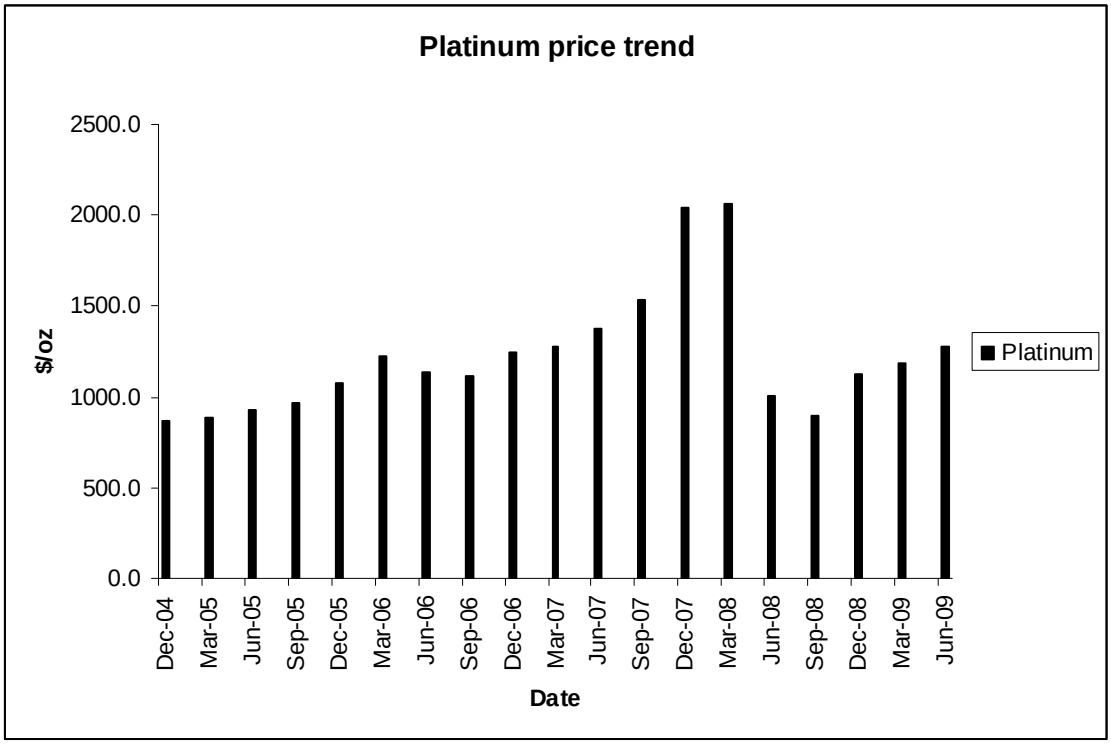
The jurisdiction administered by the RLM was chosen as a point of analysis as it is a municipality that has mining as a dominant economic activity, mainly the mining of Platinum Group Metals (PGM). Other minerals mined in the region include marble, granite and Chrome. Mining activities are situated on the southern part of the Rustenburg municipal area, approximately 96.9% contribution to the total platinum production occurs in this region. It is also estimated that almost 50% of all formal sector employment

opportunities are provided in this sector. Mining is expected to continue to grow which will result in the continued influx of people to the area and a growing need for further investment in services, housing and supporting infrastructure (Rustenburg State of the Environment, 2007).

The economic, social and physical characteristics of RLM are largely determined by the presence of mining activities within its Municipal Area. Platinum is on demand on the world market owing to its many uses, and this makes the Rustenburg Municipal Area a prominent mining hub of South Africa. Underground mining dominates, although open cast mining also exists. The majority of the mines in the study area have a life expectancy of at least 100 years, and the price trends and prospects of platinum group metals reflect the longer-term economic stability of the municipal area (Rustenburg State of the Environment, 2007).

The Platinum mining industry experienced historical high prices, at $2,048 in the first quarter of 2008, 18th of April 2008 established (Business day 18 April 2008). The price of Platinum decreased to under $1,000 an once towards the end of 2008. Analysts predict the price to be averaged at $970 an ounce throughout 2009 and $1,350 an ounce in 2010 (Mineweb, 9 January 2009). Figure 1 shows the Platinum price trend for the December 2004 period up to June 2009.

Figure 1: Platinum price trend for the December 2004 period up to June 2009.



(I-net Bridge, 18 July 2009).

Although the platinum price has plunged by more than 50% the area that is administered by the RLM still requires an effective sustainable LED strategy aligned to its mining industry as the RLM is still faced with an opportunity to promote greater economic diversification of its local economy. The majority of LED strategies for mining affected jurisdictions are concerned with mining jurisdictions that are experiencing an economic decline towards the end of a mines lifecycle (Tapela, 2008, Rogers, 2004; Otto & Cordes, 2002). The RLM requires a unique mining LED strategy as it still has an opportunity to utilize its mineral wealth to strengthen other sectors of its local economy and advance socio-economic development programs.

Comparative analysis and primarily qualitative research techniques guided the formulation of this report (Newman, 2000). Desktop research was conducted by making use of academic material and annual reports. The study reviewed both international and local experiences pertaining to LED in communities close to mining operations, while fieldwork was conducted through verbal interaction and telephonic interviews.

The actors that are affected by the mining industry within the area that is administered by the RLM were interviewed. The actors include the following: local government which is responsible for administering and managing all government and governance issues at the local level; the mining companies are significant actors in the mining industry as they manage the industry; communities close to mining operations are also major players in the industry as they are impacted by the local extractive industry; and the union for mineworkers plays a major role in the local extractive industry as it is a collective bargaining agent representing the interests of local mine workers.

Interviews were conducted with a senior municipal officer from RLM's LED unit in order to access the views of the municipality pertaining to mining and LED. Interviews were also conducted with four mining companies that have operations within the area administered by the RLM, namely Lonmin the third biggest platinum producer, Samancor Chrome Western Mines which has a set of operations within the RLM, Anglo Platinum Rustenburg Section (RPM-(R) an important platinum producer in the region and number one producer of the metal in the world and Aquarius platinum a junior platinum miner.

Interviews were also conducted with three legitimate community leaders who have leadership roles in their respective communities. These leaders were chosen as they represent community members who are directly impacted by the mining industry as their communities are major labor sending areas to several mining operations within the RLM and reside close to mining operations. A National Union of Mineworkers (NUM) unionist for the Rustenburg branch was also interviewed as he performs an important role as a representative of mineworkers in the RLM. Interviews were conducted with a senior

town planning official from the Royal Bafokeng Administration (RBA) planning unit in order to gain insight on their experiences pertaining to mining and sustainable LED. The manner in which the interviewees were chosen is dealt with fully later in the report. The legitimacy of the interviewees is explained in chapter 4.

1.6. **Chapter Outline**

1.6.1. Chapter 2: Literature review

Chapter 2 is centered on the literature review of the report which summarizes a variety of literature pertaining to the reports inquiry. The literature reviewed is concerned with efforts employed in the implementation of sustainable LED strategies for mining affected regions. This chapter begins by offering an explanation of LED and an overview of LED within the South African context. It then moves to outline the different LED approaches practiced in South Africa, these being pro-poor and pro-growth LED initiatives. The chapter then turns its attention towards mining and sustainable LED. In doing this it begins by illustrating the problems that are associated with the extractive industry. This is followed by an explanation of the possible solutions to the problems associated with the extractive industry.

1.6.2. Chapter 3: Mining and LED; international and local examples.

Chapter 3 offers international and local examples of efforts made to contribute towards sustainable LED in mining areas. The aim of this chapter is to depict the manner in which different jurisdictions have dealt with the socio-economic, environmental and institutional challenges apparent within mining regions.

1.6.3. Chapter 4: A case study of the RLM

Chapter 4 offers a case study of the RLM by illustrating its socio-economic conditions, its economy and its mining sector. The chapter then outlines the views espoused by the RLM in relation to mining and LED. This is followed by a report on the interviews conducted with four mining companies operating within the RLM, legitimate community

leaders of three communities close to mining operations in the RLM and a summary of the views of a unionist from the National Union of Mineworkers (NUM) Rustenburg branch. A brief outline of the RLM LED strategy is offered. The outcomes of the interviews illustrate the stakeholder's[2] suggestions in relation to the implementation of an effective LED strategy for the area that is administered by the RLM.

1.6.4. Chapter 5: Conclusion and recommendations

Chapter 5 concludes the paper by illustrating the relevant issues that emanate from the papers findings. It also offers recommendations.

[2] Stakeholders :Those who affect and are affected by the mining industry.

2. CHAPTER 2

2.1. Mining and Sustainable Local Economic Development (LED).

The extractive industry provides several socio-economic opportunities to a region experiencing mining operations. The mining sector also impacts negatively in the region in which it occurs. In most cases the local economy becomes dominated by the extractive industry making the local population dependant on a single industry. The region has the potential of being impacted negatively when mining ceases. The cyclical nature of the industry requires proactive solutions to be developed during mining operations. These solutions must be aimed at expanding local economic activity into other non-mining economic sectors (Rogers, 2004; Otto & Cordes, 2002; Starke, 2002).

This chapter will attempt to offer a comprehensive explanation of the role that can be played by the extractive industry in promoting sustainable LED in localities close to mining operations. The chapter will begin by explaining the meaning of Sustainable Development and move to explain LED. The chapter will then delve into explaining LED within the South African context. The chapter will turn to focus on explaining problems associated with the extractive industry and unpack the possible solutions to the problems that have been identified. The chapter will conclude by offering possible sustainable LED solutions to areas affected by mining operations.

2.1.1. Sustainable Development (SD)

The definition that is widely used to define Sustainable Development (SD) is development that meets the requirements of the present without compromising the ability of future generations to meet their own needs. SD is concerned with balancing social progress, the efficient utilization of environmental resources and maintaining economic growth and stability (The Brundtland Report, 1987). The South African government adopted its SD development strategy in 1999 titled the National Strategy for Sustainable Development. Its main objective is to ensure a better quality of life for all South Africans

now and for generations to come by promoting social activities that meet the requirements of all citizens, engaging in practices that will effectively protect the environment, promoting efficient use of all natural resources and maintaining high and stable levels of economic growth and employment (SDSA, 1999).

2.1.2. Local Economic Development (LED)

The International Labor Organization (ILO) describes LED as a process that is centered on development that includes the local population and arranges coalitions between the private and public sector stakeholders of a specific territory to plan and put into practice a development strategy that has been agreed upon by all stakeholders[3]. The development strategy should be centered on the creation of sustainable economic activity through the utilization of local resources and competitive advantage in the global context (ILO, 2002).

LED can be instituted through the implementation of LED programs that may be offered by the national government in the form of national LED policy, guidelines and programs (Nel & John, 2001; DPLG, 2006). Tomlinson (1994) argues that in order to achieve local economic growth public involvement is required to promote increased private investment with the hope that increased private investment will lead to new employment opportunities, poverty reduction, higher personal incomes, greater demand for goods and services, increased private investment, the creation of income and employment multipliers. He explains that increased private investment will create a larger tax base through additions to the capital stock, employment opportunities and personal incomes with the ability to permit either a lower tax rate that may enhance the investment climate, or higher tax revenue that may contribute to the realization of improved public services and amenities (Tomlinson, 1994).

[3] Stakeholders: those who affect and are affected by the development strategy.

Earlier LED approaches are perceived to be initiatives characterized by coalitions between the public sector, the private sector and the local community mainly centered on place marketing (Blakely & Bradshaw, 2002; Theodore & Morris, 1994; Rogerson, 2006). Theodore and Morris (1994) identify one of the most important facets with early LED policy being the emphasis laid on the employment of the necessary mechanisms aimed at enticing firms to relocate to a particular locality by developing a variety of incentives to recruit firms. Incentives could be expressed in the form of tax benefits, favorable zoning charges and moratoriums on minimum wage legislation (Theodore & Morris, 1994).

They go on to explain that a company's decision to relocate is usually supported by a variety of factors which government cannot control. These may include the size of the population, migration patterns, transportation rates, local purchasing power, labor productivity, wages and union control (Theodore & Morris, 1994).

One of the new variants amongst the numerous emerging forms of LED initiatives are LED projects that are conducted by local communities with the support of Non Governmental Organizations (NGOs) with the aim of promoting human capital development and economic diversification (Nel, 1999, Rogerson, 2006). In this case LED is concerned with the development of the skills of the local population to enable it to own and take part in local economic activities taking place within their jurisdiction. Behind this backdrop, the local population is empowered to utilize existing local resources and local solutions to develop their standard of living (Nel & John, 2001; Rogerson, 1996; DPLG, 2006).

Tapela (2008) suggests that these LED initiatives can be characterized as efforts centered on the importance of implementing workable strategies that compel the direct involvement of the local population in local economic development and investment promotion by establishing urban growth coalitions and public-private partnerships (PPP)(Tapela, 2008).

Tomlinson (1994) has identified a number of LED approaches that have been followed by the public sector. He explains that these approaches have been a combination of traditional, entrepreneurial, urban efficiency and human resource development approaches aimed at promoting development with agents representing different levels of government (Tomlinson, 1994). In South Africa LED strategies are based on the vision that is outlined in the IDP which considers the result of the analysis conducted to identify problems and development projects (South African LED Network, 2009 & DPLG, 2006). Sustainable LED is LED that fulfills SD dimensions expressed in a growth of local economic activity that adheres to the well-being of the environment, social and institutional components of a region.

2.1.3. LED within the South African context

Efforts aimed at developing a formalized LED policy framework for South Africa emerged in the early 1990's. This initiative was influenced by LED initiatives that had already started taking shape in the global north. Most importantly it was given impetus by the demise of the apartheid regime and the need to meet the service delivery requirements of various localities which never received adequate attention during the apartheid regime (Nel & John, 2006; Nel, 2001; Rogerson, 1997; DPLG, 2006).

During the apartheid era, LED was confined to smaller decentralized initiatives with emphasis placed upon place marketing as a strategy to attract inward investment. In post-apartheid South Africa, LED has taken a development planning role expressed as a variety of initiatives which include the advancement of cities as centers of production, consumption, knowledge, information processing and the provision of government surplus (Rogerson, 2006, Xuza & Swilling, 2008).

In the post-apartheid South African context LED can be described as a partnership between the public sector, communities, local actors and the private sector. This partnership is usually developed with the aim of enhancing the livelihoods of the local population or increasing economic activity in a particular area (Nel, 1999).

The National Framework for Local Economic Development (NFLED) in South Africa for the 2006 – 2011 period has been created to promote a collective approach for LED in South Africa. It also contextualizes the role of local economies in the national economy and advocates the development of strategies to reduce poverty (DPLG, 2006; Nel & John, 2006).

The Framework aims to achieve the latter by obligating local authorities to integrate local communities into economic activity and programs, to distribute information and to adequately co-ordinate economic development planning and implementation across government and between key role players (DPLG, 2006). In practice, it intends to mobilize local communities and local resources within the framework of Provincial Growth and Development Strategies (PGDS)[4] and the National Spatial Development Perspective (NSDP)[5] to achieve greater competitiveness within domestic and global markets (DPLG, 2006). The basis for the latter is that developing areas competitiveness will increase its investment opportunities. Employment opportunities will emanate from the growth of investment that occurs in a particular locality (DPLG, 2006).

The national and provincial government provides support for municipalities in developing local economic strategies while the DPLG has identified the following as the key principles underlying LED in South Africa:

- Poverty and unemployment are the main challenges facing South Africa. LED strategies must prioritize job creation and poverty alleviation.
- LED must target previously disadvantaged people, marginalized communities and geographical regions, black economic empowerment enterprises and SMME to allow them to participate fully in the economic life of the country.

[4] Provincial Growth Development Strategy (PGDS) is a strategic and integrated provincial plan that provides direction and scope for provincial-wide development programs and projects within the context of a long-term perspective and taking into consideration resources available and constrains (RSA Presidency, 2005).

[5] The National Spatial Development Perspective (NSDP) is a critical instrument for policy coordination, with regard to the spatial implications of infrastructure programs in national, provincial and local spheres of government.

- There is no single approach to LED. Each locality may develop an approach that is best suited to its local context.
- LED promotes local ownership, community involvement, local leadership and joint decision making.
- LED involves local, national, and international partnerships between communities, businesses and government to solve problems, create joint business ventures and build local areas.
- LED uses local resources and skills and maximizes opportunities for development.
- LED involves the integration of diverse economic initiatives in an all-inclusive approach to local development.
- LED relies on flexible approaches to respond to changing circumstances at local, national and international level.

(DPLG, 2006).

In South Africa LED initiatives have emerged from the need to meet the economic existence of several localities. The Growth, Employment and Redistribution Program (GEAR) has influenced the direction of LED (Rogerson, 2006; Nel & John, 2001). The most common approaches utilized in South Africa to realize LED has been the establishment of local structures for LED (Xuza & Swilling, 2008). The activities of these structures have been confined to creating the appropriate environment for LED to occur which has been expressed in the promotion of a partnership between the public, private sector and communities. In most cases the implementation of LED has been expressed in the form of proposal writing, fund raising, and employing staff, strategic planning as opposed to the actual realization of actual LED delivery processes (Xuza & Swilling, 2008; Nel, 2001).

The most common set of themes of discussion by LED leading scholars are: the debate over pro-business growth LED initiatives versus pro-poor poverty eradication approaches; the existence of inefficient capacity and resources required to manage LED projects; the challenges of co-coordinating and integrating LED projects within public

institutions; the differences between big competitively driven projects versus bottom-up smaller development initiatives; the challenges and potentialities presented by the difference in large cities compared to smaller cities; and the problem of promoting sector or specific area targeting LED initiatives (Xuza & Swilling, 2008; Rogerson, 2006).

The current focus is on the need to provide LED initiatives that have the ability to achieve both global competitiveness and poverty reduction (Rogerson, 2006; Xuza & Swilling, 2008; Nel, 2001). A variety of scholars identify the fundamental flaw pertaining to the implementation of LED in South Africa as being national government's focus on the promotion of the values of a developmental local government system without adequate guidance on the institutionalization of the appropriate set of structures, processes and leadership capacities (Xuza & Swilling, 2008, Rogerson, 2006, Nel & John, 2001).

2.1.4. LED Approaches in South Africa – Pro-growth and Pro-poor initiatives.

The majority of LED initiatives in South Africa have been following the pro-growth LED trajectory. This has been given support by the country's macro-economic policy framework, GEAR. This LED trajectory has been expressed in urban areas establishing LED activities aimed at the promotion of local competitiveness by establishing city improvement programs; provision of mechanisms to support the growth potential of the small, medium and micro enterprises (SMME); and promoting localities for competitive spaces for production, consumption and knowledge based activity (Rogerson, 2006).

Rogerson (2006) asserts that pro-poor initiatives are followed as a need to steer the LED trajectory towards the eradication of unemployment and poverty in several localities in South Africa. This approach is expressed in the 2002 LED policy document entitled 'Refocusing Development on the poor' (DPLG, 2002; Rogerson, 2006). In essence the focus of the 2002 LED policy document is to provide the correct mechanisms that will target low-income communities and the marginalized. He goes on to state that pro-poor LED strategic interventions can be explained as being the following: community-based

economic development projects, development of linkages, human capital development, the development of infrastructure and municipal services and several formal and informal activities aimed at retaining and increasing local economic activity (Rogerson, 2006).

2.1.5. Mining and Local Economic Development (LED)

2.1.5.1. Problems associated with the extractive industry

Several scholars have argued that mineral resources are a tragic national asset as they are susceptible to long-term price declines with the mineral development process having a negative impact on the surrounding physical environment coupled with the sector having volatile prices (Walker, 2006, Tapela, 2008; Binns & Nel, 2003; Binns & Nel, 2001). Mining operations comprise different stages; the stages that have a major impact on communities settled proximate to mining operations are identified by Stark (2002) as follows, the exploration stage, the construction phase, the production phase and the mine closure phase (Starke, 2002). The exploration phase is the most important phase as it is the first encounter between the community and the mining company. This phase has a low economic impact on the community as mining activities have not commenced (Otto & Cordes, 2002; Starke, 2002).

The construction phase is short but has an enormous impact with long-term implications, as it is responsible for the provision of employment opportunities and opens up isolated regions, develops infrastructure and stimulates migration into the area (Otto & Cordes, 2001). This phase has the potential to cause several physical and social commotions. The production phase is also associated with long-term effects since it introduces the generation of income and several negative and unintended outcomes especially when the new economic projects cause a significant disturbance in the activities of the community (Eggert, 2004, Stark, 2002, Otto & Cordes, 2002, Tapela, 2008).

The latter is usually the case with mining operations where communities are in danger of losing their livelihoods and the natural environment may be at risk of being damaged or

polluted. Furthermore, it is argued by Tapela (2008) and Eggert (2004) that mining activities may exacerbate or initiate social tension within communities affected by mining operations when communities feel that they are being unfairly treated or inadequately compensated by the mining companies operating in their community (Tapela, 2008; Eggert, 2004). The infrastructure that is established during mining operations may be underdeveloped or neglected when mining operations cease (Otto & Cordes, 2002; Eggert, 2004).

It is also believed that mining's positive contact with communities is on the decline as the majority of communities residing close to mining operations receive less in terms of employment and business opportunities and the multiplier effects synonymous with mining operations (Starke, 2002, Otto & Cordes, 2002). The latter is said to have been given impetus by a variety of factors which include a substantial decrease in the costs of transporting large materials and the materialization of multinational companies as primary players in the industry enabling mines to be located at a considerable distance from where the ore is processed (Starke, 2002, Otto & Cordes, 2002). In South Africa certain regions have experienced economic development synonymous with the mining sector (Fine & Rumstomjee, 1996), while other areas economic development was distorted by the apartheid regime (Bonner, 1989; Terreblanche, 2002).

Furthermore the mining industry has experienced a decline in employment of an unskilled labor force while there has been an increase in the requirement of skilled technical labor as mining operations are becoming more technical (Starke, 2002). In other mining jurisdictions mining operations have become specialist enclaves segregated from other sectors of the economy (Eggert, 2004; Daniel, 2004; Otto & Cordes, 2002).

It is also argued that in cases where there is insufficient labor supply, mining companies may be obliged to recruit labor from other regions contributing towards the traditional and cultural mixture of a particular locality. Cultural clashes may arise emanating from the destabilizing effects on traditional ways of life as a result of operations occurring in areas inhabited by communities who have had a limited experience and contact with

other tribes. This has certainly been the case with a majority of mining operations in South Africa. Local communities may not perceive foreign values as admirable or suitable as they are a threat to the significance of a community's values and traditions (Steyn, 2008).

Mining companies have been identified as having the potential to affect the traditional balance of power within a community when they neglect already established traditional decision making structures and consult with unrecognized individuals who lack the community's trust (Steyn, 2008).

In several mining regions it is common for ethnic tensions to emerge fuelled by the introduction of mining activities in traditional enclaves. It has been observed that in certain cases conflicts pertaining to ethnic boundaries may re-emerge as borders may become central in obtaining socio-economic benefits from mineral development leading to the acknowledgment of one ethnic groups socio-economic rights and the exclusion of another ethnic groups civil rights (Starke, 2002).

Conflicts between mining companies, communities and the government have sprung from the denial of several socio-economic and civil rights. The latter has included complaints from landowners and communities who may be directly affected by mining operations. The most serious issues are the loss of land, loss of individual and collective sustainable livelihoods, degradation of the environment, natural resources, and human rights abuses (Otto & Cordes, 2002). The changes introduced by mining activities such as socio-economic status amongst community members has also been identified as having the potential to exacerbate conflicts (Starke, 2002).

Otto & Cordes (2002) state that in the past mining companies negotiated contracts directly with central government. In most cases mineral development policies were formulated by governments without sufficient consultation with communities (Otto & Cordes, 2002). They go on to explain that recent international developments pertaining to mineral policy and legislation obligates governments who administer countries that are

endowed with mineral deposits to incorporate the publics views in the formulation of mineral policy and legislation. This is said to be done with the aim of enabling the mineral hosting country to derive socio-economic benefits from the development of its mineral resources (Otto & Cordes, 2002, Mtegha , 2004).

Mtegha (2004) states that the mineral policy development process requires adequate and full support from stakeholders. Mtegha's views are in line with Otto & Cordes (2002) explanation of the community participation process in the formulation of mineral policy to allow the process to be conducted in an adequate manner which enables the community to be represented and to be engaged in a process that will have a positive impact on their livelihood based on values, goals and their aspirations (Otto & Cordes, 2002, Mtegha, 2004).

Furthermore areas dominated by mining activities are said to experience an extensive increase in the accessibility and consumption of alcohol combined with an increase in gambling and prostitution (Tapela, 2008). It has been identified that mining employment opportunities largely employ male workers. This explains the historical focus on the development of single sex mining hostels and camps, especially in South Africa. Single lodgings have the potential to attract prostitutes and spread Sexually Transmitted Diseases (STDs). Sex workers are usually made up of unemployed women who have migrated or reside in the communities surrounding mining operations (Starke, 2002, Otto & Cordes, 2002, Steyn, 2008).

In the case of fly – in, fly – out operations, communities living near the mine gain less of the socio-economic benefits (employment opportunities, business opportunities, and multiplier effects) associated with mining operations since mineral deposits discovered are mined without the development of traditional mining towns and workers are brought in from outside the area in which mining operations occur. This move has the potential to destroy the social fabric of the families of mine workers as these workers leave their households in order to provide services to an area that is located at a considerable distance from their homes (Starke, 2002).

Several democratic governments have decentralized central government's responsibilities to other spheres of government structures (Jordan et al, 2005). The lack of capacity in local government structures is evident in numerous mining jurisdictions especially those located in the developing world. Jourdan (2005) explains the latter by noting that the majority of local authorities in the developing world fail to negotiate mining agreements that reflect the interests of its constituency while other local government structures have failed to integrate land use policy with a long-term perspective, managing, collecting and distributing revenues obtained from mineral development equally to its constituency (Jourdan et al, 2005).

The majority of mining operations are currently taking place in the developing world, with a big percentage of operations taking place in Latin America and on the African continent (Raw Material Data, 2008). In these regions women play a significant role in the reduction of poverty in the household and at a community level. The sexually biased nature of mining operations as they largely employ male labor has the potential to perpetuate socio-economic gender inequality. Steyn (2008) explains that the domination of employment opportunities by males in the mining sector can contribute to the enhancement of their social status as they are offered access to income and business opportunities. In other mining communities women become passive recipients of the benefits emanating from mining operations as they are usually spouses of mine employees. When they do work in the mines they may be confined to clerical, catering, nursing staff, adult education and human resources (Steyn, 2008, Otto & Cordes, 2002; Starke, 2002).

The environmental degradation emanating from mining operations has a direct impact on the immediate mining affected community. The effects may be spread to other regions especially in the case of water catchments and air pollution. Degraded environments have a direct adverse effect on the health of the people who make use of the affected environment (Rogers, 2004; Otto & Cordes, 2002). These environmental impacts may stem from waste rock, tailings dams, buildings, roads, airstrips (Rogers, 2004; Otto & Cordes, 2002; Starke, 2002).

Furthermore environmental degradation resulting from mining operations can affect women's agricultural activities. The latter can also be affected by a shortage of male labor since they will be attracted by employment opportunities offered by mining. In the case of fly-in, fly-out operations women are left at home to manage domestic affairs and are susceptible to socio-economic dangers which may include crime, break down of the family, breakdown of the social fabric, and increase in sexual violence. These factors are said to result from men being away from their households working in the mines (Steyn, 2008; Otto & Cordes, 2002; Starke, 2002).

On their return women are in danger of catching STD that migrant mine workers are exposed to resulting from the domination of male labor camps next to mines rife with prostitution (Starke, 2002). These impacts of mining on women are given impetus by the failure to recognize women as an important element of stakeholders in the planning and operation of mine sites. Patriarchal customs are still practiced in regions in the developing world. This may be an obstacle to women taking part in the deliberations of the issues that may affect their community as a result of mineral development (Otto & Cordes, 2002). Most decisions affecting the community are usually taken by community leaders who are customarily male (Starke, 2002).

Mass migration of people into a particular area and mining activities may contribute to the growth of health hazards. Some of the diseases synonymous with mining activities are produced by the pollution that results from mineral production activity which includes respiratory diseases from air pollution. The inward migration of labor adds additional pressure on the environment with the possibility of the introduction of new diseases which may be summarized as follows; influenza, malaria and HIV/AIDS (Otto & Cordes, 2002). In certain cases these diseases may already exist in communities affected by mining activities but they can be reproduced by the settlement of an additional number of laborers (Starke, 2002).

Well established mining companies usually provide their own health services to their employees. In most cases mining company's health services have been confined to

health issues emanating from their operations and their employees. No significant attention has been offered towards the overall health requirements of the community members who do not work for the mine but are affected by its operations as they reside proximate to the mine. In some cases, no substantial efforts are made to enable the community to sustain the health services offered by the mine when mining ceases (Rogers, 2004; Otto & Cordes, 2002; Starke, 2002).

Binns and Nel (2003) identify retrenchment and relocation as being a significant negative feature within the mining industry (Binns & Nel, 2003). They maintain that retrenchment has a detrimental effect on the social fabric of mining affected communities as community members may find it difficult and in some cases impossible to meet the new challenges emanating from the end of economic activity within their communities (Binns & Nel, 2003; Binns & Nel, 2001; Rogers, 2004). Tapela (2008) goes on to explain that the decline in local economic activity may obligate community members to relocate in other economically active communities (Tapela, 2008).

Rogers (2004) argues that in some cases members of a mining affected community may be forced to relocate resulting from forceful removal and loss of land due to the introduction of mining operations within the area that they had once inhibited. This may lead to communities leaving their well resourced land to a region that is not as well resourced as the area which they inhabited for generations (Rogers, 2004; Starke, 2002).

2.1.5.2. Potential solutions to the problems associated with the extractive industry

Activities centered on mineral development have the potential to introduce wealth in the area where mining operations occur as new economic projects can create employment opportunities, business activities, infrastructure, schools and health services to areas that never enjoyed these services before (Otto & Cordes, 2002). Several countries most notably the United States, Canada, the Nordic countries and Australia have been successful in the implementation of adequate strategic interventions that have enabled them to achieve economic success regardless of relying on their minerals sector (Walker, 2006).

The strategic interventions employed by these countries as identified by Walker (2006) and Jourdan (2006) were centered on the use of mineral resources as a solution for attaining economic diversification. The continued enjoyment of the benefits of mineral resources was experienced by these nations long after mineral resources had been exhausted. Factors which contributed to the latter were the development of technology to enable the further processing of minerals, combined with the development and support of a capital goods and service sector that was directly linked to the resource base (Walker, 2006; Jordan, 2006).

Di Boscio and Humpreys (2007) explain their understanding of mining and sustainable LED as efforts established to find ways that will convert a depleting mineral resource into a sustainable source of wealth as the mining industry does not represent a high linkage promoter type of production. They go on to explain that the discovery of a good ore body (economically mine able) provides the capital required to initiate an economic growth process. The biggest element of development in the mining sector is described as the sectors ability to add value with minimum pre-existing local economic conditions. The discovery of a good ore body may lead to its development process. Revenues emanating from mineral development can be spent in the local economy to develop and boost other economic sectors (Di Boscio & Humpreys, 2007).

2.1.5.2.1. Mine and Regional Development

Otto and Cordes (2002) assert that the finite life span of mines means that it is essential to develop methods to sustain the direct benefits that mines bring to communities in the form of wages and welfare. This can be achieved by incorporating mining activities into local and regional development plans to assist the community in employing the appropriate mechanisms that will sustain the benefits derived from the extractive industry (Eggert, 2004; Daniel, 2004; Otto & Cordes, 2002, Starke, 2002).

One important approach is the development of an agreement between local and central government regarding the distribution of revenues incurred from mineral development. A proportion of rents can be distributed to central government for the overall benefit of the nation and another share of revenues derived from mineral development can be allocated to local authorities affected by mining activities (Daniel, 2004; Eggert, 2004; Otto & Cordes, 2002, Starke, 2002; Tapela, 2002).

Community participation in the development of regional development plans can be a useful mechanism when conducted adequately as it will enable the community to be represented and to be engaged in a process that will have a positive impact on their livelihoods based on their values, goals and aspirations (Otto & Cordes, 2002). This approach should be maintained throughout the life of the mine (Otto & Cordes, 2002, Starke, 2002). Daniel (2004) stresses the need to develop mechanisms which can enable communities to manage significant amounts of money derived from the local extractive industry. He acknowledges that this may require government assistance to enable locals to develop unique structures and guidelines aimed at promoting sustainable management and distribution of revenues incurred from mineral development (Otto & Cordes, 2002, Starke, 2002; Daniel, 2004; Eggert, 2004).

Other useful mechanisms that have been identified as being effective in advancing better management of wealth derived from mining involve the establishment of community financial saving projects, funds and foundations (Eggert, 2001; Starke, 2002). The savings emanating from these funds can be utilized to meet the community's socio-economic requirements (Eggert, 2004; Otto & Cordes, 2002).

This method is said to be of use in cases where local government capacity is insufficient to deliver essential public services such as transport, health, education and infrastructure. In other mining jurisdictions infrastructure credits have proven to be a useful instrument in enabling mining companies to contribute towards the well being of the community where their mining operations occur (Otto & Cordes, 2002). This has certainly been the case in the Bolivian Mining Code where mining companies are expected to contribute towards infrastructure development in the areas of their operations. These efforts are offset against tax liabilities (Otto & Cordes, 2002; Starke, 2002; Eggert, 2004)

If tension exists between key stakeholders in the mining sector its resolutions can be based on the appropriate management of all interactions between all actors. This may require open transparent dialogue conducted under reasonable conditions guiding the resolution of conflicts between stakeholders to prevent the escalation of conflicts into violent confrontations (Starke, 2002; Otto & Cordes, 2002). Mining companies have a good reputation for introducing educational facilities in secluded regions in the developing world. Other educational benefits that have been derived from mining company's operations include the offering of scholarships to the youth of mining affected communities, the establishment of training sectors which offer skills that can be used within and outside the mining sector (Otto & Cordes, 2002; Starke, 2002).

Fly- in, fly – out operations have been identified by several scholars as mining operations that have the potential to protect regions which have mining as an economic activity from several negative outcomes synonymous with mining operations which include 'boom towns' and a massive influx of people seeking employment in the newly established mining town. No new settlements are created. It is appropriate to note that

fly-in, fly out operations decrease the level of conflict synonymous with mining operations which are perpetuated by access to scarce resources or interactions between the community and outsiders(Otto & Cordes, 2002; Starke, 2002; Eggert, 2004; Tapela, 2008).

2.1.5.2.2. Mining and Human Capital Development

Mining legislation has the potential to force mining companies to formulate programs aimed at developing human capital and the expansion and support of local business through the creation of programs that are aimed at training and educating locals and their employees. Another strategy that can be employed by mining companies to encourage employment and skills development in mining communities is to enable communities to become shareholders in the mining company (Otto & Cordes, 2002; Starke, 2002).

Government can provide legislative support aimed at reducing the obstacles to employment and skills development in mining communities. Large technical mining operations can be perceived as opportunities that will enable community members to derive and develop skills (Daniel, 2004; Eggert, 2004; Otto & Cordes, 2002 Starke, 2002). These private sector development initiatives should not only be confined to the development of entrepreneurial technical skills but may also be directed towards equipping the youth and women with skills that will offer them an economic existence besides employment in mining related activities (Starke, 2002).

Employment and skills development programs may be structured in a manner that will equip members of the community with the capacity that will enable them to hold senior managerial positions in the mining company's operating in their jurisdiction (Starke, 2002). Cultural awareness should be evident within the interactions of the mining company, government and members of the local community especially in mining jurisdictions where there are cases of racial discrimination directed at the values and traditional ways of lives of local employees and communities (Starke, 2002; Otto & Cordes, 2002). Appendix C illustrates an approach for sustainable development at the community level.

2.1.5.2.3. Mining and Health Issues

Local authorities are identified as having the potential to perform an effective LED role when they are equipped with the necessary resources and capacity that will enable them to ensure that members of a mining affected community receive an equitable share of the benefits emanating from mining operations. Well capacitated local authorities can be the main drivers of community development projects (Otto & Cordes, 2002, Starke, 2002).

In relation to health issues, there are two ways of looking at a mining affected community. One way is to recognize the fact that the introduction of mining operations in a once isolated region can offer that region the opportunity to access health services that previously did not exist in that community. The health services offered by mining companies are said to be more useful if their services are offered to all those who are affected by the mining operation and not confined to mine workers. Local authorities can be engaged in a partnership with mining companies with the aim of expanding their health services to community members proximate to their operations. This can be followed by the development of programs to ensure that communities are able to build independent capacity that will enable them to maintain health service provision after the life cycle of the mine (Otto & Cordes, 2002; Starke, 2002).

Rogers (2004) states that mining companies can establish initiatives to address accidents and the spread of diseases resulting from mining operations by establishing adequate health policies and programs for employees, their dependents and the mining affected community. These initiatives should also concern themselves with other underlying health effects emanating from mining operations (Rogers, 2004; Otto & Cordes, 2002).

He goes on to expand on the importance of local authorities in spearheading community health development programs with the aim of ensuring that all newly developed health initiatives are sustained throughout the life of a mine (Rogers, 2004; Otto & Cordes, 2002). Training programs can be developed aimed at equipping employees with the

skills that can be utilized in other sectors of the local economy when mining ceases. This can be realized when mining companies are obligated to do so (Rogers, 2004).

2.1.5.2.4. Mine Closure

The process of planning for mine closure should start in the beginning of a mines lifecycle as advocated by South Africa's mining legislation. There are various initiatives that can be employed to ensure that mine closure does not have a negative impact on the community that once benefited from previous mining operations. Firstly, the infrastructure that is constructed by the mining company needs to serve both mining operations and the communities requirements (MPRDA, 2004; Rogers, 2004; Otto & Cordes, 2002). The mining company can employ skills development programs that will ensure that members of the mining affected community are equipped with the necessary skills required to maintain the infrastructure without the assistance of the mining company when mining ceases (Rogers, 2004; MPRDA, 2004).

It is the responsibility of all stakeholders to ensure that the local economy experiences a significant degree of diversification during the life cycle of the mine to enable the local community to have an economic existence when mining operations cease (Rogers, 2004; Otto & Cordes, 2002). It will be beneficial for members of a mining affected community to be offered the opportunity to gain environmental management skills that will enable them to provide the necessary environmental management support when mining ceases (Otto & Cordes, 2002). In communities that have a big agricultural sector mining companies can collaborate with local administrative structures to offer local communities the necessary support that will enable them to continue with subsistence production which will be a useful economic activity at the end of a mines lifecycle (Starke, 2002).

Another fundamental feature pertaining to mine closure is Government's role in adopting the necessary mechanisms aimed at enabling the revenues incurred from mineral development during a mine's lifecycle to be utilized for the realization of socio-economic development projects and economic diversification (Eggert, 2004; Daniel, 2004; Otto & Cordes, 2002; Rogers, 2004). The planning of the mine closure program

should be conducted throughout the lifecycle of the mine. The mine closure plan should change based on the different socio-economic and environmental changes occurring within the community (Starke, 2002).

2.1.5.2.5. Mining and LED

Eggert (2006), Di Boscio and Humpreys (2007) state that proactive solutions need to be put in place for LED to emerge in a mineral based local economy. This may involve forceful policy directives aimed at making sure that monetary contributions are derived from the local extractive industry and utilized in the establishment of a diversified and sustainable local economy. This can be achieved by developing mining activities in-collaboration with other complimentary economic activities to create a platform for a diversified local economy beyond the mines life. For this to be executed efficiently, the sustainable LED strategy must be formulated based on the nature and the ability of all stakeholders to play a role in the LED process coupled with the identification of roles, boundaries and responsibilities that each stakeholder has to perform (Eggert, 2006; Di Boscio & Humpreys, 2007).

The mining sector's local economic contribution has several multiplier effects which include workers spending their wages, government distributing their tax revenues and shareholders spending their profits and provision of local infrastructure. Di Boscio & Humphreys (2007) assert the importance of strong inter-industry linkages in the realization of LED noting that local industries with stronger linkages have the ability to promote the advancement of local suppliers through upstream and backward linkages and in the development of new local customers and users of the product (downstream or upward linkages) (Di Boscio & Humpreys, 2007).

Mining is an industry that usually has weak linkages to the local economy as the majority of inputs are usually imported from other regions or countries. The latter is especially the case in most parts in the developing world. Di Boscio and Humpreys (2007) assert that even when necessary inputs are available in the local economy the decision from a mining company to source locally will not only be influenced by the proximity of the

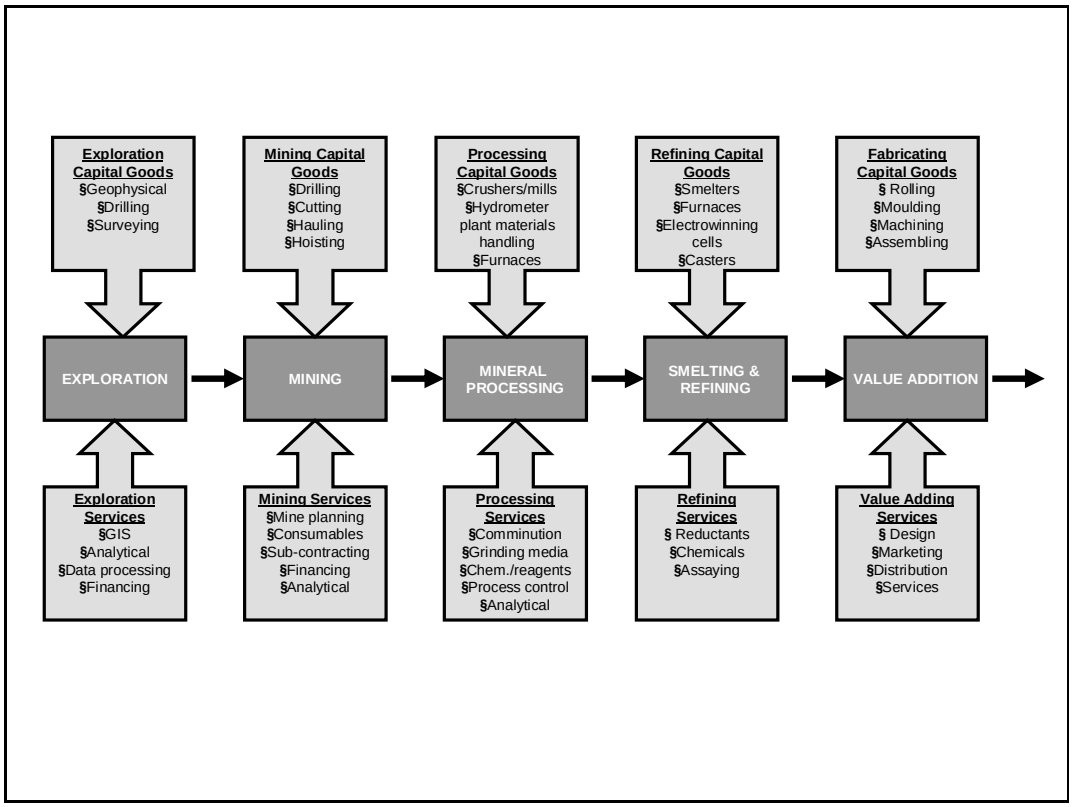
supplier but it will be influenced by various factors which will include the cost, quality, reliability and the flexibility of local suppliers compared to other suppliers (Di Boscio & Humpreys, 2007).

They go on to explain that backward linkages play an important role in LED as they provide opportunities for production and employment by local suppliers in the small enterprise sector which plays a credible role in the realization of the development of a local economy (Di Boscio & Humpreys, 2007). Backward linkages also make up a direct channel for the diffusion of knowledge and have the ability to assist in upgrading domestic suppliers (Eggert, 2006; Di Boscio & Humpreys, 2007). They also have the ability to develop economies of scale and several positive spill-overs which may include technological spill-overs as productive investments in one industry increasing demand in supply of goods and services to stimulate a positive change in the existing productive organization of suppliers (Di Boscio & Humphrey, 2007; Otto & Cordes, 2002).

The mining sector offers several forward linkage opportunities to the local economy as its main operations begin at the productive chain. Products undergo transformations through smelting, refining and fabricating. In most cases these activities can take place close to the ore body offering opportunities for local economic operations. However local economic opportunities derived from forward linkages may be limited when processing facilities are located at a distance from the ore body (Otto & Cordes, 2002). Figure 2 illustrates the mineral beneficiation value chain.

Walker (2004) and Jourdan et al (2005) identify academic institutions such as tertiary institutions, training centers, research and technology hubs, technology institutions, export promotion agencies and public and private institutions as important linkages in the realization of sustainable LED in a mining affected region as they may play important roles in the advancement of projects aimed at optimizing mining contributions towards communities proximate to mining operations (Walker, 2004; Jourdan et al, 2005).

Figure 2: The mineral beneficiation value chain.



(Mintek, 2006).

2.2. **Conclusion**

This chapter has explained the meaning of sustainable development and offered an explanation of LED. It also gave an illustration of LED within the South African context. The chapter then discussed problems associated with the extractive industry and offered a variety of solutions to these problems with emphasis on LED specific solutions.

It is evident from this chapter that sustainable development is a maturing discourse and it is being interpreted differently. The chapter depicts LED as a coalition that is headed by local authorities and third parties with the aim of providing sustainable economic opportunities to a particular locality. The manner in which LED is practiced in South

Africa shows that LED initiatives have been influenced by the country's macro-economic framework and heavily influenced by local requirements at the community level.

This chapter also showed that communities close to mining operations have socio-economic and environmental problems which require unique solutions. Stakeholder involvement is required in coming up with effective solutions for community's proximate to mining operations. It also became apparent that central government is required to enact guiding principles that will steer its mining industry to promote socio-economic development programs in the areas affected by mining operations. Local authorities need to be empowered with the necessary resources and capacity required to spearhead this process as they have the responsibility to administer and manage government issues at the local level.

3. CHAPTER 3

It is possible for the mining industry to contribute to the socio-economic development of community members who are directly affected by mining operations. The latter may take place when mining operations are conducted in a manner that considers the requirements of all those who are affected by mining activities. This chapter will offer both international and local examples pertaining to the mechanisms employed to promote sustainable LED in mining affected communities.

This will be delivered in four separate sections that need to be considered when enhancing sustainable LED programs in mining affected communities. The four sections concerned with are economic, social, environmental and institutional mechanisms employed to advance sustainable LED. These four components are required to sustain economic wealth. The chapter will first consider international examples and will then delve into local examples.

3.1. International examples pertaining to sustainable LED for mining affected communities

3.1.1. Sustainable economic development

Kitula's (2006) study on the environmental and socio-economic impacts of mining on livelihoods in Tanzania's Geita District showed that when environmental impacts emanating from mineral development are well managed and mitigated, mining significantly contributed to the incomes of local people employed in agriculture as it provided markets to their agricultural produce. In this case the arrival of newcomers searching for employment at the mine sites enhanced the demand for local goods which developed opportunities for local people to sell their agricultural produce (Kitula, 2006).

An analysis of variance of mining and local economic impact emanating from the study pertaining to agriculture and mining showed that in mining and non-mining communities, respectively, average household income from mining was US$361.47 and US$15.04, and

US$88.32 and US$358.89 from agriculture. The latter illustrates the existence of a complementary relationship between agriculture and mining within the areas of study (Kitula, 2006).

Furthermore, it became apparent from the study that approximately 66% and 3% of average household income in mining and non-mining communities, respectively, is derived from mining. Agriculture contributed 75% and 16% to total household income in surveyed mining and non-mining regions, respectively. These results imply that there is a significant number of local people employed in mining that derive direct income as mining wages. Members of the local community who are not employed in the mining sector derive their income through a variety of socio-economic activities which encompass sales from food crops and other services offered to miners (Kitula, 2006).

A study conducted by Aroca (2001) on the economic development impacts in mining regions portrays the mining sector as being strongly connected with the business services sector, utilities sector (energy sector) and the retail sector. Furthermore when the income emanating from the mining sector spent on the II region was considered the linkages connected to the mining sector were found to be stronger were mostly the manufacturing, services, transport, communication and real estate sector (Aroca, 2001).

In the study it became evident that the linkages of the manufacturing and other sectors were more apparent as compared to linkages to the retail sector. These observations imply that there is a significant impact of the expenditure of the workers within the region and that the regional economy would derive more benefits from the mining sector if the mining company provided incentives to its workers to motivate them to migrate and live in the region as opposed to commuting between the region where they live and the II region (Aroca, 2001).

Furthermore it became evident from the study that there were direct benefits to the regional economy emanating from mining operations. Approximately 9.7% of the mining sector output goes to employees employed in the mining sector and between 6.3%

and 14.3% of the mining sector output goes to workers in the other sectors of the regional economy. The latter depicts the overall impact of the mining industry on the regional economy which depends on how much of the additional income generated through mining is spent within the region (Aroca, 2001).

Aroca (2001) described the important issue about the mining sector being the magnitude of the mining projects producing a labor demand that is more than the local supply which obligates it to source labor from other regions. Therefore when miners commute to the mine, the majority of their salary is spent in other regions which hampers the impact of the mining project on the II region. Aroca (2001) speculates that the economic impact that the mine could have on II region could be 50% larger if the workers live and spend their income within the region than if they reside and spend their income in other regions which compels them to commute to work (Aroca, 2001).

In this study a private mining firm hires a small portion of the total miners employed in the mine. The majority of the miners are on a payroll from a different firm. There salaries offered by the other firm are higher than those paid by the mining company and there are several locally based firms who sell their services to the private mining company. This enabled the creation of a new class of entrepreneurs who sell their services to the private mining firm. These new entrepreneurs have expanded their activities to other sectors of the regional economy. The latter is applicable to securities firms, computing firms, food firms etc. as they have the potential to exploit markets outside the mining sector (Aroca, 2001).

3.1.1.1. Mining royalties

The rise of commodity prices in the late 1980's and the early 1990's has prompted mining economies from the developing world to reform their mineral economies to create a conducive environment to attract investment (Otto & Cordes, 2002; Cawood, 1999). It is evident from the majority of mining policies emanating from both the developing world and the developed world that the fundamental issues that concern the governments of a mineral hosting nation when creating a mineral policy, is the interpretation of the mineral hosting country's government's political and economic interests in relation to its mineral endowments and the necessary mechanism required to implement these interests (Otto & Cordes, 2002; Mtegha et al, 2006; Cawood, 1999).

Mineral resource rent collecting instruments should be economically rational and be aimed at utilizing revenues accrued from mineral development to compensate for the removal of non-renewable resources. This is achieved when revenues accrued from mineral development are invested back into the mineral hosting economy in several ways which should include the creation of socio-economic development programs such as educational institutions, infrastructure, local industries and hospitals, etc (Otto & Cordes, 2002; Cawood,1999).

Mineral hosting governments rely on mineral resource rent as compensation for the removal of its non-renewable resources. Cawood (1999) identifies the profitability of the mineral hosting government's economic return being influenced by the following factors:

- *The size of the mineral resource that is mined;*
- *the shape of the mineral resource;*
- *the location of mineral resource;*
- *the depth of the mineral resource;*
- *the grade of the mineral resource;*
- *worker efficiency;*

- *adequate management;*
- *volatile market forces;*
- *environmental conditions, and*
- *the exclusive character of the mineral resource.*

(Cawood, 1999) pg 47.

Mineral hosting governments are faced with the challenge of utilizing the most efficient rent collecting instruments that adhere to the exclusive qualities of a non-renewable natural resource. The mineral rent collecting method should enable the government to receive adequate compensation for the removal of its natural resources while at the same time enabling mining companies to receive profitable returns to stay in operation. Mineral hosting governments should utilize taxation methods which meet the unique characteristics of a non-renewable natural resource (Cawood, 1999).

Royalty payments differ from country to country as they must be crafted in a manner that meets the requirements of both the mineral hosting government and those of the foreign investor (Otto & Cordes, 2002). Papua New Guinea levies a 2% royalty, recently increased from 1.25%. It also levies import duties, subject to limitations, and offers slower depreciation. The charge is based on "net smelter returns" which includes transportation; smelting and refining charges being deducted in arriving at the revenue for the royalty (Daniel, 2004).

In Canada and Australia, royalty practices differ widely among states. Australian states tend to levy either specific royalties (monetary amounts per ton) or ad valorem royalties. These rates vary from 2% to 7.5 %, higher rates apply to iron ore and manganese in Western Australia. A 2.5% rate appears to be the most prevalent, but almost all states levy no royalty on gold. The situation is different in Canada as only the province of New Brunswick still levies a traditional royalty. Mineral resources are often privately owned, profit-related royalties are used as payments to resource owners (Daniel, 2004).

In the Philippines, mineral royalties before 1995 were directed straight to the central government which was not able to distribute a significant share to the provinces. The enactment of a new mining law in 1995, enabled local government to benefit in the following ways, firstly, 40% of the excise tax went to local government, secondly local government had the power to impose a real estate tax on mining companies and lastly, mining companies were compelled to donate 1% of their operating costs to a social development plan used in the community where mining operations were conducted (Stark, 2002).

3.1.1.2. The Norway State Petroleum Fund

In Norway a State Petroleum Fund has been established known as the Norwegian State Petroleum Fund enacted through state legislation in 1990. The aims of the fund formed part of the political process for establishing support as opposed to higher immediate spending. Actual savings began in 1996 which stood at approximately US$80 billion or 45% of GDP at the end of 2001. The fund aims to enable adequate spending of volatile oil revenues and to gather long-term savings from oil revenues to cope with increasing pensions and related expenditures on an ageing population. The fiscal rules that govern the fund compel it to be integrated with the budgetary process with the net accumulations in the fund realized as budget surpluses (Daniel, 2004).

3.1.1.3. Inward investment

The Government of Wales employed a variety of mechanisms aimed at mitigating the adverse effects that its citizens employed in South Wales domestic coal industry would experience resulting from the collapse of its domestic coal industry. The collapse of South Wales domestic coal mining industry stemmed from the fact that South Wales coal industry could not compete economically with the import of cheaper coal from efficient locations in the world such as South Africa and Columbia (Daniel, 2004).

The collapse would have had a significant socio-economic impact on South Wales as mining had been an integral part of the regional economy for more than one hundred years and it was also the biggest employer making it the most important industry in the region. The Government responded by seeking inward investment to provide new economic employment opportunities to former miners. This was expressed in the search and the attraction (with grants/incentives) of inward investment from Japan, accompanied with additional funds to retrain and re-skill the labor through a program of education and training using both existing educational facilities and new institutions created for this purpose (Daniel, 2004).

This scheme succeeded as it received substantial financial backing from the Government. Government backed finance enabled the securing of inward investment and played a key role in the development and implementation of retraining programs. Government financial support was essential as there was insufficient financial support from the minerals sector as it had been rendered uneconomical and was closing down (Daniel, 2004).

3.1.2. Social

In the study conducted in the Chilean II region by Aroca (2001) aimed to illustrate the impacts and development in local economies based on mining, it was revealed that mining companies in the region adopted plans to benefit the community in the II region. These plans were categorized as short and long term plans. The short term plans were based on the exploitation phase of the mine whereas the long-term plans were aimed at producing a positive economic impact in the community that went beyond the life-cycle of the mine. One of the plans included the creation of a foundation dedicated to finance projects in the areas of education, health and technology. The foundation was concerned with projects that would yield a high social impact on marginal groups of the community which include indigenous populations, handicapped people, woman household heads with incomplete studies, women in jail, cultural and sport activities (Aroca, 2001).

Communities affected by mining operations in the region were subsidized by mining companies to enable them to acquire housing through the implementation of what is termed as residence plans. One of the programs in the region led to the development of 820 residence units in several parts of the city of Antofagasta and has provided miners with subsidies that have enabled them to purchase these units. As a result of mining not requiring unskilled labor, the percent of the poverty level has decreased in the area resulting from local population's ability to find employment in other sectors of the regional economy which include construction and the retail sector (Aroca, 2001).

Several mining affected jurisdictions have employed mechanisms aimed at enabling woman to benefit from mining operations occurring within their communities. In Zambia mining companies provide neo-natal health care for women in occupational communities. In La Oroya, Peru, the *mineras* (miners wives) developed mechanisms to enable them to partake in economic activity by establishing small businesses coupled with the setting up of a community bank that only lends money to women (Starke, 2002).

3.1.3. Environmental

In the II region in the Chilean case smelters have caused immense environmental damage. Violators have been forced to establish a decontamination plan which involved a global investment of US$107 million. The new mining projects established in the region after 1980 have implemented internal environmental policies that are in line with international environmental standards for mining operations and are in harmony with environmental legislation endorsed by the Government of Chile in 1992 (Kitula, 2006).

In Alaska at the Red Dog mine the indigenous peoples have negotiated flexible working hours that enable them to attend to their communities to hunt and fish guided by a Subsistence Committee (SC) which performs a key role in upholding and implementing environmental protection programs. One of their major environmental protection projects was the development of a route for the 85 km road from the mine site to the port

that would largely avoid vital caribou migration paths, fish spawning areas and waterfowl nesting sites (Starke, 2002).

3.1.4. Institutional

Several countries have employed appropriate policies aimed at deriving unparalleled wealth from their domestic mineral industries. These countries include the United States of America, the Nordic countries and most recently Australia. Their mineral development strategies were incorporated into their respective economic growth and industrial development plans. Although they were developed at national level the necessary support was given to local authorities to ensure successful implementation of national policies (Walker, 2006).

The six main strategies adopted by the countries mentioned above in order to achieve resource based industrialization have been identified as follows ; (1) global skills transfer, (2) the advancement of Research and Development (R&D), (3) collaboration between academic institutions, public and the private sector,(4) the creation of mechanisms to promote Foreign Direct Investment (FDI), (5)cluster development coupled with the development of mining technology and (6) the promotion of entrepreneurialism (Walker, 2004).

The example mentioned by Walker (2004) shows that governments have an important duty to play in putting place the appropriate policies that will steer their mining industry into the creation of new industries that are not entirely reliant on the mining sector. The successful implementation of these strategies was achieved by having a strong alignment of national policies with local policies and development projects, coupled with gradual capacity building at the local level to enable the population to take part in the development and implementation of national economic diversification programs (Walker, 2006).

3.2. **Local examples pertaining to sustainable LED for mining affected communities**

3.2.1. Sustainable economic development

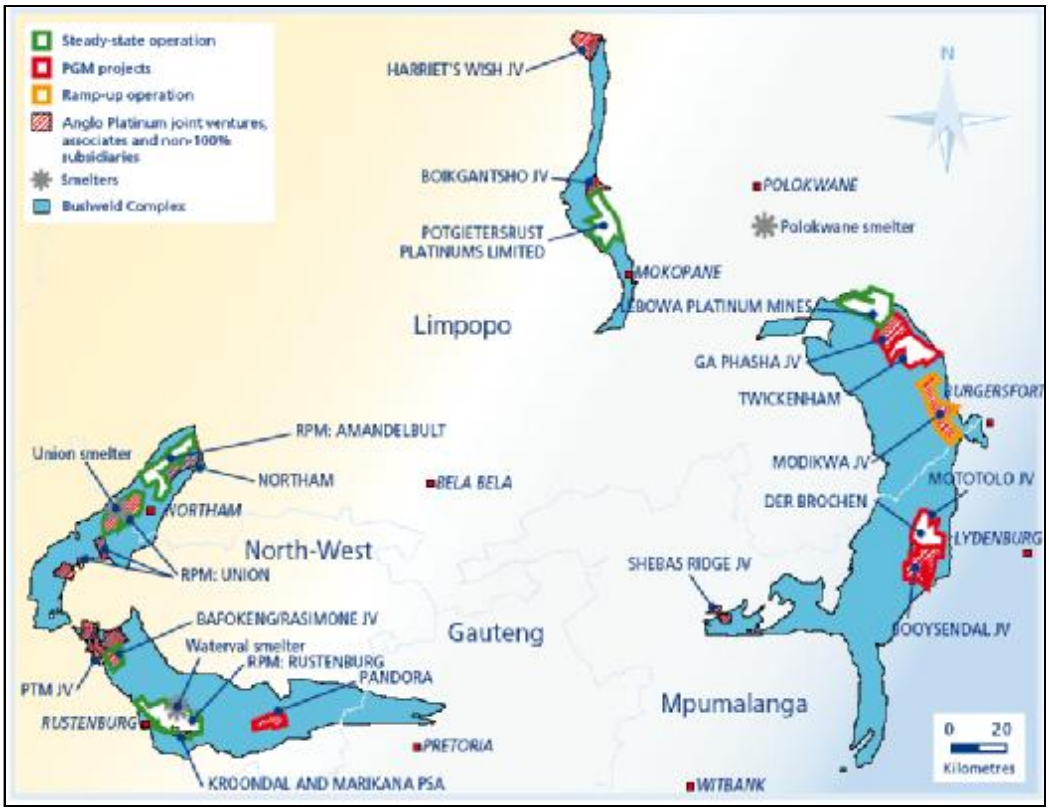
3.2.1.1. Anglo Zimele

3.2.1.1.1. Anglo Platinum

Anglo American Platinum (Anglo Platinum) is the largest integrated platinum and palladium producer in the world. In addition, it produces gold, nickel, copper and cobalt from the ores that it mines. At 31st December 2006 proven and probable ore reserves in which the Group had attributable interest amounted to 778.7 Mt and 620.3 Mt respectively, amounting to 1.399 Bt in total. These figures increased to 808.6 Mt and 644.6 Mt respectively at the end of December 2007 (Anglo Platinum, 2007).

In 2007, Platinum Group Metals (PGM) production in the group amounted to 4 787 Million Once (Moz), an 8.6% change over that recorded in 2006. Of this, refined platinum production amounted to 2 470 Moz, palladium 1 389 Moz, rhodium 328 Moz, and gold 98 Moz. The aggregate immediately available ore reserves for managed operations decreased by 10% to 14.3 months at 31 December 2007 for all of Anglo Platinum's operations in South Africa. The group has a variety of local operations in South Africa these are illustrated in Figure 3 (Anglo Platinum, 2007).

Figure 3: Anglo platinum local operations



(Anglo Platinum, 2007).

Anglo America has developed an empowerment program known as the Anglo Zimele (Zimele is a Nguni expression which signifies independence). The empowerment program is a catalyst for emerging black business in South Africa. It was established 18 years ago to empower black entrepreneurs through the establishment and transformation of small and medium enterprises (SME) (Anglo America, 2007).

The program aims to ensure the long-term economic viability of enterprises through skills transfer and guidance, and meets the needs of its investee companies by providing strategic operational, financial and business expertise on a day-to-day basis. The program enables beneficiaries to benefit from hands on support in several areas which include marketing, corporate governance, safety, health environment standards, HIV and AIDS (Anglo America, 2007).

The beneficiaries to the program must provide business plans which have opportunities that demonstrate commercial viability and growth prospects actively involving a Black Economic Empowerment (BEE)[6] partner or entrepreneur in regular operations. When an investment opportunity is aligned with Anglo Zimele's investment criteria, engagement takes place with a suitable black empowerment partner, a business plan/investment proposal is compiled and a due diligence exercise is conducted. The engagement with Small Medium Enterprises (SME) takes place in the following manner:

- A BEE entrepreneur may approach Anglo Zimele with a business idea or proposal;
- A BEE entrepreneur may express a desire to be considered as a suitable BEE partner for any deals in the pipeline; or
- An existing SME may approach Anglo Zimele with the view of empowering the business and partnering with a BEE entrepreneur.

(Anglo America, 2007,pg 4)

The main focus of the program is to promote transformation in the Anglo American supply chain. It assists the Group's procurement departments in identifying BEE suppliers, which guarantees the channeling of business opportunities to black-empowered SME. During 2006, Anglo America South Africa combined with its business units and independently-managed subsidiaries reported a procurement expenditure of R12,3 billion with black-owned managed SME(Anglo America, 2007).

[6] BEE is a growth strategy which aims to redress the socio-economic inequalities directly emanating from the apartheid regime. This policy has been devised to enable the South African economy to address the economic requirements of its citizens and its enterprises in a sustainable manner. BEE is administered by prescribed regulations and legislation. The BBE legislation titled the BEE Act of 2004 entails a balanced scorecard which calculates companies' empowerment progress. The scorecard is included in the BEE codes of good practice which will soon be passed into law.

3.2.1.2. Anglo Khula Junior Mining Initiative, South Africa

The Emerging Markets Group (EMG) Ltd conducted an independent evaluation for the Business Links Challenge Fund sponsored by the Department for International Development (DFID). The outcomes of the evaluations resulted in the successful development of a funding mechanism for junior mining in South Africa that is commercially sustainable, has significant positive impact on the local communities coupled with a strong potential to contribute to BEE (Anglo America, 2007).

Mining projects require a substantial capital investment upfront; comprehensive and timely technical inputs for licensing, surveying, and mitigating environmental and safety issues; skilled labor and equipment. Financial risks associated with mining projects are very high. Banks are compelled to offer loans on very disadvantageous terms to emerging black entrepreneurs. It is virtually impossible for small to medium size enterprises to start up without access to reasonably priced commercial borrowing mechanisms. The latter shows the need to catalyze the entry of small and medium sized black-owned companies into the mining sector to provide ongoing growth and welfare to remote and poverty stricken mining affected communities and for the overall growth of local, provincial and the national economy (Anglo America, 2007).

The Anglo Khula Mining Fund is a collaborative initiative between Anglo America and Khula Enterprise Finance LTD[7]. The fund was established in March 2003 as a reply to the difficulties experienced by junior mining companies when searching for finance for exploration activities. The fund provides loans at prime interest rates to enterprises that have the potential to become commercially sustainable but find the commercial borrowing rates forbidding or inaccessible due to the inexistence of credit history. The fund also concerns itself with the provision of technical support. Finance for technical support is provided by the United Kingdom's (UK's) Department for International Development's Business Linkages Challenge Fund (BLCF) (Anglo America, 2007).

[7] This is a development finance institution established by the South African Department of Trade and Industry (DTI).

The fund proved effective in assisting in the development of a pilot project, Vaalkrantz Colliery(located approximately 35km east of Vryheid in Kwa-zulu Natal), which is managed by the black owned Leeuw Mining and Exploration Company. This project was selected on the basis that it lacked financial and technical support; the entrepreneur's operation would have shut down due to the delayed transfer of funds by a creditor bank (Anglo America, 2007). The latter would have had a significant socio-economic impact on the community as the colliery was located in an area with higher than the average unemployment rate and no real alternatives for income generation (Anglo America, 2007).

As the result of the loan being offered to the company in 2004, the mine progress has been impressive. In two years (2005-07), the mine has almost doubled its staff and contractors, 85% of whom are local people. Production records show a steady increase moving closer to the target coupled with the doubling of revenues between January and December 2006. At current prices the mine will be able to re-pay its financial obligations and become profitable in the next four years (Anglo America, 2007).

The mine employs 269 permanent employees and 207 contractors. Females make up 28 of the labor force with 6 of them working underground. All employees have received technical training, safety training and other skills upgrades. These include 5 leadership courses with 143 employees receiving special training in 2006. There are 5 apprenticeships for local people every year. The mine also provides support to a health clinic on site with two nurses who attend to requirements of staff and their families, including the provision of information and testing for TB, malaria and HIV/AIDS (Anglo America, 2007).

The mine has a positive impact on the community as it has become a direct source of steady business for local enterprises which include SME that have been created especially to service the mine as Security and Logistics Companies. The mine contributes to the local school and to several municipal projects (Anglo America, 2007).

Mining salaries are on average much higher than those offered by the agricultural and timber sectors. The mining company also offers several benefits to its employees and other members of the community in the field of transport, health care, housing allowances, etc. Furthermore it is apparent that the increased purchasing power of the population and the regularity and predictability of incomes has a direct benefit on local vendors, traders and leisure business development (Anglo America, 2007).

3.2.1.3. The decline in South Africa's Goldfields, LED responses.

Gold mining has played an important role in the economic and industrial development of South Africa. In actual fact Johannesburg which is Africa's most developed city owes its economic development to the gold mining industry. The gold mining industry has been impacted negatively over the past two decades as a result of a decline in the gold price in the early nineties. This has resulted in the introduction of a variety of interventions which have included down-scaling of the gold industry, enormous redundancies of over half of the work force and the inevitable impact on 'downstream' industries and workers livelihoods especially on mining towns lying in the Goldfileds of the Free State and the Klerksdorp region (Binns & Nel, 2001).

South Africa's gold mining industry is endowed with 39.1% of the worlds gold reserves representing the biggest reserves of any country in the world and produces more than one-fifth (21.2%) of the worlds gold and it is the world's number one producer (Binns & Nel, 2001). The gold industry suffered a significance decline in its share of world production during the 1980's from 70% in 1980 to 36% in 1989. Production and employment in gold mining have been estimated to have been depreciating for sometime (Binns & Nel, 2001).

It is also noted that between 1975 and 1999 gold production slumped by 37.7% while employment in gold mining fell by 38.8% in the same period. Binns and Nel (2001) assert that in this 13 year period the number of jobs decreased by an escalating 57.9%. Approximately 90 702 jobs were lost between 1997 and 1998 showing a 26% fall and in the same two year period gold production fell by 39, 661 tonne or 7.9% (Binns & Nel,

2001). The fall in the price of gold was the main contributing factor towards the eventual massive job loss which also contributed towards the closure of several uneconomic mines (Binns & Nel, 2001).

The other contributing factors include rising production and labor costs largely emanating from the need to improve working and living conditions for miners in the post-apartheid era. The Free State and Klerksdorp region in the North West province are the provinces that have been hit the hardest. The loss of mining jobs has been experienced as 100,000 in the Free State province and 30,000 in the North West province. Stillfontein and Welkom, towns that were developed as a result of the gold mining boom, have experienced disastrous socio-economic impacts with unemployment rates, particularly among low skilled black workers increasing from 0% to 65% in several areas in the past two decades (Binns & Nel, 2001).

The unemployment situation has been given impetus by the lack of a state welfare system. However, several attempts have been employed by local actors comprising of mining companies, local authorities and the local population to mitigate the adverse socio-economic impacts emanating from mine closure. In the Free State the mineworkers Development Agency established programs aimed at enabling former mineworkers to attain skills that can be utilized in other sections of the local economy coupled with the development of small business operations such as the production of poultry (Binns & Nel, 2001).

Local authorities have been engaged in partnerships with the private sector in coming up with new ways to deliver employment opportunities. A provincial development centre spearheaded by Goldfields entitled the Free State Goldfields Development Centre (FSGDC) was established in the early 1990s to promote local economic restructuring and to investigate different ways of employment creation. The centre was able to implement the following projects: collaboration with local colleges and a mine; retrained former mineworkers; identified and contributed resources towards the realization of the provision of workspaces from emerging small businesses (Binns & Nel, 2001).

The centre encouraged the development of new economic activities which included tourism promotion, support for agricultural activities and agro-industry, and an impressive gold jewellery production factory that is linked to a jewellery training school in collaboration with a mining company. The development centre offers a variety of services which include the following:

- *Free industrial sites,*
- *Loan subsidies,*
- *Highly discounted property rates for a six year period.*
- *Discounted water, electricity and waste disposal tariffs.*
- *Rental subsidies.*
- *Grants for company's launches and arrangement of free municipal services e.g. approval of physical plans*

(Binns & Nel, 2001, pg 259).

The Free State's LED interventions reflect a combination of LED strategies. Several small scale low-priced LED strategies have been created in order to respond to the socio-economic crisis emanating from mine closure while other initiatives are more comprehensive. The province's LED initiatives have been hampered by limited skills offered by the local population especially the skills required to rejuvenate other sectors of the local economy (besides mining) and limited financial support from local government and the private sector (Binns & Nel, 2001).

The Development Centre aims to develop Welkom's airfield into an international cargo airport, offer resource support to urban farming through the development of initiatives that will enable them to easily access land and align it to supply of sewage and the development farm products marketing facilities. Local government has played a good role in the realization of LED initiatives; these can be summarized as being the provision of serviced sites, trading facilities, the establishment of a tendering policy to advance local authorities access inputs from locals as opposed to producers from outside the Free

State Province. These initiatives have been successful in creating over a hundred employment opportunities but have not been able to provide the required amount of employment opportunities that are desperately required (Binns & Nel, 2001).

Local actors in Klerksdorp have been seeking new ways to market Klerksdorp to attract investment, and new industries with particular emphasis on the textile industry. New training programs in collaboration with local tertiary institutions took place coupled with institutional support being offered to new emerging small businesses in the areas of manufacturing of pottery, wrought iron and leather products. The Stillfontein response was centered on selling of old mine houses at an affordable price (cost price) to retired people seeking retirement homes in a small quiet country town. (Binns & Nel, 2001)

3.2.1.4. LED responses to the demise of coal mining in Kwazulu-Natal, South Africa.

The KwaZulu-Natal (KZN) province was once one of South Africa's major coal-producing regions. The past two decades have seen the industry experiencing enormous problems which included continued mine closures and approximately 84% of mineworkers being redundant. Local actors have responded by engaging in creative interventions aimed at diversifying the local economic base in order to develop new areas that will provide new employment opportunities (Binns & Nel, 2003).

The latter has certainly been the case in the former coal mining town of Utrecht where a variety of initiatives have been implemented in order to rejuvenate the local economy as a rapid response towards de-industrialization[8] that has been experienced by the local economy. Utrecht is the largest magisterial district in the Umzinyathi region which used to be referred as the "Northern KwaZulu - Natal Coalfields or Cluster". The Umzinyathi region is predominantly rural with a small population density (Binns & Nel, 2003).

[8] De-industrialization either an absolute decline in manufacturing value added or a fall in the relative share of manufacturing in national income. Others have emphasized a falling share of manufacturing in total employment and an absolute decline of employment in manufacturing (Binns & Nel, 2003).

The regional economy has suffered a huge economic blow expressed in major economic declines since the 1980's resulting from the rationalization of the iron and steel industry. Utrecht's local economy has performed negatively in comparison to the overall economy of KZN. It has experienced an average annual growth rate in Gross Geographic Product (GGP) of - .09% between 1980 and 1991 in contrast to the provinces 1.71% for the same period. This has also been followed by devastating job losses coupled with the non-existence of new employment opportunities (Binns & Nel, 2003).

Average annual growth rates in employment in Umzinyathi between 1980 and 1991 were -1.7% compared to 0.8% for KZN as a whole as a result of the declining productivity of the northern KZN coalfields. Operations in one of the mines known as Utrecht section (Utrecht coalfields) was closed down from 1998 with the eventual loss of 1 200 jobs in 2001. Employment decreased to approximately 140 full time employees. Approximately 100 families left the town as a result of declined economic activity (Binns & Nel, 2003).

The negative impact of mine closure was inevitable in the Utrecht community as mining had become socially and spatially integrated into the local community. In 1999 approximately 40% of the residents of Utrecht were mine employees while a majority of residents relied on income generated by the mine to support their businesses. By 2001 the town had an unemployment rate of 50% and the only significant employer remaining in Utrecht was a garment factory providing approximately 400 jobs mainly for women, who lived in near by towns (Binns & Nel, 2003).

Mining operations left a landmark legacy expressed in the existence of mineworker's schools, hostels, housing for married workers, railway lines connected to large industrial towns and a leisure club on the eastern outskirts of Utrecht. Some of the infrastructure is still being used. This includes schools, railway lines and the leisure club. There is tension around the issues relating to the administering of Utrecht between the traditional leaders (Amakhosi) and traditional urban municipal councilors on whether tribal or municipal authority is the highest rank. However both parties recognized that LED initiatives would have positive outcomes for the community (Binns & Nel, 2003).

Utrecht's LED initiatives were formulated by local actors through a partnership made up of the public and the private sector. LED projects include a Game Reserve established in 1990 as an effort to diversify the town's economy by promoting tourism, in the form of a caravan park with chalets established adjacent to the municipal dam. A game fence was erected which cost approximately R80 000 provided by the Gencore Development Trust (GDT) an entity that controlled mining operations in the area. The mining company also established a leisure club with a swimming pool, Bowling Green, tennis courts, rugby field, restaurant and a bar adjacent to the caravan park on municipal land. The leisure club is now managed by the municipality of Utrecht (Binns & Nel, 2003).

Research is being conducted with the aim of further marketing the game park. Some of the ideas that have transpired relating to the latter include marketing facilities of the game park which should include facilities for back packers and four by four motor rallies have been encouraged. A wetland area close to the dam will be designated for bird watching (Binns & Nel, 2003).

The community combined forces to establish an arts and crafts center based on the production and sale of pottery, sewing, leather goods through the utilization of locally available skills and raw materials. The initiative has been successful and has led to more collaboration amongst community members regarding other tourist related initiatives. On the 13th of July 2000 the Utrecht Community Game Park was established. The project received a grant of approximately R12 million in 2000 from the national LED fund (Binns & Nel, 2003).

The community has gone as far as developing an agrivillage as a mechanism to mitigate the major impacts of mine closure using local skills, generating income developing mechanisms to alleviate poverty especially for the historically disadvantaged black community. This project is for low-income earners established with the help of local government's agricultural extension offices. This project is managed by a joint committee of 20 people comprising councilors and residents representatives. The land purchase price is well below the market value and offers negotiated special tariffs. Those

who purchase a plot in the village receive a variety of incentives which include the opportunity to sell their farm products and a 50% rebate on rates with each household receiving 6 kilolitres of water and 50 kilowatts of electricity for free for all those have bought a plot in the agrivillage (Binns & Nel, 2003).

The community of Utrecht has been successful in combining forces to diversify the economy towards a tourism based economy with particular emphasis on game related tourism. Its success has been dependent on both natural and human capital (Binns & Nel, 2003).

3.2.2. Social

The social themes in the South African context to be assessed are mining safety, diversity, sustainable development programs, literacy and skills development and health. In addition, there have been developments of proactive policies by several labor unions, governments, and companies to promote the involvement of women in mining activities. In South Africa legislation which discriminated against women's participation in mining operations has been repealed and has been replaced with legislation that promotes the involvement of more women in mining activities. However there is still a small number of women who have grabbed this opportunity partly because mining operations are still perceived as falling within the domains of harsh and dangerous male labor. Women comprised only 2.3% of the labor force in the South African mining industry in 2000/01 financial year. The employment activities they were engaged in were confined to traditional domains such as clerical, catering, nursing staff, adult education and human resources (Starke, 2002).

3.2.2.1. Anglo America's Sustainable Development Programs- South African operations.

Anglo Platinum's Lebowa mine in South Africa contributes significantly to the economy of Lebowa. It has enabled the creation of employment opportunities; it pays taxes and funds local projects. The company also commissioned a study by a postgraduate student in 2006 to assess the economic impact of the mine for use across the company's

businesses. The study was aimed at providing a general conclusion about the economic contribution of mining as an industry in the region (Anglo America, 2007).

Lebowa was chosen as it is a mature mine in a developing country and relatively isolated from other sources of economic activity. Lebowa has high poverty levels with a 98% unemployment rate. The mine employs 2,138 people, 80% of employees are local residents. The employees combined wages totaling R288 million ($42.5 million) a year. A further 2 680 people currently work for the mine as contractors and an estimated 2 635 people are employed by its suppliers (Anglo America, 2007).

Anglo Platinum offers training for local suppliers to enable them to tender for higher-value skilled projects. This has contributed to the development of entrepreneurial skills in the region in addition to R 83 million paid in taxes in 2005 of which R35 million was income tax collected on government's behalf from employees. Significant tax payments are made by suppliers and contractors (Anglo America, 2007).

The Lebowa mine contributes to the local economy through social development projects. Anglo Platinum has invested R8.4 million to build and maintain 14 local schools in partnership with the Limpompo province's Department of Education. It also contributes to healthcare services, development of infrastructure projects that improve access to electricity and water (Anglo America, 2007). The study was effective in helping to discover the manner in which Anglo America can improve its socio-economic development programs in other areas where its operations are conducted (Anglo America, 2007).

3.2.2.1.1. Mine safety

Anglo America contributed resources towards executive, management and safety training communications with all its employees. Emphasis has been laid on the implementation of a customized peer review system to share learning and spread good practice. The company has experienced fatal mining operations related activities. All accidents are

investigated by the business unit concerned and the relevant authorities. These shortcomings are analyzed to determine both cause and remedy (Anglo America, 2007).

Safety principles were incorporated into a new framework for the management of safety in the company during the course of 2006. This newly established safety framework is aimed at playing a key role in the maintenance of good safety records in the future. The safety framework includes a best practice set of Safety Management Standards known as the Anglo Safety Way a revised set of safety golden rules which is an enhanced safety peer review program that engages both professionals and line managers in safety audits of other business units across the Group (Anglo America, 2007).

3.2.2.1.2. Diversity

Anglo America is one of a few companies in the FTSE 100 index[9] that has appointed a female chief executive bringing real changes related to gender diversity. The company has experienced a significant increase in women employees and managers in 2006 in line with the South African government's efforts aimed at achieving gender equity in the domestic economy. At the end of 2006 the company recorded 43% of women employees, including junior managers (target 40% by 2009) in designated positions. Anglo Gold and Anglo Gold Ashanti have made good progress in the introduction of women into mining and related disciplines in order to meet the target set out in South Africa's mining charter which aims to achieve 10% of women being employed in the mining industry (Anglo America, 2007).

In actual fact Anglo coal has already achieved the compliance target and aims to reach 14% by the end of 2007. Of the 12,5% of women in the Anglo Coal workforce, 6,6% are in technical fields. Women comprise 8% of the management team. Women in Mining committees were established at all collieries. A Code of Good Practice for pregnancy in the workplace is a particular challenge for women in mining teams the code has been compiled (Anglo America, 2007).

[9] FTSE index is a share index of 100 most highly capitalized companies in the world.

3.2.2.1.3. Literacy and skills development

One of the most important building blocks for skills development is ensuring that unskilled workers are functionally literate and numerate. At Anglo Platinum, Adult Basic Education and Training (ABET) is achieved through own-time and company-time programs. A full-time ABET program aims to provide 10% of illiterate employees in Anglo Platinum with the opportunity to become literate to a level enabling admission to artisan programs by 2010(Anglo America, 2007).

Anglo has programs in Rustenburg that will be discussed here. A total of 582 selected employees from Rustenburg Platinum Mines Rustenburg (RPMR) section are part of the program and are due to complete ABET level 4 by the end of 2009. Selected employees are released from work on a full salary and are paid an *ex gratia*[10] bonus to encourage them to concentrate on their studies while R179 million has been allocated to the ABET programs over the next three years (Anglo America, 2007).

Mathematics and science are due to receive an annual boost of some R40 million a year as a result of two new established independent trusts by Anglo America. The epoch and optima trusts, which will operate under independent boards of trustees, were set up to disburse funding to further education in Mathematics, Science and English in South Africa over the next five years. Competence in these subjects is essential to South Africa's continued economic well being. Young black pupils, in particular, have little opportunity to excel in Mathematics and Science, given the constraints of schools in poor rural areas (Anglo America, 2007).

3.2.2.1.4. Health

Approximately 111,000 employees based in Southern Africa participated in the company's HIV and AIDS program. It was estimated that 21% or approximately 23, 500 of these employees were HIV – positive. The company continues to report on all divisions and business units which participate in their HIV and AIDS programs with

[10] An *ex gratia payment* is a payment made without the giver recognizing any liability or legal obligation.

restructuring of the Group's interests which include AngloGold Ashanti, Mondi Paper and Packaging, Exxaro and various smaller operations will be included in future reports (Anglo America, 2007).

HIV testing is the cornerstone of Anglo America's AIDS response and is the entry point for both prevention and care. It is critically important for all people to know their HIV status and more importantly to check their status on a regular basis. Early diagnosis of HIV infection gives the best prospects for proper care, support and correctly aimed access to treatment. The Group encourages all employees to have an HIV test on an annual basis. The actual testing is voluntary, supported by compulsory counseling (Anglo America, 2007).

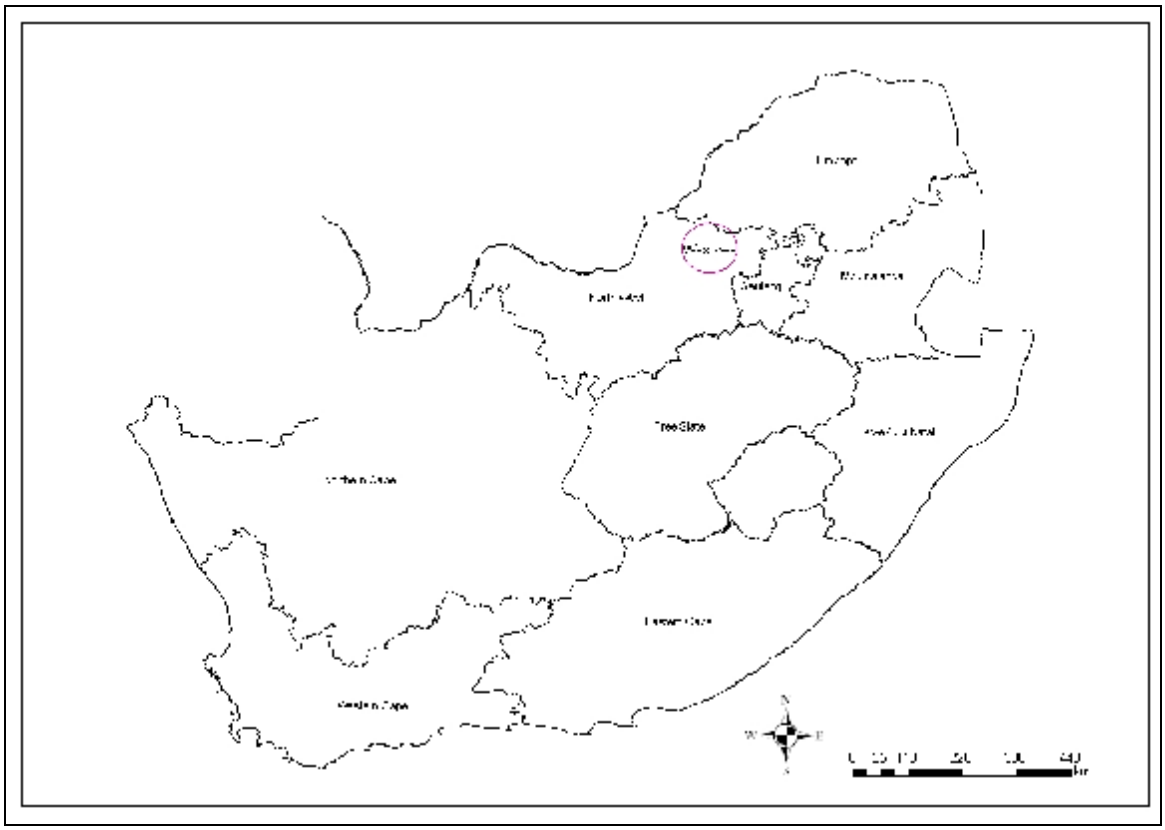
3.2.2.2. Wesizwe Platinum Ltd

Wesizwe Platinum Limited (Wesizwe) is an exploration and mining company that is 52% owned by a historically disadvantaged South Africans. The properties around the proposed mine site are mainly used as tribal farmland, for both pastoral and dry land cultivation. The village of Serosecha has been developed on Ledig 909JQ and that of Lekwadi on Frischgewaagd 96JQ. T he largest single shareholder of Wesizwe is the the Bakubung- Ba-Ratheo Community, a Tswana community comprised of approximately 15 000 people (Wesizwe, 2008). Figure 4 shows Wesizwe Platinum properties located in the North West Province, South Africa.

In 2005, Wesizwe Platinum concluded an agreement between the Bakubung-ba-Ratheo (Bakubung) communities to become the sole investment vehicle of the Bakubung. The Bakubung reside next to Sun City and the Pilanesberg National Park and had old order platinum mineral rights to the reserves under investigation by Wesizwe. The Bakubung's mineral rights are wholly-owned by a Wesizwe subsidiary, Bakubung Minerals (Proprietary) Limited. The Bakubung holds 33% of Wesizwe and is the largest shareholder in the Company. Together with the Bakubung's interest, the total shareholding held by historically disadvantaged South Africans is 52%. Through this

partnership, the Bakubung community is an integral participant in the mine's strategic direction, and not just a beneficiary (Wesizwe, 2008).

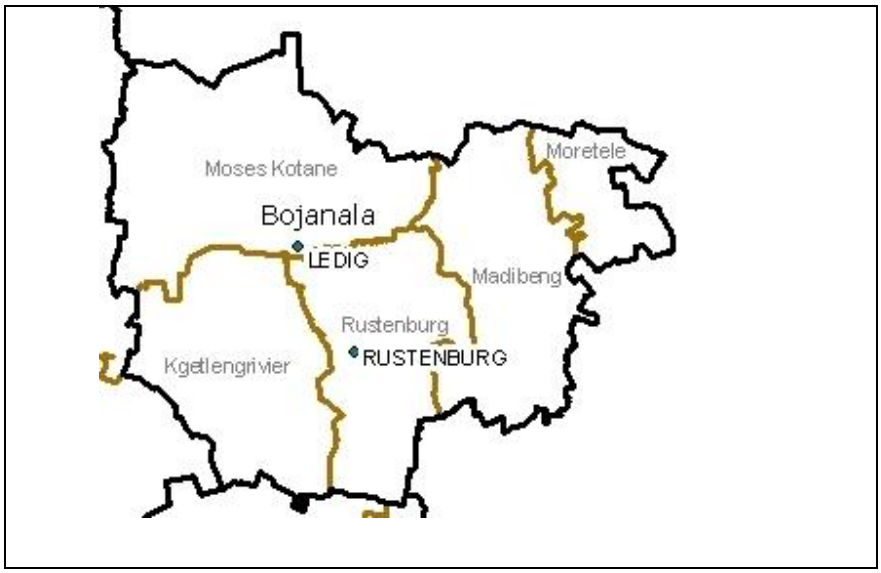
Figure 4: Location of Wesizwe Platinum properties, North West Province, South Africa



(Mintek, 2008).

The authority of this community is lies in the Traditional Council headed by Kgosi Ezekiel Monnakgotla. He has taken the tribal leadership role on behalf of his father, Kgosi David Monnakgotla, who had to step down from active leadership owing to ill health (EIA and EMP for WPL, TWP-ES, 2008). Figure 5 shows the location of Ledig in relation to Rustenburg.

Figure 5: Location of Ledig in relation to Rustenburg



(Mintek, 2008).

In 2007 Wesizwe developed an SLP in accordance with the MPRDA. The main objectives of Wesizwe's SLP is to contribute to the sustainable development of its employees, the mine and the local communities. Combining the mineral rights of Wesizwe and the Bakubung are seen as a means by which to enhance the range of opportunities for each party and enable both to manage risk more effectively. Both parties co-operate exclusively with regard to the prospecting, exploration and mining of the relevant minerals, specifically PGMs, found on these properties. Wesizwe's community development activities have so far been focused on employment creation expressed in its community development program for communities proximate to its mining operations. In order to achieve the latter Wesizwe has developed a Community Economic Development Trust Fund and the Bakubung Economic Development Unit (BEDU) in Ledig (Wesizwe, 2008).

Wesizwe has taken the decision to provide money upfront to the Trust which is represented equally by trustees from the Bakubung and Wesizwe to start generating the fiscal resource to assist the development of a sustainable economic platform as it will take approximately seven years for the mine to reach its full production capacity. Wesizwe has, in terms of the agreement, presented a programme of human resource

development for the community. Included in this is a project addressing Adult Based Education Training (ABET) where elderly community members receive further education, while bursaries have been awarded following skills assessment (Wesizwe, 2008)

Wesizwe is further offering internships to younger community members who are studying earth sciences, mining and environmental geology in order to provide them with hands-on experience. Additionally, entrepreneurial skills training and community director training programs have been established, including the training of community members in the basics of geology, exploration, mining, and corporate governance (Wesizwe, 2008).

The human resource development program will also provide facilitation of opportunities for young members of the community for entry into tertiary education and training institutions, and the sourcing of employees within the area. From being a poverty-stricken community with no assets other than mineral rights in 2005, the community now has a balance sheet of approximately R1 billion as a result of this shareholding (Wesizwe, 2008).

The company's SLP also shows the company's commitment towards a sustainable local economic development strategy for the Bakubung community. This is expressed on the company's commitment to infrastructure development projects, entrepreneurial skills training and the provision of funding for the Bakubung Economic Development Unit (BEDU) for non-mining economic development initiatives (Wesizwe, 2008).

Wesizwe has already engaged in several SMME development initiatives these include the company's commitment towards portable skills training which was expressed by the launch of its entrepreneurial skills development program in 2007. The company has also shown further commitments towards the realization of SMME development to enable members of the Ledig community to obtain the business opportunities that will be offered by the different phases of the mine. Its aim is to identify the SMME and skills available

in the community and to provide the necessary support to enable these skills and SMME to benefit from the procurement opportunities offered by the mine (Wesizwe, 2008).

3.2.3. Environmental

3.2.3.1. Royal Bafokeng Nation (RBN)

The Royal Bafokeng Nation (RBN) means People of the Dew in Tswana. It is comprises roughly 300 000 people. The community boasts of historically long standing unique cultural identity and traditional leadership structures led by a hereditary Kgosi (king), currently Kgosi Leruo Molotlegi. The area they occupy is situated within the RLM, 150 km North West of Johannesburg, South Africa, approximately 160 000 Bafokeng live in this area with the balance scattered throughout South Africa (International Herald Tribune, 7 November 2008).

The Royal Bafokeng Holdings (RBH's) which is an intergenerational investment trust of the RBN has been tasked with the responsibility to ensure that the assets and resources held by the RBN today are developed and grown so that they facilitate the socio-economic development and upliftment of current generations, while at the same time preserving and increasing the asset base to make certain similar benefits exist for future generations (Royal Bafokeng, 2007).

The company's approach to sustainable development is guided by RBN's vision of creating an enabling environment to enable members of the RBN to reach their full potential. The RBN's approach comprises four components; these are economic, social, environmental and institutional. In 2007, RBH started paying particular focus on environmental sustainability. As a shareholder in the mines that have a direct impact on the RBN, RBH has undertaken to play a proactive role in ensuring that principles of environmental sustainable development are observed with respect to the RBN's land in order to protect the environment for future generations (Royal Bafokeng, 2007).

The first important step was to initiate a project for strategic level environmental planning which would lay the foundations for sound environmental management. This

environmental planning framework is aimed at empowering the RBN to defend their natural resources from over-exploitation, pollution and degradation. RBH has started a process to identify the resources required for this task. Stakeholder involvement has been identified as important for achieving successful environmental planning (Royal Bafokeng, 2007).

A workshop was held in Phokeng by Royal Bafokeng Administration (RBA) during October 2007. This initiative brought key stakeholders together to discuss environmental management and sustainable development within the RBN land. Sixty-two delegates representing the RBN, mining, industry, non-governmental organizations and government attended the workshop. Central to the workshops proceedings were efforts made to communicate RBH's vision to ensure sound environmental management and sustainable development on the land, to receive comments from stakeholders and to identify community projects (Royal Bafokeng, 2007).

The RBH has tasked itself with responsibility to develop strategies which will balance the economic benefits which emanate from mining activities against the need to protect the environment. The inputs made during the workshops proceedings will be utilized in the formation of a Strategic Environmental Assessment (SEA) process started with the assistance of external facilitators. The SEA is planned as an 18-month process to be completed in April 2009, with the following primary aims; assessing the present state of the environment with particular focus on air, water and soil quality, waste management and biodiversity; developing a sustainability framework for use in the establishment and assessment of plans, policies and programs and the formulation of a system for environmental management, monitoring and reporting (Royal Bafokeng, 2007).

The workshop led to the identification of a set of community projects that would be observable and self-sustaining to train community members and involve them in sustainable development projects. This led to the decision to launch a litter collection and waste recycling program, drawn from a list of projects recommended by stakeholders at the workshop. Implementation of the program will start in early 2008. Through the

SEA process, RBH intends to set the foundation for long-term strategic environmental planning on the RBN land. Using its unique position as a stakeholder in the mines, the company has facilitated the involvement and support of the key stakeholders for this initiative (Royal Bafokeng, 2007).

3.2.4. Institutional

3.2.4.1. Xstrata

Xstrata in collaboration with Lonmin support several municipal offices in the Eastern Cape. They have also employed mechanisms aimed at developing the municipalities capacity to administer affairs within its jurisdiction. Xstrata pays for an engineer to play a role in the delivering of engineering services. These services are mostly about public works projects aimed at promoting infrastructure development to attract investment. The companies have set standards which the municipalities have to meet now that they have been offered resources by Lonmin and Xstrata (Stein, 2008).

3.2.5. Conclusion

3.2.5.1. International Examples pertaining to led for mining affected communities

Kitula (2006) has showed that the mining industry can play an excellent role in LED especially when the proceeds that emanate from the industry are spent in the local economy. Aroca (2001) showed that there is a positive local economic impact when mine workers reside in the community proximate to mining operations as most of the financial proceeds derived from mining operations are spent on the local economy and that there is a possibility of new firms to be developed in order to meet the local demand presented by mine workers. This leads to the stimulation of other sectors of the economy especially those that have forward and backward linkages to the local mining industry.

This chapter also showed that the magnitude of mining projects produces a labor demand that is more than the local supply which obligates the sector to source labor from other regions. The Chilean example showed that outsourcing businesses to local people offers

communities close to mining operations the opportunity to exploit markets outside the mining sector and diversified skills and local economic activity. The system of royalty payment has been shown to be a useful mechanism to compensate for the removal of a finite resource. The challenge is to utilize royalty payments to advance socio-economic requirements of the community that is impacted by mining operations.

The Norway State Petroleum Fund shows the effectiveness of saving the proceeds derived from the extractive industry to invest them in profitable ventures where the proceeds will yield a positive return on investment as opposed to higher immediate spending. In the response to Wales's declining domestic coal industry, the Welsh government responded by seeking inward investment to provide new employment opportunities to former miners. The government went as far as funding programs aimed at retraining and re-skilling the labor force through educational training programs using both existing educational facilities and newly established institutions especially for this purpose. This approach was successful in mitigating the negative effects that were going to be experienced by former coal mine workers and it showed the importance of public institutions in spearheading and driving LED programs. This example also showed the important role that academic and training institutions play as a forward linkage to the mining sector especially in offering the required training to diversify the local skills base.

The potential that mining companies have in contributing towards the realization of social development programs is revealed in the Chilean example. In this example mining companies have established a foundation that funds educational, health and technology community development projects. The Zambian and Peru example showed that the extractive industry has a variety of positive employment opportunities to offer to women. These opportunities may not be directly related to mining but play an important role in the extractive industry as they provide basic requirements for mine workers such as food and clothing.

The Chilean example also reveals that government prescribed guiding principles have the potential to steer mining companies towards implementing mechanisms that will mitigate

environmental pollution and that violators may be charged an enormous amount of money for not enforcing the prescribed measures. The Alaska Red Dog example shows that mining construction development can be forced to employ measures that may mitigate the negative environmental effects associated with the mining construction.

3.2.5.2. Local examples pertaining to LED for mining affected communities

The Anglo Zimele empowerment program shows the capabilities that conglomerate mining companies have in the advancement of socio-economic empowerment programs that have the potential of ensuring long-term economic viability of enterprises through skills transfer and guidance. The Anglo Khula Junior Mining Initiative of South Africa demonstrates that collaboration between the public and the private sector can lead to the realization of South Africa's mining legislation requirements pertaining to the transformation of the mining industry as the fund provides technical support and loans at prime interest rates to enterprises that have the potential to become commercially sustainable but find the commercial borrowing rates forbidding or inaccessible as a result of the lack of a credit history.

The RBN's LED strategy shows the potential that exists in enabling communities residing in mineral endowed areas to be offered a share of revenues obtained from mineral development through a royalty system or by enabling communities to own a certain percentage of a mining company's assets. Central to the success of the RBN is their ability to plough revenues incurred from mineral development towards the realization of its people's socio-economic advancement coupled with economic diversification away from relying only on revenues obtained from the mining sector.

The efforts made as a response towards the decline of South Africa's Goldfields shows that collaboration between local authorities, mining companies and the local population can yield practical LED solutions to a community experiencing a decline in mining activity. This example also shows the importance of tapping and developing other sectors of the economy to enable members of a local community to have other non-

mining economic activities in their jurisdiction. The example also illustrates the importance of both local enterprises and authorities as being the main drivers of LED programs.

The LED responses to the decline of gold mining in the Free State province confirms the importance of investing in Research and Development (R&D) initiatives to empower the local population with skills that can be used in other sectors or to develop other sectors of the local economy. This example also shows the magnitude of place marketing and the provision of incentives that entice investors to locate to a particular area in order to stimulate local employment opportunities. The example also reveals that a combination of expensive and inexpensive LED initiatives can be followed as a means of developing the required community based development initiatives.

The Welkom's LED response to the decline in Gold mining activities shows that local authorities have the potential to spearhead LED projects. It also depicts the notion that local infrastructure can be enhanced to meet the new needs of the local population. The Klerksdorp response reveals the importance of using local training institutions to train people in attaining the skills required to enable them to be productive in other sectors of the local economy. This case showed how useful it can be to use the competitive aspects of an area to promote economic activity.

The LED response to the demise of coal mining in the kwaZulu-Natal province of South Africa illustrates the power inherent in engaging in a collective response to local needs and the importance of rejuvenating the local economic and municipal infrastructure that once served a mineral based economy to be utilized for diversifying the local economy. This example also shows the necessity of co-operation between traditional and urban municipal officers in driving development projects.

The fund contributed by Gencore Development Trust (GDT) confirms the positive role that mining companies can play in funding costly LED initiatives. This example also shows the usefulness of the national LED fund as it offered approximately R12 million

towards the development of the Utrecht Community Game Park. This LED project shows the potential which lies in place marketing in order to recruit investment that will provide employment opportunities.

South Africa's mining legislation obligates mining companies to empower women by offering them sustainable socio-economic opportunities in the extractive industry. This effort shows the potential inherent in government in providing guidelines aimed at ensuring that the extractive industry contributes towards the socio-economic empowerment of women.

Anglo Platinum's study commissioned in 2006 to access the economic impact of it's Lebowa operations on the community of Lebowa shows that conglomerate mining companies can play a positive role in investigating the direct impact that their operations have on community's close to their operations. The outcomes of the study can inform the strategic interventions that the company can engage in mitigating its operations impact on surrounding communities. The company also offered training for local suppliers to enable them to tender for higher value skilled projects. This is a good example of the role that a company can play in developing SMME capacity in the area of its activity.

The company has also seen the need to contribute R 4.8 million to the Lebowa community in order to build and maintain 14 local schools in collaboration with the province of Limpompo's department of Education. This is a good example of how a good and collaborative relationship between a mining company and local authorities can lead to the realization of well resourced community centered development projects.

In response to the South African mining legislation, Anglo America has employed the necessary mechanisms to empower women. This illustrates a positive response in complying with guidelines that have been developed by the state. The company's HIV and AIDS program confirms that mining company's have the potential to employ the appropriate mechanisms to realize the well being of their employees.

The collaboration between Xstrata and Lonmin in the development of the administering of the municipality of the Eastern Cape shows that mining company's can play a role in helping municipalities administering the areas where their operation occur and municipalities of major labor sending areas to realize their development objectives.

4. CHAPTER 4

4.1. Mining and the Rustenburg Local Municipality (RLM).

4.1.1. Introduction

Rustenburg was established in 1852 by the Voortrekkers[11]. It was the capital of the Zuid – Afrikaansche Republiek (ZAR) until that status was transferred to Pretoria. It is one of the oldest towns in the North-West province and is part of the Bojanala District Municipality (BDM). The RLM comprises several magisterial districts which are Madikwe, Mankwe, Bafokeng and Rustenburg which is the seat of the municipality (Gaffney's 2007/08).

According to the 2007 Community Survey, the population of the RLM is approximately 449 776 people, comprising 146 542 households. The Municipality accounts for 35.4% of the population of the Bojanala District Municipality. Major settlements/towns include Rustenburg, Phomolong, Bethanie, Boshoek, Ga-Luka, Phokeng, Tlhabane, Boons and Marikana. The main population group is black African (87.0%), followed by white (11.9%). The population can be defined as youthful, with 40% of the population falling within the 15-40 age groups. Males dominate the population (53.8%), and 65.5% of households are male-headed (Gaffney's 2007/08).

This chapter will offer a case study of the RLM with the aim of illustrating the importance of the mining sector to the local economy. The chapter will also offer a comprehensive description of the potential role that the mining sector can play in contributing towards the realization of the community's development projects within the area that is administered by the RLM. This will be followed by a summary of the views of the RLM pertaining to LED emanating from an interview conducted with a Senior Official from the RLM's LED unit.

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[11] The Voortrekkers (Afrikaans and Dutch for pioneers, literally "those who trek ahead") were emigrants during the 1830s and 1840s who left the Cape Colony (British at the time, but founded by the Dutch) moving into the interior of what is now South Africa.

This will then be followed by an outline of the views of three of the mining company's operating within the area that is administered by the RLM. The chapter will then turn to focus on the views of three community representatives who perform leadership roles within their communities located within the jurisdiction of the RLM in relation to their community's concerns regarding the role which mining can play in the realization of their community's economic development requirements. The chapter will also offer a summary of the views espoused by a representative from the National Union of Mineworkers (NUM) Rustenburg branch in relation to the role that the local extractive industry can play in fostering LED. An overview of the RBN will be offered to illustrate mining LED efforts that have been developed by this community. This chapter will conclude by a summary of the findings of the views advocated by some of the stakeholders affected by mining operations within the RLM.

4.1.2. Overview of RLM

The jurisdiction administered by the RLM is accessible to major South African urban centre's such as Johannesburg and Pretoria; these urban nodes are both approximately 120 km away. Smaller centers around Rustenburg are Madibeng, Mogale City and Zeerust. The urban centers are linked by the N4 freeway of the Platinum Corridor which forms part of the planned road link between the west and the east coasts of Africa. Once it has been fully developed the Platinum Corridor will form part of a link between Namibia, Botswana, Gauteng and Mozambique (Gaffney's 2007/08).

The majority of the rural areas are covered in natural bushveld, and the Magaliesberg mountain range is an additional attraction to tourism. A considerable number of nature reserves and game parks are found in the area, these include the Pilansberg National Game Park and the Rustenburg Nature Reserve. Mining is the dominant and main contributor to the municipality's income. Most of the mining activities are situated on the Merensky reef, with approximately 20 mine shafts for platinum extraction. However, vanadium is also mined and granite is cut from the koppies near Bospoort Dam (Gaffney's 2007/08). Figure 9 illustrates the land cover for the RLM.

Dry land and livestock (cattle) farming are practiced south of the Magaliesberg, and citrus is cultivated in the north. Community and subsistence farming are also practiced. The area has a young population; approximately 40% of its inhabitants are aged between 15 and 34 years. The literacy level is very low, approximately 80% of those over 14 do not or have very little schooling, 56% of households earn R1 600 a month or less. The majority of the people who are employed work in the mining sector (Gaffney's 2007/08). Mining is the main and dominant economic activity in the Rustenburg municipal area which accounts for 77% of the municipal area's Gross Geographic Product (GGP). Table 1 shows the GVA by sector.

Table 1: Rustenburg GVA by sector 2004.

Sector	Industry	R m	%
Primary	Agriculture, hunting, forestry and fishing	120.09	0.03
	Mining and quarrying	22,747.01	93.5
Secondary	Manufacturing	1,833.11	1.16
Tertiary	Wholesale and retail trade	2,761.93	2.77
	Infrastructure services :Transport, communication ,water &energy & construction	2,007.83	1.22
	Financial, property and other business services	2,001.11	1.21
	Government ,community & social services	1,324.62	0.11
	Total GVA (2004)	32,795.69	100

(CSIR, 2007).

The municipality supplies different services to locations within its jurisdiction. Several towns and villages in the central part of Bafokeng depend on boreholes as a source of water supply. Areas situated on the Magaliesburg South Ridge still lack sanitation sewerage systems. The presence of clay or shallow rocks affects sanitation over large parts of the municipality which makes it difficult to excavate deep pit latrines. In summary the provision of basic services is as follows:

- 71% of households have electricity connections.
- Nearly 21% have water available in the dwelling.
- 41% have water pipes in the yard.

- 21% are served by community standpipes; this means that nearly 17% of Rustenburg's residents do not have access to purified water.
- Flush sanitation is provided to 40% of households.
- 13% have VIP latrines and 32.5% use the pit or bucket systems.
- 13.2% of families have no sanitation provision.
- Refuse disposal in the municipality are relatively good
    - 44.4% have the benefit of municipal refuse removal services, while half of the latter use waste disposal dumps, usually sites in each household's yard.

(Gaffney's, 2007/08, pg 267-268).

The RLM's Medium Term Revenue and Expenditure Framework (MTREF) for the 2007/08 period is one of the most important strategic planning documents to be used in the actual delivery of services to the community of Rustenburg. The RLM MTREF for the 2007/08 period reveals that there is exponential growth of the City which has been given impetus by an increase in the medium-term revenue and expenditure budget. The municipality is in good financial standing with its current assets outstripping its current liabilities based on an average ratio of 3:1. The capital charge as a percentage of the operating expenditure was approximately 15% at the end of March 2007 and the debtor turnover rate was 117 days. The salaries as a percentage of the operating expenditure at the end of the third quarter was 35% based on actual expenditure (RLM MTREF, 2007/08).

Serious delays were experienced in the past with the execution of the Municipal Investment Grant (MIG). The execution of projects financed by the MIG will continue as several interventions have already been made aimed at ensuring timeous implementation of the capital budget. All wards falling within the municipal area were visited in order to compile the concerns and requirements of all stakeholders. This process led to the successful development of a new IDP compiled for the five year term up to the 2011/2012 year. Table 2 shows a summary of the IDP priorities linked to the budget. A summary of the key priorities are given below:

- Ensuring good governance, financial viability and optimal institutional transformation and capacitating.
- Provision of quality basic services, infrastructure, housing and spatial restructuring.
- Build a clean and green city and a healthy and safe community.
- Stimulate shared economic growth, job creation and social development.
- Hosting of the 2010 FIFA world cup.

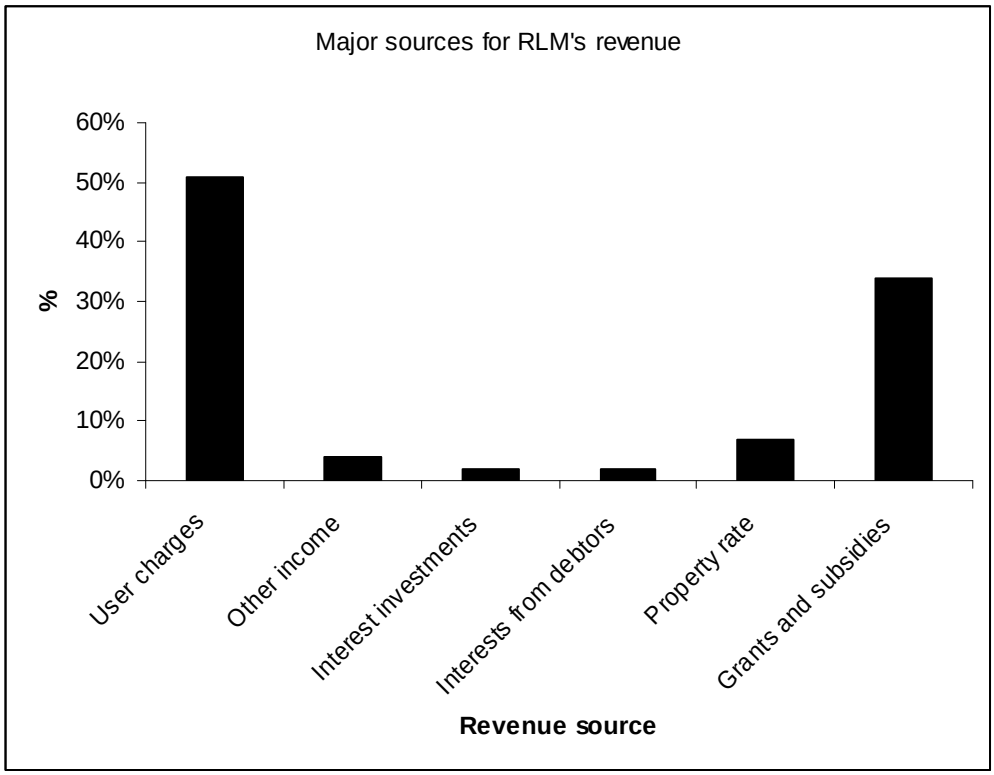
(RLM MTREF, 2007/08).

Table 2 : IDP priorities linked to the budget.

IDP PRIORITY	BUDGET 2007-2008	BUDGET 2008-2009	BUDGET 2009-2010	TOTAL 2007-2010
1. FINANCIAL VIABILITY (Non Charged Out Amount)	153,000	80,000	80,000	313,000
2. INFRASTRUCTURE INVESTMENT & ACCESS TO BASIC SERVICES	261,472,978	284,324,540	241,116,000	789,913,518
3. SOCIAL DEVELOPMENT, HIV/AIDS, YOUTH, CHILDREN, WOMEN & PEOPLE WITH DIABILITIES	28,499,263	19,112,000	6,309,000	53,920,263
4. ECONOMIC DEVELOPMENT AND JOB CREATION	11,790,870	20,695,000	3,800,000	36,285,870
5. SPATIAL RESTRUCTURING	6,441,500	0	0	6,441,500
6. HOUSING (Housing Grant of R 285 million not included)	214,000	0	0	214,000
7. DISASTER & RISK MANAGEMENT	5,888,9000	14,397,900	3,380,000	23,666,800
8. INSTITUTIONAL VIABILITY AND TRANSFORMATIO N	3,704,980	460,000	0	4,164,980
9. DEMOCRACY AND PARTICIPATION	24,475,330	24,150,000	19,150,000	67,775,330
10. 2010 FIFA WORLD CUP (Excluding Operational Grant of R147 M for Bafokeng Stadium)	0	0	0	0
TOTAL	**342,640,821**	**363,219,440**	**273,835,000**	**979,695,261**

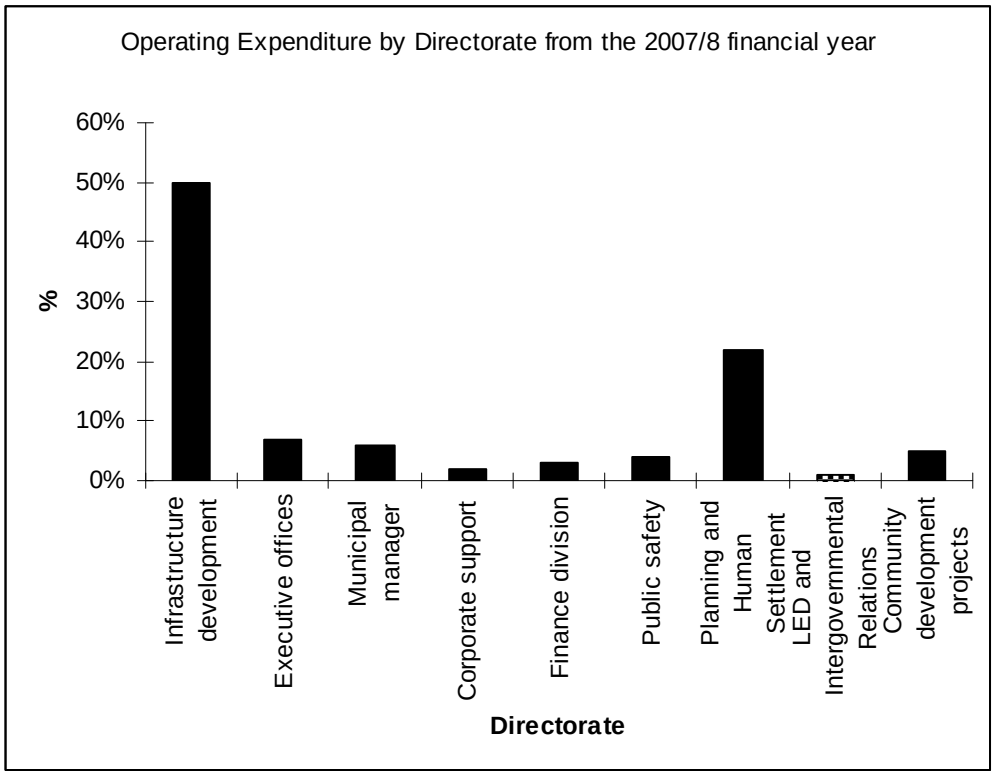
(RLM MTREF, 2007/08).

Figure 6: Major sources for RLM's revenue



(RLM MTREF, 2007/08).

Figure 7: Operating Expenditure by Directorate from the 2007/8 financial year



(RLM MTREF, 2007/08).

Table 3: Capital Expenditure by Vote (all amounts rounded off to the nearest R 1 000)

Vote	2007/8 R'000	2008/9 R'000	2009/10 R'000
Electrical Services	56,445	111,369	114,550
Buildings	2,249	15,000	15,000
Roads and Storm water	72,300	61,869	58,142
Sewerage	63,341	65,676	43,000
Water	64,984	35,480	21,000
Community Services	28,776	20,102	6,309
Planning and Human Settlement	6,882	0	0
LED & Intergovernmental Relations	11,545	22,695	7,800
Public Safety	11,093	22,175	3,380
Waste Management	6,406	7,853	4,344
Street lights	7,890	0	0
Other	10,230	1,000	310
Total capital budget	**342,141**	**363,219**	**273,835**

(RLM MTREF, 2007/08).

Table 4: Capital financing by source (all amounts rounded off to the nearest R million)

Financing Source	2006/7 R'million	2007/8 R'million	2008/9 R'million
Capital Replacement Reserve	114	196	136
Loan from previous year	14	4	3
Town Development Suspense	13	4	4
Ad Hoc	18	13	9
Total: Own Funds	159	217	152
District Municipality	19	7	9
Dept. Sport, Arts & Culture	6	2	2
Dept. Mineral and Energy	10	3	24
Municipal Infrastructure Grant (MIG)	135	120	79
Other Grants	13	11	8
Total	**342**	**363**	**274**

(RLM MTREF, 2007/08).

The municipality's LED objectives reflect a pro-growth trajectory as it's LED strategy is centered on promoting, attracting and retaining investors. The municipality also aims to market and promote economic development; and job creation for local residents through SMME development, tourism and capital projects undertaken within the municipal area, to achieve the following outcomes;

- to advance the course of local businesses,
- to promote intercultural and interregional relationships through social activities,
- to maximize private sector investment and facilitate partnerships,
- to promote the development of entrepreneurial skills in the management of economic development, and
- To support BEE as part of economic development and to create conditions conducive to entrepreneurial activity and investment.

(Rustenburg IDP, 2007-2012).

The municipality has a positive attitude towards meeting the requirements of the poor as it aims to create employment opportunities by enhancing economic activity within its jurisdiction. It has prioritized economic development, rural development and employment creation as its main activities to create conditions that will entice and attract investors and position the municipality in the global economy. The municipality's energies are also focused on the development of Unit Community Facilities (UCF) to facilitate sports and develop sports facilities for the different communities within its jurisdiction. It is also engaged in ensuring that cemeteries are available and accessible to communities and that mechanisms are employed to develop general awareness and cleanliness among communities (Rustenburg IDP, 2007-2012). The LED unit is part of a Future Development Task Team established in 2003 to speed up development. Figure 8 illustrates the LED projects pursued by the RLM.

Figure 8: LED projects pursued by the RLM

- Portion Erf 1103 has been set aside for the development of Damelin premises; this project was completed in 2006.
- Portion of Erf 219 has been set aside for the establishment of new offices for the Bojanala Platinum District Municipality. (no movement)
- Portion of Erf 218 has been set aside for the development of the Fike Trust for a Protea Hotel (progress noted)
- Erf 204 has been set aside for the development of Barongwa Consortium for Office and Business Centre (Construction to begin soon)
- Business Centre at Geelhout Park Extension 6- approved; development stalled.
- Bhams Stationers Premises, stand allocated, no movement to date regarding the development of site.
- IDP Stakeholder Representative Forum with the Economic Cluster Working Committee established; ceased to function in 2005.
- PGDS Working Committees became operational then: LED became part of all seven working groups.
- Construction and establishment of the SMME Support & Development Centre with SETA Walk-In Centre completed. Not yet operational. Launch postponed several times.
- Establishment of Recruitment Centre in 2003 with linkages with private and public sectors. Funded for 3 years by Anglo Platinum Mine.
- Established the Business Advice & Linkages Centre. Funding received from Anglo Platinum Mine. Not yet operational.
- Other private investment initiatives approved at Planning & Development PFC
- One SMME selected at NW Mega Expo 2005 to participate at Botswana international Trade Fair in 2005. Received the "Best National Stand" prize.
- Coordinated training by Mintek of twenty Pottery/beading learners.
- Five LED learner ships mentored from 2005 to 2006. Achieved above other municipalities candidates.
- Facilitated and received funding from Johnson & Johnson subsidiary (lifescan) for Phatsima Vegetable Project in 2004. Project still at survivalist level.
- Coordinated Extended Public Works Program (EPWP) learner ships from 2005.
- Facilitated the SEDA Platinum Design and Manufacturing Hub. Same launched in December 2006. Twenty learners began the course in February 2007.
- Portion of Erf 218- Feasibility study on for the upgrading of the present Tourism &Information Centre to be in line with 2010 World Cup requirements. Funding from DEAT.
- The first phase of the tourism route has been completed.

(Rustenburg IDP, 2007-2012, pg 312-313).

4.2. **Issues and Concerns relating to RLM and Mining: The Rustenburg State of the Environment Report.**

4.2.1. Introduction

Rustenburg State of the Environment Report illustrates all the negative impacts emanating from land use activities within the RLM. This section provides a summary of the issues that emanate from mining operations which have a direct impact on the RLM. Issues dealt with include Policies and plans, land use, growth, housing, noise pollution, infrastructure, waste management, access to information, natural environment, soils, water quality, pollution, air quality, fauna and flora, land management issues and engineering issues (Rustenburg State of Environment, 2007).

4.2.2. Policies and Plans

- People don't see delivery, implementation of any plans proposed, nor a serious commitment to addressing concerns raised.
- The lack of a proper management plan and strategy to deal with waste management.
- Management by the local authority is considered to be inadequate due to lack of manpower, lack of political will, bureaucracy, lack of clear guidelines , lack of law enforcement,
- There is a lack of monitoring and redress of negative impacts

(Rustenburg State of Environment, 2007)

4.2.3. Land Use

- Mining activities acting as barriers to further development or other land uses.
- Illegal development on the Mountain Areas; destruction of the koppies by granite miners.
- Inadequate management of the two important dams in the area, Bospoort and Vaalkop.
- No management plans for the underground mines.
- Some townships are sitting on old mines "hollow underground caves"
- Densification has changed the character of the area.

(Rustenburg State of Environment, 2007)

4.2.4. Growth

- Rustenburg undergoing tremendous growth
- Increase and encroachment of housing onto agricultural land

(Rustenburg State of Environment, 2007)

4.2.5. Housing

- Acute shortage occurs due to influx of workers of mines.

(Rustenburg State of Environment, 2007)

4.2.6. Noise Pollution

- Blasting by mines.
- Heavy transportation and traffic
- Industries machinery and/or factories.
- Air flights over the Magaliesberg contribute to noise pollution

(Rustenburg State of Environment, 2007)

4.2.7. Infrastructure

- Infrastructure development is too slow.
- Septic tanks cause pollution of the underground water.

(Rustenburg State of Environment, 2007)

4.2.8. Waste Management

- Illegal dumping occurs on edge and within the settlement areas in the study area

(Rustenburg State of Environment, 2007)

4.2.9. Access to information

- Delays in getting information from Government and Municipal Offices.

(Rustenburg State of Environment, 2007)

4.2.10. Natural Environment

- There is a conspicuous disregard of the environment at large by some developers and by private and public communities in their respective verities.
- Pollution is on the increase in the rivers.

(Rustenburg State of Environment, 2007)

4.2.11. Soils

- Excessive air and water pollution end up polluting the soil.

(Rustenburg State of Environment, 2007)

4.2.12. Water Quality/pollution

- Lack of proper sanitation infrastructure results in water/rivers getting polluted.
- The pollution of water by all kinds of wastes according to their classification.
- Chemical spillages
- Unauthorized dumping

(Rustenburg State of Environment, 2007)

4.2.13. Air Quality

- Dust and air pollution from mining is causing long term impacts on Human Health, Animal and Plant Life.
- People suffer from Asthma and all problems associated with air pollution. It has been mentioned that air pollution has evolved from noxious gases to mainly dust.
- Certain production processes by industries cause different types of air pollution.
- Gravel roads, coal trains and coal generated energy by households and unauthorised veld fires cause air pollution.
- Acid rain causing changes to the environment.

(Rustenburg State of Environment, 2007)

4.2.14. Fauna and Flora

- Red Data species lists are not readily available to environmental and local authorities that can be used to red flag certain areas where development is proposed.
- No policy exist for the protection and management of Red Data, Protected and Medicinal plants on private land and specifically when such plants occur on proposed development sites.

(Rustenburg State of Environment, 2007)

4.2.15. Land Management Issues

- Threat of mining related impacts.
- Mining's physical barriers and electricity power lines are impacting negatively on the sustainability of the environment.
- The position of tailings dams by the mines is a concern.

(Rustenburg State of Environment, 2007)

4.2.16. Engineering Issues

- The sewerage treatment plant is too small to handle the amount of sewerage.
- Rural areas have no sewerage networks and therefore use French drains and septic tanks.

(Rustenburg State of Environment, 2007).

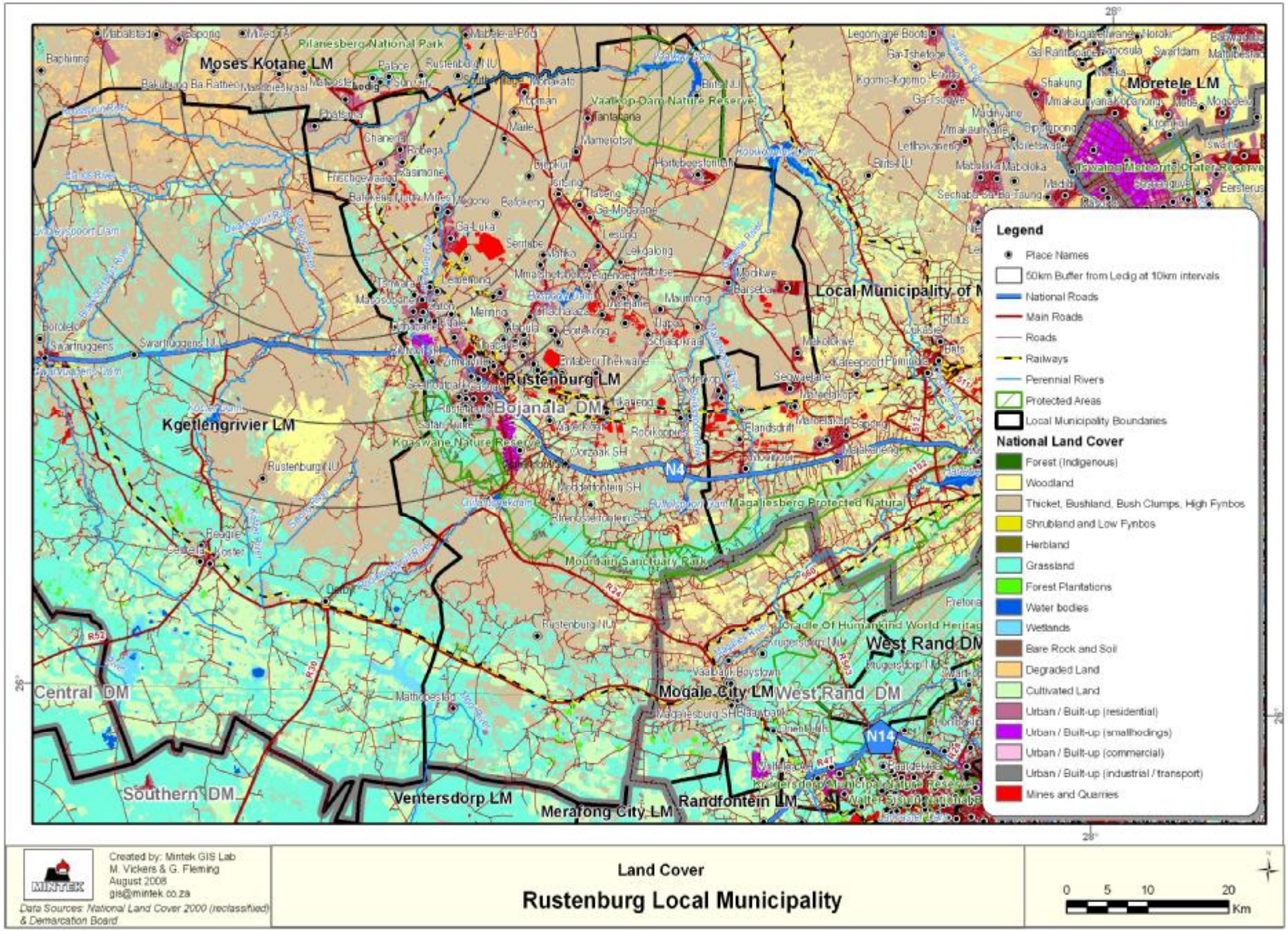


Figure 9: Rustenburg Local Municipality land cover.

4.3. **The views of the RLM on mining**

The following section is made up of a summary of an interview that took place with a senior LED official from the RLM. The municipality has 36 wards; the mayor embarks on an annual road show aimed at enabling stakeholders to contribute towards the development of the municipalities IDP. The municipality has had both negative and positive experiences in relation to the involvement of mining companies in the implementation of community based development projects that have already been identified by the municipality and are enshrined in its IDP.

The municipality's positive interaction with mining companies has been experienced on rare occasions when mining companies agree to implement community development programs enshrined in the municipality's IDP. The negative experiences are centered on the fact that several mining companies operating within the jurisdiction that is administered by the RLM have a tendency to agree to allocate funding for community development programs and end up not fulfilling their commitments. In other cases mining companies implement programs that are not enshrined in the municipality's IDP. These programs are usually implemented as SLP to obtain credit ratings from the DME that will enable them to acquire new mining order rights. Community development programs by mining companies place them on good position for their mineral rights to be approved by the DME.

It is apparent that several mining companies are engaged in their own community outreach programs without bringing the municipality on board. In certain cases mining companies end up developing their own development plans. Funding commitments differ from company to company. Anglo Platinum was instrumental in providing the necessary support and establishing a recruitment centre and appointed two Human Resources (HR) officials to administer a unit within the municipality which involved data capturing and identifying employment opportunities for the unemployed. Anglo Platinum provides funds for the development of a business advice centre within the municipality.

However, the person responsible for managing the business centre lacked the required capacity to administer its activities. Anglo Platinum was compelled to withdraw the funds that it was prepared to offer to the business centre. The funds were estimated at R850 000.00 on an annual basis. Anglo Platinum is also involved in a project that cleanses and recycles water. The municipality feels that this initiative can be enhanced through greater cooperation with the municipality in the provision of a collaborative approach in the cleansing and recycling of water.

Anglo Platinum has also contributed towards the realization of the eradication of squatter camps in Kanana (a ward within the area administered by the RLM) through the provision of financial support for Sunflower Construction that is responsible with developing houses for those people who dwell in informal settlements. Anglo Platinum is also maintaining a college that provides tuition in jewellery making.

Lonmin contributed funds in 2003 for the establishment of a Kibbutz type of farming project similar to those practiced in Israel. Aquarius Platinum has committed itself to several projects which include the development of markets that will enable members residing within RLM to sell their produce to Sun City. Aquarius Platinum intends to run a waste management project; these projects have not reached fruition. Aquarius has also utilized its resources to resettle and develop a new settlement area for a group of people who were displaced from the areas where their operations occur, coupled with the provision of VIP toilets. The municipality recognizes that there is inadequate co-operation between the DME, RLM and the DME's Klerksdorp office.

The RLM recognizes the possibility of mining companies ability to contribute a certain percentage of the annual earnings towards the realization of numerous socio-economic development programs. Thariza Minerals is a new mine and has already committed R1 million to be contributed towards the socio-economic development of members of the community of Marikana through the provision of resources to enable the community to be skilled in sawing and brick making. The company intends to purchase a truck to enable the community to be effective in its activities. Thariza Minerals has committed

itself to contribute to the realization of housing developments in the Kaffirskraal region. Figure 10 illustrates the type of accommodation that a majority of Rustenburg's community resides in.

Figure 10: Typical informal settlements from within the area administered by the RLM (Phomolong).

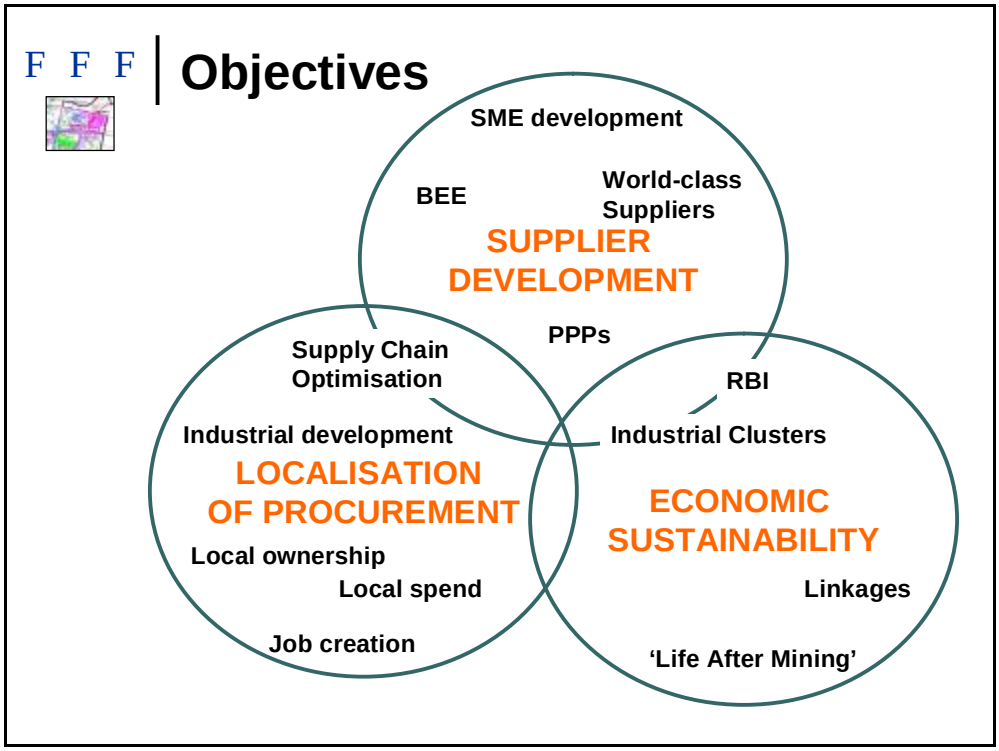


(Mintek, 2006).

International Ferrochrome Metals (IFM) consultation with the municipality is limited. The company has employed more than a thousand people. It is still unclear what socio-economic development programs it intends to engage in. The municipality aims to establish a database that illustrates all the mining company's community development programs, which will be updated on a regular basis. It also expects mining companies to recognize community development projects enshrined in its IDP. The municipality aims to establish programs that will explain and lay emphasis on the importance of the recognition and realization of the projects enshrined in its IDP. Xstrata has contributed land for the development of a mining supplier park aimed at promoting supplier

development, localization of procurement and economic sustainability. Figure 11 shows a diagram of the objectives of the intended supplier park (SORLM, 2008).

Figure 11: Objectives of Xstrata's intended Rustenburg mining supplier park.



(Mintek, 2006).

The RBN and Anglo Platinum have worked together in implementing several community based development projects which include the provision of basic services, infrastructure and offered bursaries to institutions of higher learning. The population within the RLM is growing at an alarming rate. There is continuous inward migration of labor to meet the requirements of the mines and growth in the regional economy (SORLM, 2008).

4.4. **Pperspectives of four mining companies pertaining to LED within the jurisdiction administered by the RLM.**

4.4.1. Lonmin Platinum third biggest platinum producer

Lonmin is the smallest of the three platinum producers in South Africa. The company operates three connected mining operations which are Western Platinum, Karee Mine and Eastern Platinum. Lonmin has already been offered new order mining rights to continue with its operations in the Rustenburg municipal area. It has a significant amount of migrant laborers with approximately 1 200 workers emanating from the Eastern Cape. The company's SLP delivery program is aligned with projects enshrined in the RLM's IDP. The projects have a strong emphasis on LED, commercial, agriculture and health issues. The company has provided the local educational department with curriculum development support and educational infrastructure support for grade 11's, 12's in partnership with the University of the North-West Province and Samancor (Steyn, 2008).

In Ikhatheleng the company has developed 3 schools and has erected proper toilet facilities (V.T.P), better waste separation system. The company often experiences engagement problems with members of the local communities in which it operates. For example the Bapo tribal authority is caught up in the current ANC political turmoil. It has been split into two factions the pro - Zuma and the pro - Mbeki alliance. This has been expressed through ongoing confrontations between the traditionally appointed officials and politically appointed officials within the Bapo tribal authority (SORLM, 2008).

The latter makes it difficult for the company to co-operate with the traditional authority in developing and implementing community development projects. Tribal violence is evident amongst the company's employees. The local population considers anyone who comes from outside their community as outsiders. Outsiders are ill treated by members of the local community. There have been occasions when political unrest occurred with the local population demanding that outsiders especially migrants from the Eastern Cape should be sent back to their traditional homeland. The company replied by conducting a

community engagement process aimed at enabling community members to address their concerns (Steyn, 2008).

Another obstacle in the implementation of community based development projects emanates from a high staff turnover. Community based development projects require long term attention. Regular change within Lonmin's management structures changes or even disturbs the development trajectory that has been chosen by a previous manager. The latter has the potential of ending, putting a halt or disturbing the delivery of community based development projects. The company also conducts community perspective surveys which outline the local community's perception pertaining to the company's level of engagement with the members of the community. The outcomes of the perspective surveys have an impact on the bonuses offered to company officials responsible for community engagement (Steyn, 2008).

Housing is one of the central issues for the company for its employees and community members proximate to their companies operations. The company finds it difficult to retain staff due to a shortage in housing. The company aims to provide affordable housing to its staff and tries not to rely too much on the local municipality. The company perceives the municipality as not being too concerned with the interests of the mining companies as municipal officials barely attend meetings pertaining to socio-economic development organized by mining companies. The latter may be influenced by a variety of factors which include the local municipality's lack of interest in some of the issues that are raised by mining companies and the notion that local government does not consider or value mining companies as partners in meeting the socio-economic requirements of local communities (Steyn, 2008).

The company's major focus regarding socio-economic development is centered on poverty alleviation. Its socio-economic development programs address hunger and poverty. This has been expressed in the provision for semi food serving schemes in five villages around their mines. Lonmin has also provided training to enable communities to develop gardens coupled with the offering of an accredited certificate for members of the

local municipality who are successful in their training. The company has also developed a co-operative arrangement to enable communities to trade and beneficiate their produce amongst themselves in order to generate income (Steyn, 2008).

Lonmin has a sizeable amount of unused land that has been set aside for its program aimed to develop the capacity of emerging farmers. The company's SLP initiatives are usually hampered by regional politics. The C.E.O's vision is aimed at enabling mineral development to promote LED. One of the ways that this is practiced is through the development of SMME to enable the funds emanating from the mine to be utilized within the community (to keep the money circulating within the community). The company is engaged in various community supplier development programs. It is estimated that $200 000 will be spent on local vendors over 7 years in order to keep money circulating within the local economy (Steyn, 2008).

The company also lays emphasis on mitigating the adverse effects emanating from mineral development. It has employed mechanisms to protect the environment. In its research the company has noticed that migrant workers live an unsustainable lifestyle which leads to the breakdown of the social fabric and hampers on sustainable economic growth. The newly developed family units for miners still encourages polygamy (multiple partners) as miners are not willing to bring their families to their place of work since they fear loosing their traditional land back home where their families reside. Furthermore, the company acknowledges that a mining community development strategy should be pragmatic and should be crafted based on the capacity of stakeholders to implement the strategy (Steyn, 2008).

The company aims to provide support where government cannot supply. However, the company's efforts are usually hampered by political obstacles emanating from the public sector. Lonmin feels that mining companies should not take on the work of the public sector but should support capacity building which will enable the government to meet its obligations. The mining charter lays the foundation, all those who affect or are affected by mining operations need to influence and interpret what it means (Steyn, 2008).

Lonmin has the following projects in the Greater Marikana region which is a ward within the RLM:

- *Education;*
    - Upgrading school buildings, School gardening projects, Learner support, Career expos which include Post-matric part time classes, Saturday school, Provision of teaching materials, Aptitude tests. ICT, Computer training, Computer maintenance and Training of crèche educators
- *Health;*
    - HIV/AIDS; Home care visits, Community awareness, Gardening projects, School mobile clinics and School feeding scheme.
- *LED;*
    - Training of local suppliers, Farming skills training and brick making classes.

(GLC, 2008)

4.4.2. Samancor Chrome Western Mines

The company's LED commitments are centered on community projects usually in partnership with Lonmin. Examples of this program are the winter school program, Adult Based Education (ABET) and small skills community development programs which are part of the company's SLP. Samancor prefers to be in partnership with other mining companies operating in the same area. The company provides accommodation for employees (mine hostels) and provides health services (including VCT's) both to its employees and to its employees family members (Steyn, 2008).

The company provides ABET training through Sizanani[12]. These services are also offered to communities around their mining operations. The company feels that its direct interaction with the municipality has improved (Steyn, 2008). Figure 12 depicts an

[12] Sizanani is close corporation that provides ABET career solutions.

intermediate school that received financial support from Samancor. Samancor has embarked on the following projects in the Greater Marikana area:

- Education
    - *School feeding schemes, Computer donations, Building of administration block and (SGB) Training.*
- LED
    - *Training of local suppliers*

(GLC, 2008)

Figure 12: An intermediate school that is funded by Samancor.



(Mintek, 2006).

4.4.3. Anglo Platinum Rustenburg section RPM-(R)

Anglo Platinum is part of the Anglo American group of companies. Anglo Platinum is the world's biggest platinum producer. It currently has six mining operations operated by Rustenburg Platinum Mines (RPM), which includes RPM Bafokeng – Rasimone, RPM Union, RPM Amandelbult and RPM Rustenburg. These mines are situated on the western limb of the BIC, whilst Potgietersrust Platinum is in the northern or central limb, and Lebowa Platinum Mines on the Eastern limb of the BIC. All of the operations are to be amalgamated into a single company, Anglo Platinum.

Anglo Platinum's vision in relation to Socio-Economic Development (SED) is aimed at creating an environment for sustainable socio-economic development by strategizing, planning, developing and facilitating the implementation of programs that harness the synergy between Anglo Platinum and its surrounding communities (government, civil society and business), so that the quality of life for communities can improve (Anglo Platinum Rustenburg Section, 2008).

Anglo Platinum's SED approach is aimed at developing functional strategic partnerships and to seek areas of cooperation with government at the national, provincial and local government level. The strategic focus is centered on LED, community development, sustainable habitat. In relation to LED the Anglo Platinum's SED unit aims to encourage LED and growth in mining communities, the company has established a business linkage centre, a SMME/BEE capacity building facility and women – owned cooperative businesses through the Phelo-Phepa co-operative mentored by Go-Awaste (Anglo Platinum, 2007).

The company also lays emphasis on the development of schools infrastructure. This is supported by its vision aimed at facilitating the provision of infrastructure to benefit local areas. Figure 13 illustrates one of the school development projects that Anglo Platinum has been involved in. Its programs regarding the latter are as follows:

- Planning stage
    - New Secondary School- Boitekong.
    - New Primary School Building – Tlhabane West
- Building/ Renovation started
    - Motladi Kgoadigoadi Primary School – School renovation
    - Tsope Middle School – Admin Block
    - Lekwakwa Primary School – Admin Block
    - Kgatesheng Middle School – fencing sports field
    - Lefaragatlhe construction – Sports field
    - Boitekong secondary school – computer laboratory

(Anglo Platinum Rustenburg Section, 2008).

Figure 13: Illustrates Lekwakwa Primary School administration block. Donated by Anglo Platinum in support of quality education.



(Mintek, 2006).

The company has engaged in several community development projects which include cleaning up campaigns in Photsaneng, Thekwane, Mfidikwe, Bokamoso, Zakhele and Nkaneng. Infrastructure has been offered the required attention with the aim of enhancing primary health care at the following communities; Delela, Nkaneng, Bokamoso, Zakhele, Sondela, Tlapa and Rietfontein (Anglo Platinum, 2008). Anglo Platinum's education development program is centered on the contribution towards the improvement in the provision of quality education in the communities surrounding Anglo Platinum's operations. This has been expressed in the provision of several educational resources to community educational institutions for example the development of the Bojanala Resource Centre, issuing of computers, photocopiers and furniture and the provision of the following services:

- Educator development.
    - Experico project for foundation and intermediate phase educators.
    - Technology workshops for 7-9 educators.
    - Maths and Science training for FET phase (Gr 10-12).
- Learner development.
    - Maths and Science
    - Leadership
    - Experico project

- Early childhood development.
- Special needs.
- Resource development.

(Anglo Platinum, 2008).

Anglo Platinum has been approached to build a new primary school for the residents of Tlhabane. The majority of occupiers of this area are Anglo Platinum employees. An amount of R8 million was approved with the budget that was originally allocated to three new schools now being allocated to one new school (Anglo Platinum, 2008). Paardekraal is situated within 2, 9 km from the Townlands Shaft of Rustenburg Platinum

Mines RPMR. This is one of the RPMR's doorstep communities. There is a positive relationship between the company and the community. The company employs several mechanisms to maintain the good relationship. This has been expressed in the company agreeing to provide financial assistance to build a Community Hall housed within a sports complex. The RLM community development directorate has already approved the construction of a sports complex and the proposed community hall. The project cost is estimated at R10 million (Anglo Platinum, 2007).

Taung is situated approximately 450km from Rustenburg. According to Human Resources records, Taung contributes some 40% of RPMR workforce. The greater part of this area is rural and located within the borders of the North - West Province. During 2005 the area was hit by severe floods that destroyed life, property and most of the little school infrastructure this area had. The Provincial Department of the North-West Province made a plea to the corporate world for assistance in trying to revamp the damaged infrastructure. It has been recommended that a school that was destroyed during the floods be rebuilt and renovated to a level that will render it conducive to both teaching and learning. The project is one of Anglo Platinum's RPMR SLP projects. The estimated cost of the project is R 7 million (Anglo Platinum, 2007).

The company is also engaged in the construction of a sports complex for the villages of Photsaneng, Thekwana and Mfidike which will be developed in partnership with The Royal Bafokeng Sports Holdings. The request has come through this body. The sports complex will cater for various sporting codes which will include one soccer pitch, two netball courts, two volley ball courts and one cricket oval. The project is estimated to amount to R2.5 million (Anglo Platinum, 2007).

Zinniaville secondary school borders RPMR leased area. The school is one of the best integrated schools within the Bojanala District Municipality. Most of the learners come from Tlhabane, Boitekong and Meriting areas. The renovation of the Resource Centre started in 2007 and experienced a monetary shortfall to the amount of R153 500.00. The renovation includes repainting and furnishing the centre as well as purchasing reading

material. The aim of this centre is to promote and inculcate the culture of reading amongst the children. This school provides education to the children of RPMR employees. The project is estimated to cost R160 000.00 (Anglo Platinum, 2007).

Motladi Kgoadigoadi primary school is built in Tlhabane Township. Tlhabane is situated within 8km from Boschfontein and Townlands shafts of RPMR Tlhabane provides residents to the employees of RPMR. In 2007, Anglo Platinum embarked on the renovation of the school to the amount of R 1 091 093.86. The school now requires fencing and paving to render the environment complete and conducive for educational activities. The project seeks to provide fencing (300 metres) and paving around the school (1 000 square meters). The estimated cost of the project is R500 000.00 (Anglo Platinum, 2007).

Thabiso middle school and Kgatsheng are neighbouring schools in Tlhabane. The schools are community schools registered with the Department of Education in the Bojanala District. Part of Kgatsheng middle school was fenced in 2007 and a further request is to provide a complete fencing around the two schools to completely fence the two properties adjacent to each other. The project seeks to erect approximately a 450 metre palisade fence around the two schools. The fence is breaking down and requires repair. The second project is about establishing a computer network to upgrade the current center at Thabiso middle school. The project is estimated to cost R800 000.00 (Anglo Platinum, 2007).

Boitekong is situated within 1,5km from the Paardekraal shaft of RPM, Rustenburg section. The area of Boitekong is earmarked by the RLM to provide new settlement and over 1000 houses are built every year. The erection of a new secondary school building in Boitekong is to keep pace with the growth in population. The Boitekong Secondary school which was completed a year ago has a population of 1 480 learners, 200 above its capacity. This shows the need for an additional school in the area. This is a SLP project for RPMR. The construction of 24 new classrooms with laboratories (Science and Computer) administration block, toilets and fencing. The requirements as laid down by

the Department of Education of the North – West province will be used to guide the planning for the construction. The project is estimated at R8 million (Anglo Platinum, 2007).

Selly Park Secondary School is an Independent Roman Catholic High School registered with the Department of Education and provisionally accredited by UMALUSI[13]. The school offers tuition to a multiracial learner population in and around Rustenburg. The school opened its doors to learners in 1999 and has since grown into a preferred educational institution for many young boys and girls. The project seeks to purchase sports equipment and requirements that will include among others, sets of potable goal posts and nets for hockey, soccer and netball and coaching kits. The estimated cost of the project is R60 000.00 (Anglo Platinum, 2007).

The company has also embarked on LED projects which seek to address the following issues; facilitate programs linked to the Business Linkage centre, capacity building of SMME, capacity building of women-owned cooperatives and development of infrastructure to enhance cooperative businesses. The project is estimated at R 2 500 000.00 (Anglo Platinum, 2007).

4.4.4. Aquarius platinum South Africa

Aquarius Platinum is primarily focused on the production of Platinum Group Metals (PGM) in Southern Africa. It has shown its commitment towards the development of communities who are directly affected by its mining operations by providing socio-economic development packages in the following manner;

Education

- Computer class and donations.
- Building of two classrooms.
- Upgrading of Grade R classroom and training of Grade R educators.

[13] Umalusi is a statutory organization which monitors and improves the quality of general and further education and training in South Africa.

- Upgrading of school administration buildings.

Roads and Infrastructure

- Expansion of community hall.
- Upgrading of internal roads to squatter settlements.
- Building of sports facilities.

4.5. **The current Royal Bafokeng Nation (RBN) LED strategy**

The Royal Bafokeng Nation's (RBN's) jurisdiction is endowed with the world's largest deposits of platinum group metals. Mining companies used to pay royalties to the RBN in exchange for the right to mine significant reserves of PGM which include platinum, ferrochrome, rhodium and palladium on RBN land. These royalties and dividends have been utilized to achieve several socio-economic development programs. One of the most significant achievements so far is the establishment of a civic administration and social services centre in Phokeng known as the RBN civic centre (International Herald Tribune, 7 November 2008).

The RBN has established a civic centre which has a LED unit. The LED unit responsibilities are centered on diversifying the local economy administered by the following divisions: Agriculture, Tourism, Manufacturing & Services, Mining and Construction, Creative Arts, and Training and Development with the following LED strategic objectives put in place; to maintain internal and external business relations with the RBN entities and all its strategic affiliates; to increase return on investment; to expand sources of LED funding, to assist in the provision of funds for the realization of LED projects, to make possible the establishment, growth and sustainability of SMME and individuals, to be a leader in business and talent development by initiating and implementing flagship, to employ the necessary mechanisms which will attract and retain investors, to establish and implement adequate policies, procedures, processes and systems coupled with engaging in research and development activities in order to continuously service improvement and to attract, develop and retain skilled personnel. Based on these objectives, the LED unit has adopted the following strategic thrusts to

ensure growth and sustainability of its SMME: market/product development; SMME development; BEE facilitation/deal structuring; SMME promotions and investment promotions (Royal Bafokeng, 2008).

The RBN has already begun diversifying its economic activities away from being only depended on income derived from mining operations. Its portfolio at the end of 2007 comprised the following investments: mining, finance, industrial, manufacturing, services and sport. The RBN's portfolio was worth R 33.5 billion ($3.5 billion) at the end of 2007 with a diversified portfolio which includes investments in telecommunications, logistics and other service industries. In summary its asset portfolio is 79.6% in mining; 13.7% in cash; 0.3% in the industrial sector; 0.7% in the financial sector; 1.6% in the manufacturing sector; 4.0% in the services sector and 0.1% in sport activities. In the past ten years approximately R 3 billion ($309 million) has been invested into the community expressed in the infrastructure development projects and the establishment of over fifty schools and the provision of electricity throughout the RBN (International Herald Tribune, 7 November 2008).

4.6. **Views from members of the community pertaining to mining and local economic development within the RLM**

Three senior community leaders from Phomolong, Tlhabane and Marikana were interviewed to receive the community's views pertaining to the involvement of mining companies in community development programs in their respective areas. These communities are located on the rural parts of the area that is administered by the RLM. No significant attention was paid towards the urban area that is administered by the RLM as it is experiencing enormous development expressed in a variety of new businesses being developed offering the local population employment opportunities. By contrast the rural sections of the area administered by the RLM are poverty stricken and are close to mining operations making them the areas that should be impacted by mining companies SLP.

The legitimacy of these leaders emanates from the fact that they have been chosen by the community to represent and perform various leadership roles for their communities. The man from Phomolong is a recognized community business leader and chairman of the Phomolong business forum, the lady from Tlhabane is a teacher in one of the primary schools in the community and also heads the community's educational forum, the gentlemen from Marikana plays a variety of community leadership roles which include taking part in the community's traditional meetings (Legutla), representing the community in ward meetings and is also a sport coach for the local soccer team. These interviews were summarized to reflect the community's perceptions. This was done as all the community leaders raised similar issues and mentioned concerns emanating from other mining affected community's within the RLM that were not interviewed.

The concerns of the community members who are affected by mining operations within the jurisdiction that is administered by the RLM are largely centered on the need to employ mechanisms that will contribute towards the mitigation of the adverse effects emanating from mining operations. Community members feel that mining companies have both the required capacity and resources to implement sustainable development programs. These programs are expected to develop socio-economic, environmental and institutional requirements at a community level.

Even though interviews were conducted in different areas within the jurisdiction administered by the RLM, the concerns of community members in relation to their socio-economic requirements are similar. Community members feel that mining companies have the capacity to expand the resources they offer to their employees to benefit the members of the community who are affected by their mining operations. These resources include access to adequate health facilities, clean purified water, adequate toilet systems (sewerage systems) and resources for construction to develop, upgrade infrastructure especially in relation to educational institutions, roads and housing.

In recognizing the role that mining companies can play in contributing towards socio-economic development in their communities, community members draw comparison to

other communities who are deriving socio-economic benefits from mineral developments occurring in their community. The community socio-economic development trajectory that is practiced by the RBN is highly recognized. Community members express the need for mining companies to go beyond the provision of socio-economic services to community members who are affected by their operations but to offer communities opportunities that will enable them to administer their own socio-economic affairs by engaging in a partnership with local authorities with the view of advancing the community's ability to play an effective role in meeting it's socio-economic needs.

It became apparent during the interviews that there was a need for mechanisms to be established by community representatives, the local municipality and mining companies in relation to providing special socio-economic development and skills training programs for females as the employment opportunities that are offered in the mines mostly attract males. A majority of women do not prefer to work underground. This is not based on the harsh activities synonymous with mining operations but is influenced by the ill treatment of underground women miners by their male counterparts. Cases of sexual and other abuses have been reported on various occasions. Due to the need to acquire income women still work underground amidst these conditions as it is hard to find other employment opportunities. Mining employment is perceived to be better than engaging in prostitution.

There is an enormous number of young women (mostly between the ages of 14 and 30) who are engaged in prostitution as an activity to derive income. The majority of women engaged in prostitution are usually bread winners in their households as their parents are either unemployed, too sick to be employed or lack the necessary skills required by the local labor market, or are deceased. These women benefit from various sexual education programs provided by the local government institutions and mining company's especially Anglo Platinum's Voluntary Counseling and Testing (VCT) support service.

This service teaches young women engaged in prostitution about the dangers of this activity and provides them with access to contraceptives. The service makes use of

women who are engaged in prostitution to teach other women (mainly sex workers) about the benefits of using contraceptives and Sexually Transmitted Diseases (STD) preventive measures. Community members felt that there should be more programs aimed at educating locals about the dangers and preventive measures pertaining to STDs.

In relation to environmental pollution members of communities close to mining operations expect the government to take a strong stand against mining companies that are not employing the correct measures to mitigate pollution emanating from their operations. The latter emanates from the recognition that other mining companies in other regions and within the area administered by the RLM employ measures that are effective in decreasing the negative effects emanating from their mining operations. The communities' main concerns are dust which has the potential of affecting the respiratory system, mining dumping areas that can damage important agricultural land both for cattle grazing and for planting, surface and underground water pollution and air pollution from refineries. Community members also feel that there are not enough health services within their communities to meet the demand that is provided by the local community.

The central economic issues from the majority of community members affected by mining operations are that mining companies have a tendency to employ foreign and migrant workers instead of offering employment opportunities to locals. The members claim that this practice usually perpetuated by the fact that locals may lack the skills that are required for technical mining operations. They feel that mining companies should provide training to locals to enable them to be able to take part in technical intensive mining activities.

Furthermore locals aspire to be involved and to own assets in the mining operations through community trusts. Funds emanating from these trusts are expected to be utilized to realize community development programs. Community members feel that they should be offered the required training and business opportunities that will enable them to provide services and equipment that are utilized in mining operations. The latter will enable them to be equipped with skills that can be utilized in other sectors of the local

economy. This will be useful in maintaining economic activity at the end of a mine's lifecycle.

The interviewees from Phomolong and Marikana argued that members of their communities were dissatisfied and had no faith in the local municipality. They perceive local municipal officials as not being effective in delivering essential public services. They also perceive local government institutions to be administered by migrant workers that are not well acquainted with the needs and cultural values of the local population. The interviewee from Thlabane argued that the relations between the Thlabane community and the RLM has improved, shown in the municipality's quick response to most of the Thlabane community's needs. The latter is said to have been given momentum by Anglo Platinum's collaboration with the RLM as a majority of Anglo Platinum's workers reside in Tlhabane.

Community members are concerned about the current political turmoil and split within the ruling party as it has already began to affect them. There has been a break down in communication between traditionally appointed leaders and political appointed leaders within the traditional councils in the villages that fall within the RLM. This has led traditional structures representing the interests of the community to be perceived to be null and void.

Community members feel that co-operation between members of the local communities within the area administered by the RLM, local authorities and mining company's needs to be enhanced. They feel that this alliance will be effective in realizing and implementing the socio-economic requirements of the local population that are affected by the mining operations within the jurisdiction administered by the RLM. Community members are aware of the RLM's IDP. They expect mining companies to identify community development plans enshrined in the IDP and to provide support in realizing community development projects emanating from the IDP.

4.7. **Views from a representative of the National Union of Mineworkers (NUM), Rustenburg branch.**

A telephonic interview was conducted with a NUM Rustenburg branch representative. NUM Rustenburg branch is the union that most of the mineworkers in the region are part off. The union has also played a substantial role in the realisation of most of the mineworkers' requirements. The aim of this interview was to find out the union's perspective in relation to the role that the local extractive industry can play in promoting LED within the area that is administered by the RLM.

The representative from NUM Rustenburg branch has dealt with a variety of issues relating to the advancement of the requirements of the community. He acknowledged the fact that mining companies are beginning to consider the interests of its work force and that in some cases the mining companies have been involved in the realisation of a number of community requirements. These include offering workers on site VCT services, providing student financial assistance to a number of deserving students and providing housing subsidies for some workers to be able to afford housing.

It became obvious during our conversation that the official seemed to think that the manner which community development projects are conducted require improvement as he mentioned on several occasions that the process required in the community development process can be developed further by enabling all stakeholders to partake in the establishment of community development programs. In relation to the latter the union official went as far as mentioning that the local extractive industry can learn a lot from the community development programs implemented in other mining jurisdictions such as Chile, Australia and Canada.

However he also acknowledged the fact that the socio-economic development projects pursued and implemented in the area that is administered by the RLM are much better that those practised elsewhere in South Africa. He also laid emphasis on mine safety as one of the areas which mining companies need to improve on and to apply international practices in all phases of their operations.

4.8. **Conclusion**

The municipality's strategy in promoting LED is driven by a pro-growth LED trajectory. The RLM has development programs aimed at creating a conducive environment that will attract foreign investors to relocate into the RLM's jurisdiction. Inflow of investments is expected to increase municipal revenue and provide employment opportunities that will benefit the population of the RLM. It is also not noticeable that the RLM is making full use of the national LED fund.

There are a variety of LED initiatives within the RLM. These initiatives are usually driven by the RLM. These are a combination of expensive and inexpensive LED initiatives as the municipality has followed a mixture of LED approaches these have been expressed as traditional, entrepreneurial, urban efficiency and human resource development projects. It is not clear that the RLM is engaged in programs that advance Research and Development (R&D) initiatives aimed at empowering its local population with the skills required to diversify the local economy. Some initiatives are established and implemented by mining companies. In some cases there are levels of cooperation between mining companies and RLM.

The LED Directorate receives little financial support (1% of the 2007/08 budget) as revealed by the RLM MTREF for the 2007/08. These funds are allocated for both LED and Intergovernmental Relations which can be summed up as a total of R11 545,000.00 out of a total capital budget of R342, 141.000 in the 2007/8 financial year. The amount spent on LED and Intergovernmental Relations is expected to increase to R 22 695,000.00 in 2008/9 budget and it is expected to decrease to R7, 800.00 in the 2009/10 financial year (RLM MTREF, 2007/08).

The Rustenburg State of the Environment report reveals that service delivery in the RLM is hampered by institutional challenges as local citizens never see the delivery, implementation of any plans proposed; there are inadequate management plans and strategies to manage waste. The community also believes that there is lack of monitoring and redress of negative impacts. Management by local authorities is perceived to be

inadequate resulting from a lack of political will, bureaucracy, lack of clear guidelines and lack of law enforcement. The municipality still has to develop adequate management plans and strategies to manage water. The community believes that there is a deficient in monitoring and redress of negative impacts (Rustenburg State of the Environment, 2007).

The RLM needs to improve co-operation between the DME's national office with its provincial and local municipal branches. Communities around mining operations have similar grievances centred on ensuring adequate service delivery. The extractive industry is having a negative impact on land use as its activities have become barriers to further development and land use. Granite mining has led to the destruction of Koppies. The Rustenburg State of the Environment report also identifies the inadequate management of the Bospoort and Vaalkop dams. A number of mining companies have failed to develop efficient underground mining management plans. Some of the township dwellers life's are in danger as their townships are sitting on old mines (Rustenburg State of the Environment, 2007).

The development of new mines has led to an influx of mine workers from different regions. This has led to an increase in rural settlements, increase and encroachment of housing onto agricultural and strain on limited public resources. Communities who reside next to mining operations were also concerned about the noise pollution that results from blasting from the mines, heavy transportation and traffic. Infrastructure development that is managed by the public sector is perceived to be too slow. The lack of proper sanitation, infrastructure results in water catchments getting polluted (Rustenburg State of the Environment, 2007).

Dust and air pollution from mining is causing long term impacts on human health, animal and plant life. This has resulted in most of the population suffering from asthma and several problems associated with air pollution. Mining's physical barriers and electricity power lines have a negative impact on the sustainability of the environment (Rustenburg State of the Environment, 2007).

Mining employment opportunities are dominated by males. This perpetuates socio-economic gender inequality. Most young women are unemployed and are engaged in prostitution as a means to derive income. The local economy is experiencing gradual economic diversification resulting from the growth of influx of people into the area. Other economic sectors are stimulated especially the retail, services and the real estate sector. The local economy still lacks strong inter-industry linkages since the dominant sector sources most of its capital equipment from outside the Rustenburg municipal area. The RLM will derive more benefits from its mining sector if it develops incentives that will compel mine workers to spend their earnings within the municipal area. Community members expect the RLM and mining companies to work together in advancing their socio-economic needs.

One of the efforts developed by mining companies to stimulate the local economy is Lonmin's program which provides various communities with supplier development projects to keep money circulating within the local economy. Lonmin is also using a perspective survey to understand the impact that its socio-economic development programs have on communities surrounding its operations. Bonuses are offered to company officials responsible for successful community engagement programs (Steyn, 2008). Mining company's socio-economic development programs are centered on projects that are aimed at benefiting their employees these are expressed as service delivery programs such as the provision of clean water, schools and the improvement of their living conditions.

The establishment of a community civic centre responsible for administering the area that falls within the jurisdiction of the RBN is a good way of empowering local community members as their offered employment opportunities that are aimed at meeting their community's requirements. The RBN LED strategy is a good example for other mining jurisdictions as it is centered on diversifying the local economic base to other sectors which include financial, industrial, manufacturing, services, sport. The success of the RBN strategy is evidenced in RBN's diversified investment portfolio which was worth R33.5 billion at the end of 2007.

5. CHAPTER 5

5.1. Conclusion

The extractive industry is associated with several problems. However potential solutions are available to mitigate the problems associated with it. SD is still a maturing discourse and it is interpreted differently. Sustainable LED can be described as a coalition that is managed by local authorities and third parties engaged in the formulation of activities that will provide sustainable local economic opportunities based on available local resources and capacity. Adequate stakeholder involvement is required in the formulation of sustainable LED activities. This should be combined with resources to empower locals to enable them to play a credible role in the formulation, implementation and assessment of the LED process.

The report has revealed that communities living close to mining operations require unique LED approaches as the extractive industry offers different LED challenges and opportunities. Central governments are required to provide the correct guiding principles that will enable the extractive industry to promote socio-economic development programs in communities close to mining operations. The extractive industry has enormous potential to promote LED especially when the proceeds that emanate from the mining industry are spent on the local economy. The latter is said to be possible when workers reside close to mining operations coupled with the majority of their remuneration spent on the local economy as other sectors in the local economy are stimulated.

The most critical issues pertaining to mining and LED are the need to devise strategies to diversify the local economy from being totally reliant on the extractive industry. The mining industry should be used to stimulate other economic sectors as specially those which form important backward and forward linkages to the mining industry. Trends emerging from international and local literature pertaining to LED in mining affected areas depicts that LED is a partnership between stakeholders. Stakeholders should play a role in the development of LED strategies and in its implementation. Government is portrayed as having the overall responsibility of coordinating the LED initiation and

implementation process. This responsibility may also involve the development of initiatives which will develop the necessary capacity required by stakeholders to contribute towards the realization of a developed and diversified local economic base.

The majority of the LED initiatives in the literature respond to declining economic conditions in a mining affected region. The importance of establishing LED initiatives before a local economy declines is also emphasized. These initiatives are created to diversify the local economy by identifying and enhancing economic opportunities in sectors of the local economy that are linked to the mining sector. Furthermore, alternative economic opportunities can originate from the creation of projects aimed at mitigating the adverse effect that may emanate from the extractive industries.

Mining is an important sector in the South African economy as it contributes a considerable amount to the domestic economy. Communities affected by mining operations are still not receiving the potential benefits offered by the respective extractive industries. The majority of the projects developed to advance LED in communities close to mining operations have been concerned about areas that are experiencing a decline in economic activity. The area administered by the RLM is a unique case as it still has the opportunity to implement sustainable development projects aimed at enabling future generations to gain access to the benefits emanating from the present exploitation of mineral resources.

The extractive industry has a significant impact on the communities of the RLM as it is the provider of direct and indirect employment opportunities. The industry is also a major contributor to municipal taxes which are used to advance service delivery. Most of the people residing within the RLM work in the mines and obtain health services from the mining companies. The mining companies sponsor the youth of the community in advancing their tertiary education. This also includes other educational programs designed to cater for the educational requirements of all the generations within the community of the RLM.

The municipality has the mandate to deliver public services to its municipal area. There is currently a backlog in the delivery of basic services. Effective service delivery is largely hampered by the lack of resources and skilled personnel in the municipality. Another factor that contributes to the increasing requirements for public services is the continuing influx of migrant workers in search of employment opportunities especially in the mining and quarrying industry.

The summary of interviews of some of the key stakeholders affected by mining operations within the RLM reveals the extractive industry having a role to play in the advancement of a LED. This can be achieved through the equal and transparent involvement of all stakeholders in the formulation of LED programs.

The Mining Charter has laid the foundation in development planning related to the extractive industry. Stakeholders are faced with the challenges and opportunities of interpreting, developing and implementing appropriate socio-economic development programs linked to the extractive industry.

Mining company's contribution towards the realization of LED within the area that is administered by the RLM differs from company to company. Some mining companies have a strong relationship with the RLM while others do not have strong relations with the RLM. The level of cooperation with the RLM determines the manner in which the mining company will respond to the RLM IDP and LED strategy which in most cases meets the socio-economic requirements of communities close to mining operations.

Some mining companies have conducted successful independent community development projects either in coalition with other mining companies or autonomously. The majority of these community development projects are established in the areas where their respective mine employees reside. These projects are usually established to meet the socio-economic and environmental requirements of mine workers. The lack of co-operation amongst stakeholders and insufficient resources and personnel in the RLM are

identified by the majority of stakeholders in the local extractive industry as being the biggest challenges in the implementation of LED projects within the RLM.

The RLM's IDP and LED strategy is linked to its mining industry. Its LED strategy caters for the requirements of the local mining industry as it lays emphasis on the creation of an investor friendly environment that will attract investors in order to enable them to invest in the RLM and contribute towards the creation of employment opportunities. The development of a conducive environment for investors is essential for a local mining sector to thrive. As the technical and financial intensiveness of mining projects usually requires the importation of capital and skills.

The extractive industry also contributes towards air and water pollution therefore having a detrimental impact on the health of the population of the RLM. Migrant workers contribute to social and economic instability in a variety of ways which include a growth in prostitution therefore increasing the HIV/AIDS infection rate, decreasing the number of employment opportunities which the local population would have access to, social instability emanating from ethnic cultural clashes, loss of life as a result of mining related deaths and occupational diseases.

Community involvement in the formulation of mining companies SLP within the area that is administered by the RLM differs from company to company and from each community. Some mining companies have implemented the appropriate mechanisms that enable community members to contribute to the development of appropriate SLP while other mining companies are still battling to develop adequate processes that reflect the interests of the communities residing close to their mining operations.

In order to improve the latter, mining companies in collaboration with the RLM and members of the community should contribute more resources in identifying the requirements of the community. This should be done to create socio-economic and environmental development programs that will meet the needs of communities close to

mining operations in the RLM. The involvement of local community members should be seen as one of the most important facets of the formulation of an SLP.

In cases where local community members lack the necessary capacity to play an effective role in contributing towards the attainment of an efficient SLP that reflects the local community's requirements. The development of a municipal LED strategy should also consider the capacity and resources available at the municipal level. In the case of the RLM's population both the public and the private sector need to contribute resources aimed at developing the capacity for locals to contribute towards the development of an adequate LED strategy.

Mining within the area that is administered by the RLM is currently unsustainable. The mining sector is the most dominant economic activity. The majority of the local population works directly and indirectly in the minerals sector. Some of the mining companies have developed sustainable mining processes aimed at enhancing their mining operations contribution towards sustainable socio-economic advancement of the RLM. The latter is the case with most conglomerates while the majority of new mining ventures seem to battle to develop and implement sustainable mining strategies.

There is enormous potential for mining to be sustainable within the RLM. This can emerge from greater co-operation amongst those who affect or are affected by the mining industry. As it is revealed from both local and international examples pertaining to mining and LED that co-operation is necessary in advancing development programs in a jurisdiction that is affected by the extractive industry. The RLM should play a leading role in advancing the attainment of efficient mining and sustainable LED strategies. This may mean that it should build capacity in administering and managing mining and sustainable LED in order to create the necessary platforms and processes required by stakeholders to cooperate in the development of attainable mining and sustainable LED initiatives.

5.2. **Recommendations**

The Rustenburg municipal area has a youthful population with a very low literacy level. The opportunities offered by the other sectors of the local economy require a better skilled work force than what is currently available. The municipality should invest in education and skills development programs. These should be aligned with the economic opportunities offered by the local economy.

Non-mining activities should be expanded to diversify the economy even further. The extractive industry is currently the dominant economic activity within the municipal area. Research needs to be conducted for each sector to find ways that will enable each sector to develop its market share in the local economy. This research needs to assess the current obstacles that prevent other non-mining economic sectors from increasing their economic output.

In order to manage the municipality's service delivery backlogs the municipality has to manage and allocate its scarce resources efficiently. This will also require the municipality to improve the skills and capacity of its workforce to be effective in the management of service delivery. Greater co-operation is required between the private sector (mainly mining companies) in devising a strategy aimed at enabling migrant workers to be catered for to enable them not to become a burden to a municipal area that is already experiencing a backlog in the delivery of basic services.

Areas of co-operation may include the provision of funds that will be used to meet the requirements of a growing population. The local mining sector has a skilled labour force that can be useful in a variety of areas where the municipality is lagging behind. These areas include electrical services, construction, roads and storm water, sewerage water provision, community services, planning and water management. Another area of co-operation that needs to be enhanced is that which relates to economic development. Since mining and quarrying are the most important economic activities within the municipal area. The local extractive industry also has economic multiplier effects as it is connected to other sectors of the local economy.

The RLM LED unit should work very closely with its extractive industry to gain insight on economic development opportunities that exist. Mining companies should help the municipality in the development and management of its LED projects as mining companies have proven to have adequate business management expertise. Mining companies should play a greater role in influencing and in the implementation of the projects identified in the municipality's IDP especially those projects that relate to socio-economic development programs for communities close to mining operations.

The municipality should also influence the SLP chosen by the mining companies. More attention needs to be given to the mining supplier park proposed by Xstrata as it will offer the local economy economic development opportunities in the areas listed below:

- Supplier development which will offer opportunities for BEE, SME development, Public Private Partnerships (PPP's) and the relocation of world class capital equipment suppliers which can be used in a number of sectors of the local economy.
- Economic diversification can be achieved by creating a conducive environment that will facilitate a resource based industrialised economy that has strong industrial linkages with other sectors of the economy.
- Localisation of procurement to promote supply chain optimisation, industrial development, local ownership, local spend and employment creation.

The municipality also needs to strengthen its co-operation with mining companies in areas around skills development to ensure that the local population is equipped with the relevant skills required to work in all sectors of the economy. Women should be offered preferential treatment when it comes to employment opportunities. They're currently not enough opportunities for women in the local economy. This move will also assist in decreasing the amount of prostitution taking place in the municipal area. The municipality should strengthen its co-operation with mining companies in mitigating various pollution emanating from mining operations and ensure a safety working environment for miners.

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7. APPENDIX A

SCORECARD FOR THE BROAD BASED SOCIO-ECONOMIC EMPOWERMENT CHARTER FOR THE SOUTH AFRICAN MINING INDUSTRY

NOTES	DESCRIPTION	5 YEAR TARGET		10 YEAR TARGET
	Human Resources Development			
1	• Has the company offered every employee the opportunity to be functionally literate and numerate by the year 2005 and are employees being trained?	Yes	No	
	• Has the company implemented career paths for HDSA employees including skills development plans?	Yes	No	
2	• Has the company developed systems through which empowerment groups can be monitored?	Yes	No	
	Employment Equity			
	• Has the company published its employment equity plan and reported on its annual progress in meeting this plan?	Yes	No	
3	• Has the company established a plan to achieve a target for HDSA participation in management of 10% within five years and is implementing the plan?			
	• Has the company identified a talent pool and is it fast tracking it?	Yes	No	
4	• Has the company established a plan to achieve the target for women participation in mining of 10% within the five years and is implementing the plan?			
	Migrant Labour			
5	• Has the company subscribed to government and industry agreements to ensure non-discrimination against foreign migrant labour?	Yes	No	
	Mine community and rural development			
	• Has the company co-operated in the formulation of integrated development plans and is the company co-operating with government in the implementation of these plans for communities where mining takes place and for major labour sending areas? Has there been effort on the side of the company to engage the local mine community and major labour sending area communities? (Companies will be required to cite a pattern of consultation, indicate money expenditures and show a plan)	Yes	No	
	Housing and Living Conditions			
6	• For company provided housing has the mine, in consultation with stakeholders established measures for improving the standard of housing, including the upgrading of the hostels, conversion of hostels to family units and promoted home ownership options for mine employees? Companies will be required to indicate what they have done to improve housing and show a plan for progress the issue over time and is implementing the plan?	Yes	No	
7	• For company provided nutrition has the mine established measures for improving the nutrition of mine employees? Companies will be required to indicate what they have done to improve nutrition and show a plan to progress the issue over time and is implementing the plan?	Yes	No	
	Procurement			
	• Has the mining company given HDSA's preferred supplier status?	Yes	No	
	• Has the mining company identified current level of procurement from HDSA companies in terms of capital goods, consumables and services?	Yes	No	
8	• Has the mining company indicated a commitment to a progression of procurement from HDSA companies over a 3 – 5 year time frame in terms of capital goods, consumables and services and to what extent has the commitment been implemented?	Yes	No	
	Ownership & Joint Ventures			
9	• Has the mining company achieved HDSA participation in terms of ownership for equity or attributable units of production of 15 percent in HDSA hands within 5-years and 26 percent in 10-years?	15%		26%
	Beneficiation			
	• Has the mining company identified its current level of beneficiation?	Yes	No	
10	• Has the mining company established its base line level of beneficiation and indicated the extent that this will have to be grown in order to quality for an offset?	Yes	No	
	Reporting			
	• Has the company reported on an annual basis its progress towards achieving its commitments in its annual report?	Yes	No	

(Mining Charter for the Republic of South Africa, 2002).

8. APPENDIX B

Questionnaire

1. What do the stakeholders perceive the relationship between mining companies and local communities should be?

2. What are the projects that could be established between mining companies and the rural communities?

3. What are the productive areas for cooperation between the mining companies and the rural community's?

4. How can the local municipality utilize strategies aligned to sustainable LED implemented in other mining dominant jurisdictions?

5. How can the Rustenburg local municipality capitalize on the LED potential offered by its mining industry?

6. How can mining companies create social corporate responsibility programs aligned to community's socio-economic requirements?

7. How should locals be consulted and informed of the mining companies' corporate social responsibility programs?

9. APPENDIX C

Table 5: Means for Sustainable Development at the Community Level.

Resources – quantity, quality, access to them, and realizable value

Physical resources

- Land, natural resources, and environmental services
- Productive equipment to make use of these services
- Infrastructure (especially safe and secure shelter, water supply and sanitation, education, energy, transport, communications)

Financial resources

- Income
- Savings, investments and credit

Human resources

- Health, safety and security
- Skills, knowledge and qualifications
- Jobs and other economic strategies such as migration/remittances and subsistence activities

Information

- Information about technical/policy/market opportunities and obligations
- Information about change

Community institutions

- Community governance institutions, mechanisms, rules and sanctions – for participation in problem and opportunity assessment/ debate./ communication/ consensus, conflict management/ decisions/ self- help/ joint work/ learning and innovation/ social security/ cost–benefit sharing/ vigilance and monitoring/ accountability
- Legitimacy and reputation of the community and its institutions
- Trust, leadership, membership, management of community groups, federations, networks
- Internal relations/ partnerships within the community, such as gender/ ethnic relations
- Relations/partnerships with other communities, actors, and service providers
- Other means to seize opportunities, manage risk, and improve resilience

Individual and community powers

- To negotiate with bureaucracy and private sector
- To influence politics, policy, laws and instruments
- To influence market conditions
- To plan/control developments and activities in the vicinity

• To express a communities needs, ideas and choices
Individual and community rights • To claim, receive, defend, transform, and trade material and financial assets • To information • To representation and engagement in processes (political, policy, legal, market) • To development and self- determination
Key factors: Community coherence, diversity, equity, stability, resilience, options, pace.

(Starke, 2002).

10. APPENDIX C

The approach followed in implementing the four strategies identified in the national framework

Strategy 1 This strategy will require the LED unit to focus on a range of existing DPLG initiatives around the priority of improving local economies. A number of actions are underway and monitoring; reporting on these actions from a point of view of building public and investor confidence is the responsibility of the municipal finance section at DPLG, working closely with National Treasury.
Strategy 2 This strategy will be driven through the IDP/PGDS/NSDP alignment task team that is led by the Presidency and of which DPLG and DTI is part. The team will oversee the development of strategic district and metropolitan IDP's working together with the relevant provinces and municipalities.
Strategy 3 Strategy 3 is largely a part of the on-going responsibilities of the DTI. There are also a number of additional sector-based enterprise support initiatives such as the Department of Agriculture's emerging farmer support program than need to be localized more effectively through this framework.
Strategy 4 This strategy will require a special program to be established. The LED unit will mobilize resources for an appropriate institutional structure to develop concepts and proposals to pilot and replicate sustainable developmental community investment programming.

(DPLG, 2006).

11. APPENDIX D

The National Framework for Local Economic Development (LED) in South Africa (2006-2011), funding sources and challenges.

Local government own revenue Municipalities should generate more own revenue through increased economic activity in the form of property taxes and sale of municipal services. Equitable Share (ES) (1) Increase in overall national growth generates more revenue for municipalities. High growth municipalities support low growth municipalities through national transfers – redistributive measure. (2) Fund development function of municipalities through the currently undefined development component of the equitable share. (3) Improve utilization of provincial equitable share and transfers to municipalities to support integrated sustainable human settlements and robust local economies. Municipal Infrastructure Grant (MIG) (1) The current level of transfers supports mainly basic infrastructure development. This in itself needs to be spent and utilized better by municipalities. (2) The MIG does support infrastructure for economic development. This "E" portion could be increased. Infrastructure for street traders for examples should be developed utilizing the MIG.
Neighborhood Development Partnership Grant (NDPG) and urban development incentives (National Treasury) (1) Municipalities to organize themselves and apply for the NDPG over the 2006-2009 MTEF period. Inner city strategies to maximize usage of property development incentive from urban development zone program. Consideration should be given to expand to areas outside inner cities.
Sector Support (National Departments and State Owned Enterprises) Includes range of DTI support to give effect to the industrial Policy Framework for customized sector

development, enterprise support, critical infrastructure and spatial development initiatives.

(1) There is a range of funding sources for sector specific initiatives from national departments. The challenge is both for better communication on the side of national departments about these funds and for municipalities to be more proactive in linking with these initiatives.

(2) Better institutional inter-governmental coordination at district/metro level should address this challenge through joint planning.

(3) Many sector programs are also delivered directly in municipal areas. This together with funds that can be channeled through municipalities need to be organized better to enable integrated impact and outcomes to optimize economic development in the local space.

Development Finance Institutions (DFI's) such as Industrial Development Cooperation(IDC), Development Bank of South Africa (DBSA), National Empowerment Fund (NEF) , IDT, and private banks, venture capital companies.

The challenge is to link local enterprises to these support instruments more effectively through better communication and information. Growing and expanding the number and size of local business is the key for local economic development. Mobilizing corporate social investment and support for cooperatives need to be expanded through public-private partnerships.

Donor Funding

Coordinating and ownership of donor support by government is critical. The mainstreaming of these support instruments into the programs of government is required. The large EU support for LED in Kwazulu- Natal. Limpompo and Eastern Cape for example has to be optimized around governments vision for local economies in these areas expressed through the PGDS's and LED programs

(DPLG, 2006).

12. APPENDIX E

12.1. LED Approaches in South Africa – Pro-growth and Pro-poor initiatives

Examples of pro-growth LED examples practiced in South Africa include the Business Place program that has been established and is headed by Investec's Corporate Social Investment (CSI) directorate. This initiative is in line with the corporate bank's commitment towards entrepreneurialism. This program interlinks collective support services for entrepreneurs across several localities. However LED municipal officials have not showed enough interest for this initiative (Xuza, Swilling, 2008).

The City of Johannesburg's LED strategy has a pro-growth focus. This is expressed in its activities that promote and advocate mechanisms which are aimed at facilitating economic growth in the poorer sections of its community. The area administered by the municipality is the most important economic node in Africa. It is also an area that is experiencing rapid growth in the financial and business services sectors and also in retail and wholesaling in recent years (Nel et al, 2005).

The city's high-technology manufacturing and tertiary sectors are also experiencing exponential growth. However, long-term decline has been experienced in the mining and manufacturing sector. Employment growth is presently confined to the more capital-intensive growth sectors which explain the ongoing high unemployment levels. An informal vibrant sector has emerged as a response (Nel et al, 2005).

Johannesburg policy framework is known as the ' Johannesburg 2030' which steers the city's energies towards a pro-growth trajectory aimed at developing a knowledge based economy and further develop the city's status as a 'world city'. The city's strategy is focused on issues pertaining to skills development, the promotion of the tertiary sector and infrastructure development programs. The strategy has limited pro-poor LED initiatives as it perceives poverty alleviation programs to emanate and be addressed by the development of the city's economy (Nel et al, 2005).

The city's planning activities are in line with the provincial focus on knowledge-based development known as 'Blue IQ' which aims to enhance high-tech, logistics, tourism and transport network. The municipalities Economic Development Unit (EDU) is responsible with overall economic development. The unit supports public private initiatives especially those which directly relate to issues of inner city redevelopment and the 'Blue IQ' program[14] (Nel et al, 2005).

The city's strategies are centered on a variety of development initiatives which include the development of the City Deep Freight and logistics depot, a vital economic node for the continued economic development and linkages of the city, support for urban agriculture, support for small business by using procurement policies, support for financial service development and support for marketing the city as a venue for conferences and events (Nel et al, 2005).

The city is also engaged in the development of pro-poor LED initiatives an example of the latter is the Johannesburg Fashion District initiative which covers twenty city blocks. This has been achieved through a partnership between the government of the city, the private sector and a tertiary training institution. The initiative involves 1000 clothing micro-manufacturers and is focused on the development of niche markets, outsourcing and the integration of migrant workers. The Fashion District also provides training and development centre's and has a production network and an operations association (Nel et al, 2005).

This initiative has had several successes as it is evident that the output of supported firms has increased as have employment opportunities and networking between firms. This effect has also enabled small businesses to gain access to local and international markets

[14] Blue IQ is a multi-billion rand initiative of the Gauteng provincial government to invest in economic infrastructure development in identified mega-projects in the areas of tourism, technology, transport and high value-added manufacturing. The majority of projects are located in Johannesburg, the capital of the province and home of the provincial government.

coupled with an increase in employment and incomes for the poor. The outcomes of the city's development strategy show the following:

- *Comprehensive policy and supporting mechanisms are required in the implementation of poverty reduction strategies.*
- *Strategic planning is an important component in the formulation of poverty relief interventions.*
- *It is important to place small operators in niche markets in order to enable them to succeed in a competitive market environment.*
- *There are proven positive outcomes from engaging in public private coalitions.*
- *The Fashion District is an example of how pro-poor growth initiatives can be entrenched into a city's competitiveness strategy and still have a positive impact on the poor*.

(Nel et al, 2005).

12.1.1.1. LED interventions in the Ingwe Municipality

Ingwe municipality is a small rural municipality situated in KwaZulu-Natal on the town of Creighton. The main concerns emanating from the municipality's IDP is the need to eradicate poverty within its jurisdiction. The municipality has targeted the development of its tourism sector as a way of revitalizing its local economy with the hope of increasing the areas income base and employment opportunities. In order to place its tourism industry on a sustainable LED trajectory the municipality has focused on enhancing it's local railway line as a tourist attraction through an alliance that includes the municipality, mission, rail, tourist authorities and local actors (CWCI, 2006).

This initiative has led to the creation of more than 300 jobs. This initiative became effective as a result of a good alliance amongst the stakeholders responsible with realizing the positive outcomes of the development of the tourism industry with the

municipality coupled with adequate marketing to attract tourists and the effectiveness of efficient business research in the establishment of a market (CWCI, 2006).

12.1.1.2. LED intervention in the Ekurhuleni Municipality

The Ekurhuleni municipality was formally established as a unified metropolitan entity in 2000. The jurisdiction administered by the municipality boasts one of the biggest industrial concentrations on the African continent. The city's manufacturing sector has been experiencing long-term decline since the 1980's this has resulted in 100 000 jobs being lost which has increased the unemployment rate to a staggering 40%. However, sectoral growth has been experienced in higher technology sectors (Nel et al, 2005).

The city's LED policy is centered on pro-poor LED initiatives. This is expressed in the municipality's policy document entitled the "Ekurhuleni Local Economic Development Policy" which is centered on the development of a 'people-centered economy' with an explicitly pro-poor vision. This LED policy is aligned with the RDP and it concerns itself with the following LED objectives for the area that is administered by the municipality:

- *Local production for local markets.*
- *Skills-development support for urban and commercial agriculture.*
- *Waste recycling.*
- *Building local development capacity.*
- *Participating and integrated planning.*
- *Formation of industrial links.*
- *Small medium and micro enterprise (SMME) development.*
- *The development of Local procurement policies.*

(Nel et al, 2005).

The development trajectory followed by the municipality is influenced by the following principles; development programs must put people first, the micro and macro economies must be linked, mainstreaming environmental issues and the state-led partnerships with major emphasis on service provision, establishing development zones, mainstreaming the informal sector, promoting procurement and developing key sectors of the local economy (Nel et al, 2005).

The municipality's Economic Development department is responsible with implementing the metropoles LED initiative. In order to effectively achieve the latter, the municipality commissioned a 'local Industrial Policy' focused on the development of a variety of industries within the jurisdiction administered by the municipality. The areas that have been offered focus are centered on enhancing enterprises competitiveness, value chain analysis, inter-firm relations and sectoral clarity and understanding (Nel et al, 2005).

This LED approach also promotes a clear emphasis towards the development of existing firms and support for medium-sized enterprises. The municipality aims to steer its energies towards offering greater support to transport services and skills upgrading, technology development and sectoral support (Nel et al, 2005). The experience with LED initiatives for the municipality shows that there are a range of pro-poor issues that can be filtered into a LED policy. Nel et al, (2005) affirm that the municipality needs to identify 'Key Perfomamce Indicators' which will enable it to monitor LED projects and to identify key economic drivers on which to develop a strategy upon (Nel et al, 2005).

12.1.1.3. LED interventions by the Ndlambe municipality

Ndlambe is a relatively small municipality that is on the South-eastern coast of the Eastern Cape Province. The municipality's LED trajectory is centered on pro-poor initiatives expressed by sustainable pro-poor community based LED projects established in the municipality through the utilization of government LED Funds. Key industries are a pineapple pulp processing factory and a brick making works. The municipality's LED strategy relies heavily on the following pillars; government support, effective municipal

facilitation of development, establishment of viable market competitive enterprises within its mostly poor community's (Nel et al, 2005).

The jurisdiction administered by the municipality has a range of small farming enterprises. The municipality's IDP is heavily focused on issues pertaining to service provision and the facilitation of socio-economic development projects. As mentioned earlier the municipality has a variety of projects some of them are funded on behalf of the community, the Department of Labor funds both urban and rural farming projects. These efforts are usually centered on issues relating to water supply and ploughing, some of the Department's projects are listed below:

- The Umsobomvu pineapple pulping project which is a community-based market linked initiative that boasts links with the municipality's commercial farmers and manufacturing firms. Township leaders approached the municipality to ask for assistance in the purchasing of a farm adjacent to the township which the pineapple pulping factory had once operated.

  Funds for the project were derived from the local LED fund and a viable commercially linked community enterprise exists which produces fruit pulp for juice manufactures countrywide. The community needs more skills development programs to enable them to be fully effective in the factory's activities.

- The municipality also provided support to several community farming groups. Support is given through interventions which include access to land, water supply and assistance. This initiative is centered on food security as the majority of the products produced are consumed by the local population.

(Nel et al, 2005)

The municipality makes use of a pro-poor focused LED strategy as a way of responding and supporting the community's socio-economic requirements. LED initiatives are focused on meeting the basic requirements of the community (Nel et al, 2005).