SOCIO-ECONOMIC IMPACTS OF PLATINUM MINING ON LOCAL COMMUNITIES

Potgietersrust Platinum Ltd

in

Mogalakwena (Limpopo Province)

(A South African Case Study)

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ABSTRACT

Mining is a major economic activity in several countries with significant contributions to exports and infrastructure development. Mining is generally viewed as providing an economic stimulus in the areas/regions where it occurs. In some areas, the local economy depends almost exclusively on mining.

However, the abundance of resources has not always resulted in a prosperous populace. Some view resource abundance as a *“blessing”* and others as a *“curse”*. The natural curse thesis holds that resource abundance is the cause of lesser economic growth (Buitelaar, 2001). It is also an industry that is often held responsible for causing environmental damage and social disruption. This situation is not unique to South Africa, as this scenario is increasingly manifesting itself in other countries where mining takes place.

The questions thus are as follows: What are the impacts of mining, particularly on local communities? To what extent are the economic benefits arising from mining impacting positively and/or adversely on the socio-economic development of the local communities in the area? Is growth translating into human development?

This study found that the establishment of Anglo Platinum PPrust has had mixed impacts on locals and hence contradictory views are held about whether the presence of the mine in Mogalakwena is proving to be a *“blessing”* or a *“curse”.*

DECLARATION

I declare that this report is my own, unaided work. It is submitted in partial fulfilment of the requirements of the degree of Master of Management (in the field of Public and Development Management) in the University of Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination in any other university.

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4. Godfrey Mello, Anna Sekhaolelo and David Moselakgomo from the affected communities for their assistance and contributions.

A special word of thanks to my wife Safiyya for her support and patience.

DEDICATION

I dedicate this work to the memory of the late Peter Nchabeleng, a selfless leader of his people, who died in detention in the 1980’s at the hands of the apartheid regime while struggling for a society wherein all human beings can enjoy equal opportunity. I also dedicate this effort to my grandparents, parents and all my teachers and mentors who together moulded me and taught me the values of justice and compassion.

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LIST OF ACRONYMS

AHI – Afrikaanse Handels Instituut

DPLG – Department of Provincial and Local Government

ECLAC – The Economic Commission for Latin America and the Caribbean

EIA – Environmental Impact Assessment

GDP – Gross Domestic Product

GGP – Gross Geographic Product

HDSA – Historically Disadvantaged South African

IDP – Integrated Development Plan

IFC – International Finance Corporation

LED – Local Economic Development

MPRDA – Minerals and Petroleum Resources Development Act, 28 of 2004

NAFCOC – National African Chamber of Commerce

PGM's – Platinum Group Metals

SACOB – South African Chamber of Business

TLU – Transvaal Landbou Unie

UNDP – United Nations Development Programme

WCED – World Commission on Environment and Development

LIST OF PERSONS INTERVIEWED

1. David Nkoana – Limpopo Provincial Government, Office of The Premier, Chairperson of the Task Team relating to resettlement of communities affected by mining operations.
2. Bob Mmola – Mayor of Mogalakwena Municipality.
3. Hendrick Ngwepe – Mogalakwena Municipality, Office of the Municipal Manager.
4. Simon Tebele – Anglo Platinum Ltd – Group (Communications)
5. Martin Kokemoer – Anglo Platinum Ltd - PPrust (Operations)
6. Frank Pieterse – Anglo Platinum Ltd - PPrust (Environment)
7. Imraan Osman – Anglo Platinum Ltd - PPrust (Finance)
8. Julia Ledwaba – Anglo Platinum Ltd - PPrust (Health)
9. Dr Hennie Du Preez – Consultant on Environmental Issues.
10. Pieter De Bruyn – President of Mokopane Chamber of Business.
11. Neil Burnett – former President of Mokopane Chamber of Business
12. Godfrey Mello – resident of Ga-Pila village (Sterkwater)
13. Anna Sekhaolelo – resident of Mothotlo village (Armoede)
14. David Moselakgomo – resident of Motlhotlo village – Member of M.D.C.
15. Bali Mamabolo - Waterberg District Municipality (Local Economic Development Unit)

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CHAPTER ONE

INTRODUCTION

1.1 Introduction

Mining to a great extent influenced the patterns of development and the destiny of South Africa. For nearly 150 years the South African economy was skewed in terms of a noteworthy dependence on the mining industry (Nel, et al, 2003). Its legacy includes the migrant labour system and associated influx control laws of the apartheid regime. The negative impacts of those patterns of skewed development under apartheid are still evident today, including the massive structural unemployment challenge facing South Africa.

At the local level, mining affects the natural environment. At the national level, mining requires government to deal with structural changes to the economy, market instability and other political problems such as rent-seeking caused by the presence of mineral rents (Eggert, 2002).

The direct economic benefits that are created through the payment of wages and taxes by mining enterprises as well as the indirect impacts as a result of their spending on goods, services and infrastructure are quite apparent and quantifiable at national and local levels. The environmental and social impacts are often not so apparent, particularly at local level.

Hence my desire to explore the socio-economic impacts of platinum mining in the Mogalakwena area to gain an understanding of how and to what extent the local communities living in the immediate vicinity, and the wider area, are affected by its activities.

1.2 Background to the Study

1.2.1 Anglo Platinum Mine (PPrust)

Anglo Platinum is part of the Anglo American group of companies. Rustenberg Platinum Mines, part of Anglo American Platinum Corporation Ltd, concluded an agreement with the erstwhile Lebowa homeland government to exploit the mineral reserves in 1990. Anglo Platinum is the world's leading primary producer of platinum and accounts for 37% of newly mined production globally. Anglo Platinum also produces other platinum group metals (PGM's) including palladium and rhodium. Some 61% of the world's platinum is used in auto catalysts, designed to reduce noxious emissions from vehicles (Anglo Platinum Ltd, 2008).

Anglo Platinum's operating mines are based in South Africa which experienced years of skewed (selective) development under apartheid and which led to serious economic imbalances in South African society. The present government is attempting to rectify these imbalances through numerous transformation programmes and policies such as the MPRDA (Minerals and Petroleum Resources Development Act, 28 of 2004).

Anglo Platinum (PPrust) is the world's biggest open-cast platinum mine and has been in continuous operation since 1992. It is situated 25km northwest of Mokopane in Mogalakwena Municipal area in the Waterberg region of Limpopo Province. (See appendix 9 for view of mine). In an article in Business Report, (2006 November 23), the mine manager at PPrust Anglo Platinum, Ted Nohajer, said that ongoing capital expenditure will increase to an average of R400 million a year over a period of ten years.

PPrust also intends expanding its operations at PPrust North, at a projected total cost of R5.6 billion. The project includes the relocation of almost 10 000 people at a cost of R 613 million. When communities are resettled, *“this takes place according to the World Bank and Chamber of Mines guidelines”* according to Simon Tebele of Anglo Platinum (Business Report, 2006, November 23). (See appendix 1).

The guiding principle of AngloPlat is that people being resettled should be at least better off than they were before being relocated. According to AngloPlat each family that is relocated is provided with a new brick home, in a serviced village, having roads, water, electricity, schools, recreational facilities and churches. Communities are provided with alternative land for ploughing and grazing for their livestock. Millions of Rands are provided to tribal authorities and communities in lump sums and annual payments (Business Report, 2007 April 15).

The Mining Charter defines each operation’s zone of influence as a 50 km radius surrounding the operation. However Anglo PPrust has identified the areas that are most directly affected by its activities in which to focus its interventions. Currently they have identified an area that ranges between 15 and 35 km around the operation and includes 39 villages; all of which fall within the Mogalakwena Municipality. (See appendix 7).

Anglo Platinum’s (PPrust) operations impact directly on the sub-region (Mogalakwena Municipal area) and on the local communities most affected by its operations viz. Ga Pila and Motlhotlo villages. These two villages are in the closest proximity to the mine.

1.2.2 .Map 1: Map Showing Mogalakwena Municipal Area

Source: Encarta Multimedia Encyclopaedia, 2004

1.2.3. Mogalakwena Municipal Area

The Mogalakwena Local Municipality is in the north-eastern part of the Waterberg District of Limpopo Province and it covers 6 200 km^2. It has numerous farming areas and rural settlements and has historically been an agricultural and mining area.
Gold, chrome, nickel and tin, diamonds, platinum and granite have been mined in the area in the last 100 years.

The Mogalakwena Local Municipality consists of one town namely Mokopane (formerly Potgietersrus), two townships (Mahwelereng and Rebone), 178 villages, and various farms. The townships have basic infrastructure like roads, electricity and telephones but the services are still mostly situated in the urban areas.
Mogalakwena has been home to the Ndebele people for more than 200 years.

The main town of Mokopane derives its name from Chief Mokopane (Makapan) who led the resistance of the Ndebele people against the Boers over 150 years ago. The Berlin Mission Society established a station in the area of Mokopane in 1865. Mokopane is the economic hub of municipal area. It has the largest population share of the district with considerable inward immigration to Mokopane.

Mogalakwena currently has a population of approximately 300 000, constituting 60% of the district's total. Fifty four percent of the population is female. Over 90% are black/African. It has an unemployment rate of over 40% and a housing and electricity backlog of 73% and 23% respectively (Waterberg District Municipality, 2007).

Table 1

POPULATION OF MOGALAKWENA BY AGE AND GENDER, 2007

	0 - 4 Yrs	5 - 14 Yrs	15 - 34 Yrs	35 - 64 Yrs	65+ Yrs	Total
Male	15972	41928	46966	25697	6457	137020
Female	16064	41665	53718	37001	12972	161420
Total	32036	83593	100684	62698	19429	298440

Source: Waterberg District Municipality, 2007
Quantech Research adjustments to Stats S.A. 2001 Census

Table 2

PROFILE OF MOGALAKWENA

Number of households	68 000
Population	300 000(54% female,46% male)
Unemployment rate	Over 40%
Average monthly income	Over 50% less than R1000 Less than 10% over R10 000
Main sectors of the economy	Mining (20%) Finance (19%) and Trade (17%)
Main export	PGM’s (Platinum, Palladium & Rhodium)

Source: Waterberg District Municipality, 2007
Quantech Research adjustments to Stats S.A. 2001 Census

1.2.4. The Communities That Are Being Resettled Due To Mining Activities

The operations at Anglo PPrust resulted in the relocation of the Ga-Pila village to Sterkwater farm in 2002. Expansions that will take place over the next twenty or so years will be in a south-easterly and north-westerly direction and would necessitate the relocation of further settlements. The PPrust North project has resulted in the relocation of the Ga-Puka and Ga-Sekhaolela (Motlhotlo village) to the farm Armoede in 2007.

The village of Ga-Pila neighbours Anglo PPrust. Because of its proximity to the mine, the residents are/were most directly exposed to the impacts of the mining activities which have affected their health, safety and their quality of life. It was proposed and decided to relocate the village to the farm Sterkwater, approximately 15 km south of the mine. At the time 1998, Sterkwater fell under the jurisdiction of the Bakenberg Transitional Local Council.

In 1998 Ga-Pila had 800 households with an average of six people per household (approximately 2600 adults and 2100 children). More than 60% of these households had lived in their homes for more than 20 years implying strong social, economic and cultural relationships. More than 80% of the economically active persons had formal employment. Almost half of all households earned less than R 500 per month. More than 50% had family members who worked in Pretoria and Johannesburg in the Gauteng province (Anglo American Platinum Corporation Ltd, 1998).

Although a vast majority (95%) indicated their willingness to move to a new village (Sterkwater) they had raised concerns about their relocations, inter alia: social relationships may be disrupted; the cost of living may be too high in the new area, and a lack of opportunities for subsistence activities, etc (Anglo American Platinum Corporation Ltd, 1998).

Since 2002 most of the households of Ga-Pila had relocated to Sterkwater. Some residents claim that they were coerced by members of the police force to move. 15 households have refused to move and are still living near the mine in dire circumstances (Sunday Independent, 2007 January 28).

The planned expansion of PPrust Mine required the relocation of Motlhotlo village (comprising of the Ga-Puka and Ga-Sekhaolelo clans). Negotiations began in 1998 and the site selection process took place in 2002. The Land Rights Holders Community Resolution was signed on 13 October 2002 and a Section 21 Company was registered in 2003. Relocation and Donation Agreements were signed on 17 July 2005.

Towards the end of 2006 just before the actual relocation started a group of residents represented by Richard Spoor, a *"human rights"* lawyer, began making new demands and challenging the mine on certain issues. A task team consisting of representatives from the National Council of Provinces, the Premier of Limpopo's office and Mogalakwena Municipality as well as Anglo PPrust was set-up to manage the demands/ concerns of the dissatisfied group to facilitate the successful relocation of Motlhotlo village.

In 2007 the relocation commenced to the new area: viz. Armoede where approximately 500 new houses and four schools have been built. By February 2008, 80% had already been occupied. Other members of the Motlothlo village (approximately 100 households) are resisting resettlement and have elected an interim committee to address their concerns and are represented by the aforementioned attorney.

The Minister of Land Affairs had by February 2008 not signed the lease agreement with the Section 21 Company; and which places the whole relocation process *"in a legal vacuum and in a morass of uncertainty."* (Spoor, 2008)

Richard Spoor, a *"human – rights"* lawyer acting for Limpopo communities locked in strife with Anglo Platinum over their mining activities, has accused Anglo Platinum of *"corporate thuggery"* and *"racist behaviour"* (Business Report ,2006, August 2). He contends that the *"communities carry the cost while Anglo enjoys the benefits".* Simon Tebele of Anglo Platinum responded by saying: *"we are not the monster you would have the public believe"* (Business Report, 2007, April 15).

Anglo points to its contribution to the country and the partnerships it has forged with communities and its building of schools and clinics where none existed, its HIV/Aids programme and university bursaries, as examples of its being socially responsible.

1.3 Summary

Mining has the potential to contribute significantly to socio-economic development by generating income and foreign exchange, employment, infrastructure development and other economic linkages. But these benefits come at a cost: affecting the environment and often causing social disruption (relocation from ancestral land to new townships, etc).

1.4 Problem Statement

The Preamble to the Broad-Based Socio-Economic Empowerment Charter for the South African Mining Industry states:

"The policy objective of the Minerals and Petroleum Resources Development Act, 28 of 2004 (MPRDA) (is 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", and noting that *"it is the government's stated policy that whilst playing a facilitating role in the transformation of the ownership profile of the mining industry it will allow the market to play a key role in achieving this end and it is not the governments' intention to nationalise the mining industry"* (Department of Minerals and Energy Affairs, 2007).

Mining has always been viewed as an industry that contributes significantly to the socio-economic development of the areas wherein it occurs. It is seen as an opportunity to create employment and generate income in the form of salaries and wages, taxes, and the earning of foreign exchange. It is generally associated with infrastructure development and the stimulation of other economic activity in the areas/regions where it occurs.

Yet, it is also an industry that is often also associated with causing significant environmental damage, social dislocation and disruption. There are as many who believe that an abundance of mineral wealth is a *“curse”* as there are of those who believe that it is a *“blessing”.*

However, the economic, environmental and social impacts are difficult to quantify given that these impact differently on various groups and hence generally result in the formation of competing social groups, with some seeking to maximise the benefits accruing to them in the short term, and others who agitate for the closure of the mines.

The Anglo PPrust case is a good example of how social issues are increasingly being pushed onto the corporate agenda. The Minister of Mineral & Energy Affairs of South Africa, Buyelwa Sonjica, told Bloomberg News on June 22, 2007 that her department was *“examining changes to the mining laws to enable greater ownership of mines by workers and affected communities as a consequence of the Limpopo (PPrust) and the Northern Cape experience, where communities are rising up to challenge the status quo”*. (Business Report 2007, July 10).

1.5 Purpose Statement

In this project I explore how mining activity at Anglo Platinum PPrust impacts directly and/or indirectly on local communities in the socio-economic spheres by illustrating the extent to which local communities around the mine, are affected and/or benefit from the economic development resulting from the mining activities taking place.

While economic impact has traditionally focused on economic values, more recent trends are to include values that have no explicit monetary value and therefore cannot be assessed using the traditional economic tools. Researchers are beginning to integrate economic, environmental and social indicators as measures of human development. Martinez – Alier in Harris, et al, 2001, points to a new field of political ecology, i.e. integrating (social) issues of distribution and equity with environmental and economic perspectives.

"We (humankind) are rediscovering the essential truth that people must be at the centre of all development. The purpose of development is to offer people more options. One of these is access to income- not as an end in itself, but as a means to acquiring human well-being. While growth in national production (GDP) is absolutely necessary, what is important is: how does growth translate or fail to translate into human development" (Draper in UNDP, 1990)

1.6 Significance of the Study

Given the contentious nature of the research topic and the very extreme views held by different parties on whether mining is proving to be a *"blessing"* or *"curse",* this study hopes to shed light on how mining companies impact on local communities through an understanding of the direct and indirect socio-economic impacts on the communities wherein they operate. It may stimulate broader debate and assist mining companies to achieve the *"social license"* to operate. It may also identify further research work that needs to be done in this field.

1.7 Research Questions

I. How are local communities around Anglo Platinum PPrust mine affected by mining activities in the area?

II. To what extent are local businesses and the local economy benefiting from PPrust's mining operation?

III. Is Anglo Platinum operating according to sustainable development principles?

IV. How have local and provincial government officials/leaders assisted in achieving the objectives of the Mining Charter?

1.8 Structure of the Report

In the preceding pages, the report provided an introduction to the research. The background to the study in chapter one seeks to illustrate the complexity of the research topic. The research questions were formulated in a way that could provide a combination of measures to assist in the evaluation of the benefits and costs of the development resulting from the platinum mining activities in the area.

Chapter two of the report sets out the research methodology used. The research approach explains why a mixed approach was considered more suitable for this case study. An exploratory case study was undertaken by the researcher to gain a broader insight of the research topic and to assist in clarifying the relationship between platinum mining in Mogalakwena, in this case Anglo Platinum PPrust, and the impacts on local socio-economic development.

Chapter three of the report begins with an introduction to the literature review undertaken and moves on to briefly outline some of the salient aspects relating to the economic, environmental and social impacts of mining in general. The report then considers the arguments around whether resource abundance is proving to be a blessing or a curse and whether the mining activity in fact promotes local economic development.

A brief overview of the structural changes to the South African economy is provided by the researcher before discussing how the cluster concept of industrial development can be a means of broadening the benefits resulting from mining. The purpose of the cluster initiative is to promote economic development within the cluster by improving the competitiveness of one or several specific business sectors. The cluster concept promotes the interaction of various players and sectors within an economy. These economic linkages are vital to the sustainability of the local economy.

Development will not be sustainable without the full and proactive cooperation and participation of some context specific critical mass of community members where development is to take place. Thus *"social license"* is a pre-requisite to any company intervention, including a potential role in stimulating local sustainable development (Institute of Social and Ethical Accountability, 2004).

Issued around the concept of sustainable development are briefly examined and thereafter new strategies for sustainability are presented for consideration.

Two concepts have emerged as centrally important to the goal of corporate social responsibility: viz. accountability and transparency. This is followed by a section of an overview of the governance issues relating to mining in South Africa.

The report presents the findings relating to the economic, environmental and social impacts of Anglo PPrust at the local and sub-regional spheres in chapter four. The economic spin-offs resulting from the presence of Anglo Platinum in the form of capital expenditure, procurement, infrastructure improvement and other social investments are presented. The findings also discuss the environmental and social impacts of the mining activity on the local communities. The issue of resettlement is considered as the one that has the most social ramifications.

The findings on the role of government are then discussed. Presently local government and traditional communities are under-capacitated to deal with the complexities and challenges relating to mining.

Chapter five presents the research analysis of the findings on the broad issues around economic well-being, environmental quality and social justice. The conclusions and recommendations on how mining can stimulate economic development while contributing to poverty reduction are discussed in chapter six

CHAPTER TWO

RESEARCH METHODOLOGY

2.1 Introduction

Economic impact assessment can be done using different types of assessment techniques such as expert opinions, technical estimates, economic base multipliers, input-output models and other more sophisticated methods, according to Ivanova, Rolfe and Lockie, 2007.

The choice of the method depends largely on the expertise of the practitioner (researcher), the data available, the nature and scope of the project and the required accuracy of the information being sought. There does not seem to be a generally accepted methodology relating to measuring the effects/impacts of mining on local communities.

Clark and Cook Clark, (2007) list the following methodologies:

I. Conformity with national development policy objectives,

II. Cost-benefits analysis,

III. Contingent evaluation,

IV. Cost effectiveness,

V. Input-output analysis,

VI. Impact assessment,

VII. Alternative land use analysis, and

VIII. Sustainability planning

Although some research relating to socio-economic benefits of mining in general (or on a particular region's economy), has been conducted internationally e.g. Australia, Canada, Chile, Peru and USA, very little, to my knowledge has been done in South Africa, i.e. at the micro-economic level. Some companies report quantitatively on direct impacts such as number of jobs created, salaries and taxes paid; and in some instances on indirect opportunities resulting from their operations. Very few companies are reporting on their indirect positive and adverse economic, environmental and social impacts.

The standard approach to dealing with economic and social impacts of mining operations is through the Environmental Impact Assessment (E.I.A) process; which although very important and useful has a number of potential weaknesses relating to the addressing of adverse impacts (Ivanova, Rolfe and Lockie, 2007). Different economic techniques are needed to determine if a project has net benefits.

The process of accounting for and managing indirect economic impacts is still in a formative stage and there does not seem to be consensus on models and frameworks to be used to measure and account for indirect economic impacts (Institute of Social and Ethical Accountability, 2004).

Methodological problems make it impossible to provide one single social and environmental measure of economic activity. It is however of great importance to find a combination of measures that can assist in evaluating the benefits and costs of economic growth. A more nuanced understanding of development as an interaction of social, economic and environmental factors is needed.

2.2 Research Approach

This research has not followed any conventional methodology exclusively but a *“mixed”* approach was adopted using a variety of qualitative techniques to source primary and secondary data to inform the findings of the research.

The methodology adopted for this research was qualitative since it was the intention of the researcher to understand and explain the issues and the dynamics relating to the research topic. Qualitative research uses concepts to articulate a particular phenomenon and builds concepts and theories unlike quantitative research which usually uses statistical analysis to test theories and hypotheses.

The theoretical perspective that informed the study is phenomenological (interpretive) i.e. interested in understanding how individuals and groups experience the effects of mining in a particular context and at a particular point in time. Case studies emphasize exploration and description in order to provide as complete an understanding of an event or situation as possible (Badenhorst, 2007).

A case study refers to the collection and presentation of detailed information about a *“case”.* The case study looks intensively at something and draws conclusions only about that group in that specific context. According to Cronbach, in Morris (2005), case study research can be differentiated from other research design because it allows for “*interpretation in context”.*

The case study enables the researcher, to concentrate on a single phenomenon and arrive at what Becker believes to be a "*comprehensive understanding of the groups under study*" and "*to develop general theoretical statements about regularities in social structure and process".*

Yin in Tellis (1997), presented four applications for a case study model:

I. To explain complex causal links in real-life interventions,

II. To describe the context in which the intervention has occurred,

III. To describe the intervention itself, and

IV. To explore those situations in which the intervention being evaluated has no clear set of outcomes.

Case studies are multiple persectival analyses according to Tellis (1997). This means that the researcher considers not just the voice and the perspective of the actors, but also of the relevant group of actors, and the interactions between them. Case studies *"give a voice to the voiceless".*

Although case studies are criticized for being narrowly based and hence any generalizations may be questionable, they do however have a variety of uses. *"They can be used to test theories, to develop new theories, to provide detailed contextual analysis of events, to analyze deviant cases that contradict generalizations, and to help provide an intuitive feel for the subtleties and nuances of the policy process and the practice of politics".* (Anderson, 2000).

According to Patton, in Merriam (2002), qualitative research is *“an effort to understand situations in their uniqueness as part of a particular context and the interactions there. This understanding is an end in itself, so that it is not attempting to predict what may happen in the future necessarily, but to understand the nature of that setting. What it means for participants to be in that setting, what their lives are like, what’s going on for them, what their meanings are, what the world looks like in that particular setting?….The analysis strives for depth of understanding”.*

2.3 Data Collection

There are three major sources of data for qualitative research study, viz. interviews, observations and documents (Merriam 2002).

2.3.1. Primary Data

The primary data for this study is derived from 15 semi-structured face to face and telephonic interviews with senior and middle mine managers, members of the resettled communities, members of the business community, provincial and local government officials and other key stakeholders.

Through these interviews the researcher had sought to obtain the opinions, attitudes and perceptions of these various actors on issues related to the research topic. Data was gathered through semi-structured interviews as this approach did not restrict the interviewees from sharing their thoughts, views and experiences.

All interviewees were informed at the outset of the aim of the research and that their names would not be used if they so desired and that although this research was being undertaken for academic purposes, the final outcome of this research may be made available to interested persons.

The major advantage of an interview is that it is adaptive, i.e. allows data collection on a range of possible subjects or issues. It allows the interviewer to build rapport with the interviewee. It does however present problems in coding and interpretation and can lead to bias (Nadler, 1977).

As part of the study two field visits were made to the mine and the surrounding communities viz. Ga-Pila village and Motlhotlo village to observe whether what came out from the interviews corresponded with what is experienced on the ground. The major advantage of observation through field visits is that it facilitates collection of data on behaviour. Its major potential problem relates to sampling and validating (Nadler, 1977).

2.3.2. Secondary Data

The researcher also sourced substantial data from documents provided by Anglo Platinum relating to the research topic such as Annual Reports and Environmental Impact Assessment Reports for several years. Other relevant management reports were also analysed as were certain relevant government reports and correspondence between the local government and various stakeholders.

The researcher also participated in a District Wide Growth and Development Summit hosted by the Waterberg District Municipality on the 22 and 23 February 2007. The meeting held at Park Hotel in Mokopane included a presentation where future mining plans in the region and resettlement challenges facing particularly Anglo PPrust were discussed.

2.4 Data Analysis

The aim of the researcher was to process all data immediately, summarize the same and to clarify the issues raised with the relevant participants telephonically and/or by electronic mail. The data was categorised around the key aspects of the study and then organised around the key themes of this research project to facilitate analysis and to address the specific research questions.

*"In qualitative research, data analysis is simultaneous with data collection. That is, one begins analyzing data with the first interview, the first observation, the first document accessed in the study. Simultaneous data collection and analysis allows the researcher to make adjustments along the way, even to the point of redirecting data collection, and to test emerging concepts, themes, and categories against subsequent data" (*Merriam 2002).

2.5 Limitations of the Study

The findings in this case study are influenced by the researcher's choice of indicators. I have attempted to construct validity and reliability for my research, yet I am mindful of the limitations under which I operate.

I have endeavoured to avoid personal biases in presenting the findings of the research that was undertaken. I strove to conduct myself in the research in an ethical manner mindful of my own philosophical orientation vis-à-vis the issues being researched.

I was born and raised in Mokopane (Potgietersrust) and was resident there for the best part of the first 40 years of my life. My family have been there for almost 90 years.

Language may also be a limitation in that not all participants were able to articulate their ideas in English and some of the meanings may have been lost during translations. All care was taken to make the process of identifying participants for interviews as objective as possible but was influenced by the availability of persons during the period of research.

A total of 15 persons representing a diversity of stakeholders were interviewed. The only group not willing to participate were the representatives of the Section 21 Companies who were not keen to be interviewed.

CHAPTER THREE

LITERATURE REVIEW

3.1 Introduction

Development is a multidimensional concept. One dimension is economic wellbeing measured by the per capita income of a nation. A second dimension is environmental implying that economic wellbeing should be achieved without diminishing environmental quality. The third dimension relates to social justice, i.e. fairness in the distribution of the benefits and harms that result from the pursuit of economic growth.

Mining involves extraction of a non-renewable resource so it is not sustainable by nature. While mining is inherently unsustainable, the world needs minerals, so mining is necessary. It can be the engine of social and economic development and can play an important role in bringing infrastructure and services to under-developed regions, according to Ross Beaty, Chairman and CEO of Pan American (International Institute for Environment and Development, 2001).

The contribution of mining to the local economy may come in different forms. There is nothing intrinsic in mining that hinders it to be an engine of economic and social development in the region. Although mining does not generate massive employment, its investments in local infrastructure (transport, water, electricity, etc) are nonetheless important (Buitelaar, 2001).

The impact of mine closure can have a devastating effect on the local economics of the towns that they once supported. The economic devastation of mining centres is a global phenomenon that is well documented. Whether as a result of the inevitable resource depletion or broader structural changes in the economy, the result is that the host communities experience significant economic and social erosion (Strangleman, in Nel, et al, 2003).

A combination of economic and social impacts determines the quality of company engagement with communities. When engagement is proactive, continuous and co-operative on both sides, *"social license"* is granted and maintained (Institute of Social and Ethical Accountability, 2004). Sustainable development then becomes possible.

3.2 Economic Impacts

Economic impact is defined as any increase in the productive potential of the economy. It extends beyond the boundaries of any single organization and it is linked to both the environmental and social elements of sustainable development. By understanding economic impact we seek to understand how a company adds value to society.

A number of positive economic benefits are expected due to new mining operations such as generation of new job opportunities and the stimulation of the local and regional economy. New jobs result in an increase in annual per capita and household income of the workers and their families, thus increasing buying power and improving the standards of living.

Economic opportunity is a key expectation from communities when they choose to engage with companies. In building relationships with a community, a company's best chances appear to lie in the area of economic opportunity, as that is something that has been largely lacking in so many communities where mining operations are undertaken.

The key focus areas of economic impact that emerge from case study examples are:

I. employment,
II. procurement,
III. infrastructure improvements,
IV. community investment
(Institute of Social and Ethical Accountability, 2004).

Mining can also be a starting point for new business opportunities downstream, particularly in the processing of mining products. Its investment in infrastructure can be a base to develop other business activities that use the same infrastructure, e.g. tourism.

All economic activities related to mining can generate an indirect effect on the local economy due to the multiplier effect of investments and expenditure by mining firms. This may express itself in the demand for local goods and services ranging from construction, housing, food, education, health, leisure and other public services.Local employment can also be created through related construction projects and the provision of services and infrastructure which could stimulate skills development.

The positive economic impacts are manifested through an increase to GGP and GDP and increases to exports and tax revenues (providing economic spin-offs).

Many fast growing developing countries are however discovering that their high GNP (gross national product) growth rates have failed to reduce the socio-economic deprivation of substantial sections of their population.

Human development and deprivation have many facets, so any index of human progress should incorporate a range of indicators to capture this complexity. For most developing countries, human development poses several challenges; including the following:

I. Expanding development opportunities for more people
II. Upgrading living standards
III. Achieving more with less (more people sharing less resources) (UNDP, 1990)

Mining activity includes creating jobs with corresponding flows of income and accumulation. This allows for more resources to be used for social services such as health, education and welfare. Mining has a major impact in generating income and employment, yet it is reliant on communities for labour and services.

Despite having common interests, the communities and the mining industry often are at odds with each other. However the economic, environmental and social impacts of mining on communities are difficult to quantify since these relate to individuals, families, local communities (including local business and labour), and the people of the wider region (Ivanova, Rolfe and Lockie, 2007).

3.3 Social Impacts

According to the Mining Sector Report, December 2004, a company's indirect economic impacts on disadvantaged communities can be as great, or greater, than its direct economic impacts.

The nature of engagement with low income communities will shape whether a corporation's direct or indirect economic impacts will be more important and whether its legacy will prove to be a blessing or curse.

In sectors such as agriculture and manufacturing, direct impacts will be more important in the form of payments for labour provided, whilst in the mining and extractive sector, indirect impacts, especially those relating to environmental effects will become more important in the medium to long term than the direct impacts such as payments for labour.

To maximise the potential positive indirect impacts for low-income communities and to mitigate the risks of adverse impacts, it is essential for an enabling environment to be created involving all stakeholders, especially government in partnership with the private sector.

These partnership agreements should go beyond just making the environment conducive for efficient business but should also make it accountable in respect of equity (i.e. who gets what and who doesn't?) and fairness (i.e. who pays how much, and when?).

This enabling environment and accountability can only be achieved if there is synthesis between the interests of national and local governments and low income local communities.
"By simply engaging with national government in a way that creates economic benefits for the country, as a whole, does not imply that those benefits will trickle down to the poor" (Institute of Social and Ethical Accountability, 2004).

"The distribution of income is fairly uneven in most of the third world (developing countries). Simply stated, economic growth seldom trickles down to the masses. Free market mechanisms may be vital for allocative efficiency, but they do not ensure distributive justice. That is why added policy actions are often necessary to transfer income and other economic opportunities to the very poor" (UNDP,1990).

3.4 Environmental Impacts

According to an Environmental Impact Assessment undertaken by Johannesburg Consolidated Investment (JCI) in May 1991:
"the rights of 29 000 – 49 000 people will be directly affected by the mine (PPrust Platinum) due to their close proximity.
A further 46 000 – 76 000 will be indirectly affected. In about 19 years (by 2010) between 145 000 – 165 000 people in the greater radius of the mine will be indirectly affected"

The 1998 Specialists Report to Anglo American Platinum Corporation on the relocation of Ga-Pila village states in its conclusion and recommendations: *"The proposed relocation to Sterkwater farm site is an emotionally charged issue….. If effective management of the potential problems identified is not implemented, the impacts identified have the potential of being fatal flaws for the entire relocation process…. On the basis of the baseline data, it has been identified that although there are high negative potential impacts, most of them, could be mitigated and managed" (Anglo American Platinum Corporation, 1998).*

Other negative environmental impacts related to mining activities include:

I. The loss of livelihoods as a result of lost natural resources and other productive assets e.g. land used for subsistence agriculture, wild fruits and plants harvested for edible and medicinal purposes, and wood used for fuel (fire).
II. Increase in social instability and community disturbance due to the presence of foreign (not local) workers, job seekers and contract employees leading to increased competition for job opportunities and thus placing additional pressure on local infrastructure (facilities and services).
III. Increase in prostitution and related health hazards such as HIV/AIDS as a consequence of the presence of workers with disposable incomes which could cause community fragmentation and family disintegration.
IV. Increase in vandalism, crime and theft as well as an increase in nuisance factors such as loitering,
V. Disturbance of graves, and other cultural heritage sites.

Table 3

Potential Environmental Risks and Impacts

Category	Examples of risks and impacts
Air	Activities causing excessive dust, gas and particle emissions. Activities causing odours and excessive noise levels.
Biodiversity	Illegal fishing and hunting: illegal removal of wood Disturbance of protected plants and animals. Proliferation of exotic vegetation.
Energy	Energy wastage, inefficient use.
Hydrocarbons	Spillage of fuel, oil, grease, and lubricants. Incorrect storage of fuel, oil, grease and lubricants.
Land	Erosion due to water and process spills, uncontrolled driving off existing tracks and roads. Veld fires. Topsoil handling.
Hazardous substances	Spillage of chemicals and other hazardous substances. Incorrect storage and use.
Tailings	Spillage/uncontrolled discharge of tailings due to pipe and other failures.
Waste	Illegal dumping of scrap or domestic or industrial waste. Illegal dumping of hazardous waste. Littering.
Water	Leakage or spillage of process water. Illegal/uncontrolled discharge of effluent, process or storm water.

Source: Anglo Platinum Limited, 2008,
Sustainable Development Report, 2007

3.5 Is Mining a Blessing or a Curse?

It is over 100 years, 1906, since platinum was discovered in the Bushveld complex, Limpopo Province in South Africa. Over 200 million ounces have already been mined of an estimated 7 billion reserve ounces. There are still potential deposits for about 800 years of demand.

Using an average basket price of $ 1000 (about R7000) an ounce for platinum group metals (PGM's), Hochreiter of Nedbank Capital Investment in a Business Report article (2006, November 10) arrived at a conservative value for the potential deposits of PGM's of $20 trillion still left unmined in the Bushveld. He described this *"as probably the richest single mineral deposit on earth."*

Whether this abundance of resources is proving to be a blessing or curse continues to be a matter for serious debate and requires further research. Extreme views still persist according to Eggert (2002) on both sides of the argument relating to the economic effects of mining. Some argue that *"minerals are a curse to be avoided"* because of their negative economic, environmental, and/or social effects on local communities. Others contend that mining *"is a blessing that holds the key to economic development in mineral – rich regions".* (Eggert, 2002)

The natural curse thesis holds that resource abundance is the cause of lesser economic growth, or as referred to by Buitelaar (2001),as *"the paradox of impoverishing abundance*. The *"natural resource curse thesis"* has been explored in economic research (e.g. Sachs and Warner, 1995, and Gavin and Hausman, 1998), and different conclusions have been reached.

Yet the evidence for the Prebish – Singer thesis remains valid, according to Buitelaar,(2001) that *“economies which specialised in the export of primary products have less dynamic demand and will therefore grow at lower rates than economies with other export specialization”.*

Whether resource abundance proves to be a curse or blessing has to do with the relationship between groups of agents around the mining sector in a particular place. According to the group theory of politics, public policy is the product of the group struggle which rests on the contention that struggle among groups is central to political life. Many groups make claims upon other groups in society through institutions of government. Some groups are able to shape and influence governmental decisions by virtue of having more resources and greater access to policy makers and officials (Anderson, 2000).

According to James Bond, Director of the Mining Department, World Bank and International Finance Corporation (IFC), mining accounts for 1-2% of foreign direct investment worldwide. The mining sector is dominated by around 20 large companies with a big *“footprint”* and having a huge impact. *“The industry is essential but controversial, due to the conflict over the division of risk and rewards, often leading to or associated with corruption”.* (International Institute for Environment and Development, 2001).

3.6 Local Economic Development

The notion of local economic development, (LED), has become more prominent in South Africa in the past few years, yet there seems to be differences in understanding what LED actually means. The National LED framework, directs municipalities in addressing economic development at local level. The aims of LED relate to poverty alleviation, employment creation, and the redistribution of resources and opportunities to benefit locals.

The White Paper on Local Government (March 1998) defines developmental local government as *"committed to working with citizens and groups within the community to find sustainable ways to meet their social, economic and material needs, and to improve the quality of their lives"*.

The Department of Provincial and Local Government (DPLG) defines LED as the outcome of local initiatives involving the *"identifying of and using of local resources, driven by local stakeholders, to stimulate economic growth and development".* (Waterberg District Municipality, 2007).

Generally development is measured only in terms of aggregate growth rate and investments but it should also measure the reduction of poverty and unemployment. Hence the major challenge relating to mining is to ensure that the mineral wealth and consequent benefits and adverse impacts are distributed equitably among mining companies, government, and the local communities.

This should be done in a way that maximizes the total welfare of all involved, or at least in a way that ensures that the least well-off are made as well off as possible, and that allows for all the competing interests to be reconciled. Capital must be allowed to thrive but it has responsibilities beyond just paying taxes and providing employment. Growth must occur in tandem with poverty alleviation, local economic development, and environmental maintenance.

Participatory democracy processes are not only about decisions made at national level. *"Participatory processes must entail open dialogue and active civic engagement. Processes, not just outcomes* are *key to this broader interpretation of participation" (*Stiglitz, 1999).

*"Development represents a transformation of society" (*Stiglitz, 1999). The comprehensive development paradigm focuses on more than just economic and allocative issues and considers issues relating to democracy (good governance) and how growth is achieved.

3.7 Structural Changes to the South African Economy

During the 1970's mining (and quarrying) employed almost 700 000 out of a total of 7.5 million people, i.e. 9-10% of formally employed persons in South Africa. By 1995 this had declined to about. 450 000 out of 8, 5 million (approximately 5%).

The contribution of mining to the GDP (Gross Domestic Product) of South Africa stood at around 10% in 1970 and over 20% in 1980 but had declined to 7.5% by 1997 (Bhorat, Dieden and Hodge, 2007).

Table 4

Share of S. A. GDP Economic Activity (1970 – 1997)

Period	Agri/fish	Min & Qu	Mnf	El,Gas & Wtr	Const	Whls/ Ret	Trsp/Stor /Comm	Financial	Com/Se/ Psrvee
1970	8.3	10.3	24.2	2.6	4.3	15.1	9.2	11.1	14.8
1975	8.1	12.1	22.8	2.3	5.2	14	9.1	12.5	13.8
1980	6.9	21.7	22.2	3.6	3.5	11.3	8.1	10.8	11.8
1985	5.7	14.9	22	4.1	3.6	11.5	8.5	13.5	16.2
1990	5.1	9.4	24.7	4.2	3.4	14.6	7.2	14	17.3
1995	4.2	7.5	23.4	4	3	15.7	7.3	16.4	18.5
1997	4.4	7.5	23	3.8	2.8	15.4	7.4	17.2	18.6
Change 70 - 97	-3.9	-2.8	-1.2	1.2	-1.5	3	-1.8	6.1	3.8

Source: Bhorat, Dieden and Hodge, 2007

It is evident from Table 4 showing the share of GDP by economic activity in South Africa, that the services sector which includes wholesale and retail trade, transport and communication and financial services were by far the fastest growing components of GDP during the three decades from 1970 - 2000.

The structural change in the South African economy during the period 1970 – 2000 is characterised by a move away from primary and manufacturing production sectors towards a greater emphasis on output in the services sector. The shrinkage of the non-mineral tradable sector (manufacturing) since the early 1990’s and particularly the weakness of export orientated manufacturing has deprived South Africa of growth opportunities that countries such as Malaysia have enjoyed (Rodrick, 2006).

The relative shrinkage of manufacturing (along with an economy-wide skills upgrade) has entailed a collapse in demand for relatively unskilled workers and has contributed to the massive structural unemployment situation prevailing in South Africa. While Malaysia was actively promoting manufacturing for export during the 1970's and 1980's, South Africa was beginning to deindustrialise. Malaysia was able to pull an increasing share of its workforce into manufacturing, while in South Africa manufacturing lost ground to the tertiary (services) sector.

Malaysia's experience is in line with other successful industrialising countries i.e. the productive diversification of the economy was not left to markets to generate on their own but was as a result of a nurturing approach by its government in strategic collaboration with the private sector (Rodrik, 2006).

"Development is not an automatic result of favourable conditions and the functioning of markets. (It) requires purposeful collective action and adequate co-ordination of public and private initiatives. All this stems from a shared strategic vision among all agents in the region regarding building a better future. To build this strategic vision is the central goal of the cluster project" (Buitelaar, 2001).

3.8 Broadening the Benefits (the cluster concept)

One of the most significant consequences of shifts in the global economy has been a new focus on place and the intensified competition between localities. Associated with this has been the shift in the focus and style of competition. Increasingly urban governance is being concerned with the promotion of local economic development through mechanisms of inter-urban competition (Harvey in Urban Forum, 1994).

Communities in peripheral localities such as Mogalakwena where Anglo PPrust is located are often trapped in low road forms of competition because of the severe human resource constraints (skill shortages) and the weaknesses of the institutions there which often lack the capacity and flexibility to respond to change and the development challenges (Harrison in Urban Forum, 1994).

Industrial districts (clusters) are now at the centre of major debates surrounding local economic regeneration and could offer a model for replication elsewhere as a base for renovation (Rogerson, 1993). Features of industrial districts include nurturing sectoral agglomerations and collective efficiency among networks of small firms.

Two main models emerged around industrial districts from the Italian experience. The first is where large and medium firms decentralize some stages of production to small firms who took on roles as dependent sub-contractors. The second is where independent small firms link into networks specialising in specific industries through sub-contracting.

The engine of industrial districts is not the large vertically integrated corporation but the existence of a collection of small firms able to attain economies of scale, according to Sengenberger and Pyke (Rogerson, 1993).

The economic health of industrial districts can be enhanced by appropriate policies towards small business including support programmes for small scale enterprises.

Global trends suggest that competitive advantage in regional economic performance is based on clusters of industries that are concentrated and have close buy-sell relationships and common technologies. These clusters are usually centred around the most vital businesses in the region and drive the growth and development of industries which provide services and/or inputs into operations of the main industries. (Felbinger and Robey, 2001).

From case studies conducted in Central and South America, research suggests that a-four stage local process appears to be crucial for the success of cluster type development; viz.

I. The presence of sufficient institutions (organized business and local government.
II. Interaction and dialogue among institutions to avoid redundancy.
III. The formation of coalitions.
IV. The process of *"institutional thickening"* should lead to the formulation of a hegemonic local development project which constitutes a local social contract.

*(*Perez Sainz and Andrade-Eekhoff, 2003)

Research conducted in Chile found that the cluster will only achieve greater coherence and collective efficiency if the big mining firms view local economic development as a strategic objective for long run competitiveness (Culverwell in Buitelaar, 2001).

In Chile, two distinct and parallel clusters emerged. One consisting of sizeable and technologically - advanced suppliers offering products of strategic importance to the mining firms. The other consisting of a group of smaller, technologically backward and vulnerable suppliers whose products are not of strategic importance to mining firms.

The Economic Commission for Latin America and the Caribbean (ECLAC) conducted research into mining clusters and local economic development and concluded that technical progress and accelerated productivity increases are keys to economic development.

In Canada, the mining cluster consists of a large number of diversified agents, including mining companies, suppliers, consultants, financial institutions, professional services, academic institutions and specialised media. Different public agencies fostered initiatives to provide the cluster with basic infrastructure and information towards realising a common strategic vision. This interaction has produced specific capabilities that give Canadian firms an edge in global competition (Ritter in Buitelaar, 2001).

The cluster value approach to economic development is supported by the Limpopo Provincial Government and the Waterberg District Municipality. The Provincial Growth and Development Strategy, 2004 defines clusters as *"encompassing an array of linked industries, from suppliers and providers of infrastructure to downstream activities and service organisations".* (WDM, 2007).

3.9 The Concept of Social Licence

Social impacts relate to the production and maintenance of community history, culture, traditions and institutions. Social impacts inform ways in which the company's presence changes the community and its capacity to adapt to change. The underlying assumption of community level sustainable development is that there should be full and proactive co-operation and participation of local communities/stakeholders.

This co-operation will provide the *"social license"* for mining (and other extractive industries), which can go a long way in reducing conflicts and adverse impacts; and which will create benefits and positive impacts directly and indirectly for affected communities. This *"social license"* is critical in enabling a company to contribute more successfully to sustainable development at community level (Institute of Social and Ethical Accountability, 2004).

Successful negotiations for *"social license"* have involved some combination of a demonstration of respect for local culture and tradition, jobs and training of local people, infrastructure improvements, and humanitarian contributions.

These negotiations are only meaningful when the company has learned enough about formal and informal community processes and begun to develop trust, so that the right people are involved and agreements may be enforced through social mechanisms (Institute of Social and Ethical Accountability, 2004).

The capacity to manage (local) community – level impacts towards net benefits is dependant on community engagement and *“social license”* which are mutually reinforcing and parallel processes that occur both as a cause and consequence of addressing and managing social and economic impacts at the community level.

When companies and communities engage in a co-operative and continuous way *“social license”* is reinforced and validates the development process. The framework for Sustainable Development for mines and communities (See appendix 2) highlights the mutually reinforcing processes of company – community engagement which influences the key social and economic impacts (Institute of Social and Ethical Accountability, 2004).

As companies are increasingly being held to account for their community level impacts, they are becoming more proactive in attempting to improve the well-being of the communities in which they operate.

An example of this is Anglo American’s Socio Economic Assessment Toolbox (SEAT), which aims to assess how its operations allow all groups to meet their socio-economic needs in an equitable manner. (See appendix 3). It includes analysis of existing management systems for achieving community based sustainable development goals.

A consensus has not yet emerged over how to understand and implement strategies that create significant improvements of indirect economic impacts on low-income communities and there is *“no one size fits all”* framework.

In each industry sector a consensus needs to be developed on what the key focus areas are for economic, environmental and social impacts. Mining companies and communities should agree on development goals and have good indicators and frameworks for measuring the economic and social impacts resulting from mining activities in the area.

3.10 Sustainable Development

In 1987 the World Commission on Environment and Development sought to address the problem of conflicts between environment and development goals by formulating a definition of sustainable development: *"Sustainable development is development which meets the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1987).*

According to Harris, et al, 2001, a serious consideration of sustainable development requires a rethinking of major elements of economic theory.

Standard economic theory views manufactured capital as the key to development. Natural resources, social relationships and institutional arrangements that provide the basis for economic activity are not given due importance in most models of economic development. Harris identifies four kinds of capital viz. manufactured, natural, human and social. All four kinds of capital are essential to economic activity, although standard economic theory emphasises primarily manufactured and human capital.

Neoclassical economics treats natural and manufactured capital as fully substitutable e.g. if the proceeds from the timber sales of a country that is cutting down its forests are used for industrial development; i.e. reinvested in reproducible capital, then this is regarded as acceptable.

However, according to Constanza and Daly in Harris, et al, 2001, certain minimum conditions are necessary for sustainability. In the case of renewable resources the rule is to limit resource consumption to sustainable yield levels and for non-renewables e.g. mineral resources, the rule is to reinvest the proceeds into renewable substitutes.

Natural capital (resources) should be regarded as a social asset and fundamental social principles should determine the broad outlines of natural resource management according to Page in Harris, et al, 2001.

Page contends that *“marketisation”* breaks down traditional social institutions that have governed the use of common property (natural) resources which frequently results in rapid and destructive resource exploitation in the development process.

The effects of recent legislation mean that mining companies have to demonstrate how their activities will impact on the socio-economic and biophysical environment of the areas in which they operate. *“Sustainable development strategies should meet the needs of the present generation without compromising the ability of future generations to meet their needs.”* (UNDP,1990).

Toman in Harris, et al, 2001, proposes that inter-generational equity can be resolved by recognizing that some issues are best dealt with using *“neoclassical”* market efficiency measures. Other issues would be better dealt with through applying *“safe minimum standards”* where a precautionary principle should supersede economic analysis; especially when there is uncertainty about possible outcomes such as large potential ecological damage. (See appendix 8).

For mining companies, sustainable development is becoming a critical factor for long-run competitiveness. *“A sustainable mining community is one that could realise a net benefit from the introduction of mining that lasts through the closure of the mine and beyond”* (Bolts from Veiga, et al in The Executive Summary of the Mining Report, 2004).

Other principles for sustainable development include:

I. limiting economic scale to the carrying capacity of natural capital (resources)
II. promoting efficiency - increasing technological progress
III. harvesting rates for renewable resources should not exceed regeneration rates
IV. waste emission should not exceed the renewable assimilative capacity of the environment
V. non renewable resources should be exploited at a rate equal to the creation of renewable substitutes.

3.11. New Strategies for Sustainability

Economic measures alone cannot provide all the answers relating to sustainable development since they do not adequately factor in environmental and social realities. The concept of *“ green accounting”* which seeks to modify national income statistics to take account of the environment is fraught with difficulty according to Salah el Serafy, in Harris, et al, 2001.

This approach requires many *“judgement calls”* to be made in valuing complex environmental impacts; some which (like species loss) are almost impossible to monetize. One approach is to use the principle of depreciation where national accounts are adjusted for natural capital depreciation. Another approach is to use satellite accounts, which measure environmental stocks and functions in physicals terms without assigning valuation. These two approaches together can give a more complete picture of the natural resource base and the state of the environment.

Sustainability should be viewed as a process rather than a set of goals. It should go beyond issues of environment, economic justice and development. Sustainability is about diversity in all its dimensions and must focus on local participation and control over the way in which people live and work.

Achieving sustainable development ”*requires challenging not only the self interest of the wealthy minority, but also the consumption package which is defining our quality of life”* (Barkin in Harris, et al, 2001).

International economic integration does not affect all peoples equally; hence different strategies for sustainable development will apply in different regions. In regions that are *“left behind”* it is essential to redevelop the *“peasant economy”.* Food self-sufficiency must be one part of a strategy of productive diversification based on principles of greater self-reliance.

3.12 Corporate Social Responsibility

Corporations control the vast majority of the world’s productive assets. Through them raw materials (natural resources) are extracted, processed, and made into products for sale to consumers.

The economic power that corporations wield translate into political and cultural power that in many ways exceeds the power wielded by governments, educational and religious institutions, families, and other forces that shape society (Goodwin in Harris, 2001).

The challenge then is to encourage or coerce corporations to improve on their economic, environmental and social impacts in a sustainable manner. The ideals of corporate social responsibility are not new. *“The social and economic agendas that promote communitarian and community values against the destructive impacts of corporation action have become more widely known since about 1980”* (Goodwin in Harris, et al, 2001,).

On the one hand there are indications that pressure from governments, investors and other stakeholders has resulted in corporations becoming more *“responsible”;* yet, on the other hand corporations appear to ignore the *“triple bottom line”* when faced with declining profits and then attempt to *“greenwash”* their image according to Goodwin.

Although most corporations are slowly starting to accept increased responsibility for economic, environmental and social sustainability, they need to be *“pressured”* to do more and to be more accountable and transparent in their dealings.

According to Julian Morris of the Institute of Economic Affairs, sustainability can be defined as *“the adoption of measures to ensure that the systems, naturally and socially impacted by mining activity, are able to maintain or enhance their functioning into the future. The success of a mining project requires understanding of its location and social context”* (International Institute for Environment and Development, 2001).

3.13 Governance Issues Relating to Mining

Addressing sustainable development challenges has become more urgent following the introduction of the MPRDA in 2002 (and the associated Mining Charter in 2004). The policy objective stated in the MPRDA, is *“to expand opportunities for historically disadvantaged persons to benefit from the exploitation of the nation’s mineral resources.”* The South African Mining Charter was developed by the government in consultation with the minerals industry and representatives of the mining companies. It was published in the Government Gazette, GG 2661, 13 August 2004, in terms of section 100(2) of the MPRDA Act of 2002.

The MPRDA embraces the concept of sustainable development in section 37 where it references the National Environmental Management Act's definition as *"the integration of social, economic and environmental factors into planning, implementation and decision-making so as to ensure that development serves present and future generations".*

The MPRDA requires all mining operations to have social and labour plans, and environmental management programmes in place, and to comply with and publicly report on progress towards meeting the requirements of the mining charter.

According to the Mining Charter, Broad-Based Socio-Economic Empowerment (BBSEE) refers to a social or economic strategy, plan, principle, approach or act, which is aimed at, inter alia, integrating socio-economic development for host communities.

The MPRDA and the Mining Charter have as objectives the following:

I. promoting equitable access to the nation's mineral resources.
II. expanding opportunities for historically disadvantaged South Africans (HDSA's) to benefit from the exploitation of the nation's mineral resources.
III. utilising the existing skills base to empower HDSA's.
IV. expanding the skills base of HDSA's.
V. promoting employment and advancing the social and economic welfare of mining communities.
VI. promoting beneficiation of South African mineral resources.

The role of government is primarily to create an enabling environment for these objectives to be met using the following laws as a regulatory framework to facilitate socio-economic empowerment:

I. The Preferential Procurement Framework Act (No. 5 of 2000).
II. The Employment Equity Act (No. 55 of 1998).
III. The Competition Act (No. 89 of 1998) (and subsequent amendments).
IV. The Skills Development Act (No. 97 of 7998).

The government produced an annexure to the Mining Charter to asses the progress of mining companies in respect of key socio economic goals known as the *"Mining Scorecard".* For the purpose of measuring, the scorecard lists nine elements viz.

I. Human resource development.
II. Employment equity.
III. Migrant labour.
IV. Mine community and rural development.
V. Housing and living conditions.
VI. Procurement.
VII. Ownership and joint ventures.
VIII. Beneficiation.
IX. Reporting.

According to a provincial government document, 2008, intended for discussion purposes entitled: *"Draft Institutional Model for the Empowerment of Communities Hosting Mining Houses in Limpopo"* current legislation in South Africa governing minerals resources does not adequately cater for the land rights of the host (traditional) communities.

Section 54 of the Minerals and Petroleum Resources Development Act, 28 of 2004, stipulates that:

The holder of a reconnaissance permission, prospecting right or mining permit must notify the relevant Regional Manger of the Department of Minerals and Energy Affairs if that holder is prevented from commencing or conducting any reconnaissance, prospecting or mining operations because the owner or the lawful occupier of the land in question –

i)refuses to allow such holders to enter the land;
ii)places unreasonable demands in return for access to the land;
iii)cannot be found in order to apply for access.

The Regional Manager must, within 14 days from the date of the notice referred to in subsection (1) –

i)call upon the owner or lawful occupier of the land to make representations regarding the issues raised by the holder of the reconnaissance permission, prospecting right, mining right or mining permit;
ii) inform that owner or occupier of the rights of the holder; of a permit or permission in terms of this Act;
iii) set out the provisions of this Act which such owner or occupier is contravening; and
iv) inform that owner or occupier of the steps which may be taken, should he or she persist in contravening the provisions.

If the Regional Manager, after having considered the issues raised by the holder under subsection (1) and any written representations by the owner or the lawful occupier of the land, concludes that the owner or occupier has suffered or is likely to suffer loss or damage as a result of mining operations, he or she must request all the concerned parties to endeavour to reach an agreement for the payment of compensation for such loss or damage. If the parties fail to reach an agreement, compensation must be determined by arbitration in accordance with the Arbitration Act, 1965 (Act No. 42 of 1965), or by a competent court.

Section 4 (a) of the Act further stipulates that no person may prospect for or, mine, conduct technical operations, or reconnaissance, explore for and produce any minerals or petroleum, or commence with any work incidental thereto on any area without notifying and consulting with the land owner or lawful occupier of the land in question

The Act provides that an applicant for a prospecting right or a mining right must consult with interested and affected parties and the results of such consultation be submitted as part of its application. Only ‘consultation’ is required and the landowner cannot prevent prospecting or mining (if the rights have been granted by the Department of Minerals and Energy Affairs).

As mentioned above, the MPRDA makes provision for the payment of compensation for loss or damages suffered by a landowner as a result of prospecting or mining.

In terms of these provisions, the owners or the lawful occupiers of the land do not have veto rights to deny the holders of reconnaissance permission, prospecting right, mining right or mining permit access to their mineral rights whatsoever.

Most traditional communities do not have sufficient resources, be they human, technical and financial at their disposal to engage in these protracted legal processes against the mining companies who are able to engage the best legal minds to fight their legal battles.

The only rights the owners or lawful occupiers of the land have in terms of the Act are to be consulted and if there are any disputes or conflicts, the matter shall be referred for arbitration or court processes for final determination. The traditional communities are therefore exposed to some extreme forms of vulnerability because they cannot legally prevent the mining companies from moving on to their land for purposes of undertaking prospecting and/or mining operations.

3.14 Conclusion

Mining can be the key to economic development if it is done in a sustainable manner and in a manner that allows for all stakeholders to benefit equitably. To earn the *"social license"* to operate, mining companies must ensure that local communities also share from the wealth being generated through improving of local infrastructure, providing meaningful employment, stimulating local business through procurement, etc and community investment.

Even though a mine itself is not sustainable, (having finite resources) the economic benefits created by mining can be sustained through appropriate investments in education, health care, infrastructure, and other activities that can create human wellbeing long after mining ceases (Eggert, 2002).

Hence the contribution of mining to comprehensive economic and people development depends on the type and the quality of the interaction among the agents involved. Mining should be managed in ways that enhance the benefits through sustainable development whilst minimizing the costs particularly to local communities.

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CHAPTER FOUR

RESEARCH FINDINGS

4.1 Introduction

This study sought to establish how and to what extent Anglo Platinum PPrust is impacting on local communities affected by its operations. Certain impacts e.g. dust and noise pollution are experienced more directly by those living in the closest proximity to the mine, while other impacts such as the economic spin-offs generated by the mine are experienced indirectly in the wider sub-region of Mogalakwena.

Some impacts are open to different interpretation and hence may be viewed positively by some people and negatively by others, e.g. the building of a new national road, which may benefit the sub-region but may result in the disruption/dislocation of the community through which it passes.

A total of fifteen persons of varying ages between 25 and 65 years were interviewed for this research representing a diversity of stakeholders. These interviewees included the representatives from provincial, district and local government as well as representatives from local business and the local communities.

Data was also sourced from two field visits undertaken by the researcher to the two villages most directly affected or impacted by the mining activities of Anglo Platinum PPrust and from relevant documents relating to the research topic.

4.2. The Impacts of Mining by Anglo Platinum in Mogalakwena

Development is a multidimensional concept incorporating economic wellbeing, environmental quality and social justice. Any measure of human development should consider a range of indicators of development or deprivation such as: standards of living, economic opportunities and sustainability.

The economic, environmental and social impacts of mining are difficult to assess given that these relate to individuals, families, local communities and the people of the wider region. There is no consensus on models and frameworks to be used to measure and account for indirect economic impacts. The findings in this case study are thus influenced by the researcher's choice of indicators.

The measuring of economic activity may be done in various ways using one or a combination of several techniques, e.g. the economic base projection model which considers a variety of units, including employment, personal income and sales value added. A more accurate picture of a local economy can be obtained using other measurement units that may be appropriate for different sectors of the economy and for different communities (Klosterman, 1990).

As suggested previously, a more nuanced understanding of development as an interaction of social, economic and environmental factors is needed, particularly for the minerals and resources sector which is of national economic strategic importance but whose environmental and social impacts linger long after such operations have ceased.

This study sought to explore and to illustrate the impact of platinum mining by Anglo PPrust on the local communities affected by its operations. The research questions centred on issues relating to economic, environmental and social impacts. The researcher also sought to investigate whether Anglo PPrust is operating according to sustainable development principles and in line with the Mining Charter.

4.2.1 Demographic Changes

The population of Mogalakwena in 2007 was approximately 300 000 according to Quantech Research. The area experienced a decline in its population between 1991 and 2001, from almost 360 000 to 300 000, if one compares the statistics provided by the Development Bank of South Africa in 1991(Anglo Platinum, 1998) and those of Statistics South Africa in 2001.

According to members of the local business chamber this decline may have been due to the effects of droughts on the agricultural sector where many workers were retrenched from citrus, cotton and tobacco producing farms and by the closure of some mining operations in the area, e.g. Samancor Chrome Mine, Zaaiplaats Tin Mine, and Eersteling Gold Mine as many persons left the area to seek employment in the metropolitan areas of Gauteng Province. The easing of influx control measures previously imposed by the apartheid regime may have also contributed to this migration away from Mogalakwena during that period according to an official from the Mogalakwena Municipality.

Since approximately 2000/1 the area has been experiencing an increase in population with considerable inward immigration of people searching for employment towards Mokopane and the area around Anglo PPrust. The Local Economic Development (LED) unit of the municipality indicates the shortage of water and land as hindering growth in the area and lists the resettlement of communities, as a result of the platinum mining, as a major challenge for development (Waterberg District Municipality, 2007).

4.2.2 Employment and Economic Spin-offs

A majority of the interviewees were of the view that Anglo Platinum PPrust is certainly having a significant positive impact on the local economy through the direct employment of approximately 1000 people itself and a further 1000 people indirectly through sub-contractors. Ninety percent of these people live in Mogalakwena, and the economic spin-offs generated by the mine through its local procurement and the spending by its employees is impacting very positively on the local economy.

Overall, according to DBSA statistics mining (chrome, tin and lime) contributed almost 3500 jobs in the sub region of Mokerong and Potgietersrust in 1980 but this had declined to 1200 by 1991. According to a study conducted by SRK Consultants in 1991 for the Mogalakwena River Basin, mining contributed 19% to GGP in 1970 but had declined to below 10% by the late 1970’s and declined still further to below 5% by the late 1980’s (Johannesburg Consolidated Investment Ltd 1991).

By 2007 mining contributed 20% to GGP due mainly to platinum mining operations at Anglo PPrust. The number of jobs in the mining sector in Mogalakwena in 2007 was estimated to be about 2500 according to the local business chamber which estimated that 1500 – 1800 jobs were of a permanent nature and the balance were temporary contracted workers employed by service providers such as construction and security firms contracted to the mines in the area.

Anglo Platinum PPrust employed on average 2000 people including the subcontractors during 2006/7. Other mining operations in the area are not of significant proportions employing less than 500 people combined according to 2006/7 information given to the local Chamber of Business.

Anglo PPrust estimates that its presence and the economic spin-offs provided to the local economy has the effect of creating a further 5000 jobs indirectly as is evident from the growth in those sectors of the local economy e.g. tourism and hospitality, and the services sectors (trade and finance, etc).

However the view that Anglo Platinum PPrust is contributing that many jobs to the local economy is not shared by all the stakeholders. Representatives of the local business associations such as SACOB, NAFCOC, AHI and TLU, acknowledge that a number of jobs have been created directly and indirectly in other enterprises and sectors of the local economy but are unable to furnish any reliable data on the number of jobs actually created directly and indirectly as a result of the mining activity at Anglo Platinum.

To estimate the levels of indirect employment in the formal and informal sectors as a result of PPrust's operations, an empirical multiplier of 3.6 was used by Environmental Resources Management Limited when compiling its report on the Social and Economic Assessment of Potgietersrust Platinum Limited.
It calculated indirect employment to be 3540 jobs in the formal sector and 1770 jobs in the informal sector.

Anglo Platinum's 2007 employment equity status shows satisfactory progress at national level towards achieving equitable representation of designated groups across all occupational levels and categories of the workforce as required by the Employment Equity Act. (See appendix 5).

The total annual wage bill of Anglo PPrust amounts to just over R 120 million (R 10 million per month) of which about 16% is estimated to be retained in the local economy i.e. approximately R 20 million per annum. PPrust's contribution to the Anglo Platinum group which in turn contributes very significantly to the regional and national economies cannot be overlooked.

Total payroll benefits of Anglo Platinum nationally increased from under R5 billion in 2003 to over R8 billion per annum. Its total contribution to taxes for the past five years (2003-2007) stands at over R11 billion. Anglo Platinum paid R7.5 billion in taxes and royalties in 2007 to the state as well as almost the same amount R7.5 billion in salaries and benefits (88000 employees including contractors).(See appendix 4).

4.2.3 The Changing Local Economy

The structural changes to the national economy during the past three decades i.e. from the primary and manufacturing sectors to the services sectors are also manifested at local level e.g. Mogalakwena where the tertiary sectors have become larger contributors to GGP and employment creation. In a study by Bhorat, Dieden & Hodge, 2007, the contribution of mining to the national GDP was found to have declined from over 20% in the 1980’s to approximately 7.5% by 1997.

Yet, mining continues to be a dominant player in certain regions of South Africa e.g. Waterberg District in Limpopo Province where it accounts for 49% of the GGP (Gross Geographic Product) and 16% in formal employment. In the Mogalakwena area mining contributes almost 20% to the GGP of the local municipality and 6% to formal employment as stated earlier (Waterberg District Municipality, 2007). In Table 5 of the GGP contribution and employment per sector in Mogalakwena, 2007, it indicates that the main drivers of the economy in Mogalakwena are mining at 20%, finance at 19% and trade at 17%. Although mining contributes 20% to GGP it only contributes 6% to employment, implying that mining has become more capital intensive and less labour intensive.

According to local business leaders from the Chambers of Business, certain sectors of the local economy are affected more positively than others due to the mining operations in the area. These include the finance, tourism and hospitality sector (hotels, conference venues, guesthouses, restaurants, etc), the security sector (guarding services), the transport sector and the FMCG (fast moving consumable goods) sub-sector of trade.

Various sectors of the local economy have been affected by globalization. Agriculture has been the most negatively affected in Mogalakwena with fewer farms and much lesser small-scale farming. It now contributes only 1% to GGP and 14% to employment i.e. very significantly less than years bygone when it was seen as the mainstay of the local economy. The PTK (Potgieterus Tabak Kooperasie) employed approximately 300 persons and 1000 seasonal workers in its heyday.

Table 5

The GGP Contribution and Employment per Sector In Mogalakwena, 2007

Sector	Sector Key	Mogalakwena GGP % Contribution	Sectoral Employment % Contribution
Agriculture, Hunting & Forestry	A	1	14
Community Services	N	6	17
Construction	E	2	6
Electricity, Gas & Water	D	5	1
Finance, Insurance & Related	I	19	12
Government Services	K	15	18
Manufacturing	C	5	8
Mining & Quarrying	B	20	6
Transport, Storage & Com	H	10	3
Wholesale & Retail Trade	F	17	17
TOTAL		100%	100%

Source: Waterberg District Municipality, 2007
Quantech Research adjustments to Stats S.A. 2001 Census

In 1980 agriculture (citrus, cotton and tobacco farming) was a major source of employment contributing approximately 27 000 jobs but this had declined to 14 000 by 1991 (Anglo American Platinum Corporation Ltd, 1998). Although agriculture declined in real terms and as a percentage of GGP, it nevertheless remains an important contributor to employment.

This decline can be mostly attributed to changes in national policies relating to deregulation, land restitution and subsidy decreases, etc and as a result of South Africa's re-entering the international arena and the technological changes to agricultural production methods and techniques. The lack of sufficient water and climate change are also very significant contributing factors for agriculture's decline in the area.

Mining in Mogalakwena is the sector that has been the most positively affected by globalisation with massive investment in particularly platinum mining as a result of high world demand and commodity prices. The mining sector contributes the most to the local economy at 20% and even greater to the district's GGP at 49% (Waterberg District Municipality, 2007).

4.2.4 Changes in Local Income Levels

Table 6

Monthly Income Levels for Limpopo and Mogalakwena, 2007

Income Category	Limpopo	Mogalakwena
R1 – R400	28%	31%
R401 – R800	20%	22%
R801 – R1 600	16%	16%
R1 601 – R3 200	16%	15%
R3 201 – R6 400	13%	10%
R6 401 – R12 800	5%	4%
R12 801 – R25 600	1%	1%
R25 601 – R51200	0.3%	0.4%
R 51 201 – R102 400	0.2%	0.2 %
R102 401 – R204 800	0.1%	0.1%
R204 801 or more	0.0%	0.0%
Total	100%	100%
Weighted Average	R 2 542	R2 319

Source: Quantech Research, 2007
(adjustments to Stats S.A. 2001 Census)

According to Table 6 on income levels for Limpopo province and Mogalakwena, more than 50% of the population in Mogalakwena had an income of less than R 800 (eight hundred rand) per month and over 30% have an income below R 4 000 (four thousand rand) per month in 2007. Over 40% are unemployed, and this may be even higher, given that many in the informal sector are barely able to scrape a living and could in fact be regarded as being in *“disguised unemployment”* (Moller in Mafiri, 1992).

Many households in Mogalakwena are at present still reliant on income from sources other than formal employment just as they were in 1991. According to a Lebowa Development Corporation Report in 1991 the average income in the area was R446 per month (61% of the population earned below the average) and 44% depended on remittances as the major source of income (Anglo American Platinum Corporation Ltd, 1998).

The majority of the households in Mogalakwena are dependent on government grants (old age pension and child support) and on remittances from family members employed in other cities. What this means is that the presence of Anglo PPrust has not significantly improved the average income levels of households in Mogalakwena since it employs less than 1% of the total economically active persons in the area. Yet its impact on those households who have persons employed directly or indirectly by the presence of Anglo Platinum PPrust cannot be overlooked.

However, some stakeholders are of the view that Anglo PPrust has actually had a negative impact on their income earning potential. Rose Dlabela, 56 years old, a protester at a demonstration organised by ActionAid, an international non-governmental organisation (NGO), in Johannesburg on 31 March 2008 to highlight concerns relating to the relocation of communities said that: *"life has gone from bad to worse".*

According to her "*she had eleven acres of communal land on which I grew fifty bags of maize a year. I used to make R 2000 a month from tailoring but now with no electricity (in the old Ga-Pila village); I can't use my sewing machine. You would never have found me idle before but now I have nothing"* (Muslim Views, 2008).

4.2.5 Capital Expenditure, Procurement and Beneficiation

The total capital expenditure at PPrust for 2007 was R 4 billion, which included the PPrust north pit project and its associated infrastructure and including the relocation of Motlhotlo village for which R 225 million was spent in 2007.
(Anglo Platinum Limited Annual Report, 2007).

Anglo PPrust spent over R 220 million on procurement for non capital expenditure in 2007 up from R 160 million it spent in 2006. Almost 70% was purchased from enterprises in Gauteng. It spent about 12% of its total procurement locally in Mogalakwena of which almost 50% was spent on machinery and equipment and approximately 25% on wholesale and retail trade.

According to the representative of the local business chambers, many local suppliers and service providers are finding it difficult to secure large tenders from Anglo PPrust as these are usually sourced from outside. The bulk of capital expenditure and working cost expenditure items are purchased through the Anglo Platinum supply chain, which is managed through group-wide contracts from large suppliers based in Gauteng or in other countries (Anglo Platinum Limited Annual Report, 2007).

The tendering process is complicated according to the local business chamber. The long payment lead time which negatively impacts on the cash flow of small enterprises supplying the mine and the time consuming security checks at the mine make it difficult for local enterprises to do business with the mine.

Anglo PPrust has undertaken several initiatives to assist local HDSA suppliers, but non local HDSA suppliers will be given priority if there are no accredited local suppliers according to a report by Environmental Resources Management Limited, 2007.

Anglo PPrust has established a small business development unit to promote local procurement. According to the representatives of the local business chambers several enterprises are benefiting as a result of local procurement but there is scope for this to be broadened.

Anglo Platinum's strategy relating to beneficiation, or value addition to raw materials, is developed from the premise that its own competence is in mining operations and not in downstream manufacturing.

Anglo has little competitive advantage in a direct involvement in downstream beneficiation and hence it will only facilitate and assist in promoting beneficiation, but will not involve itself in beneficiation beyond supporting downstream industry development (Anglo Platinum, 2008).

Anglo Platinum is playing a significant role in sponsoring research and development initiatives into additional uses of platinum group metals to grow the market. Since 2005 Anglo Platinum has allocated resources towards platinum jewellery beneficiation projects including:

I. increasing consumer awareness

II. supporting a platinum jewellery design competition

III. providing bursaries for students in the field of jewellery design and manufacturing

IV. cooperating with the Jewellery Council to provide loan facilities for jewellery fabricators

V. in partnership with the North West Provincial Government, Anglo launched a platinum branded jewellery range called *"Djadji".*

4.2.6 Infrastructure Improvements

Anglo PPrust previously spent R 80 million on a bulk water supply infrastructure system for Mokopane (in conjunction with the Mogalakwena Municipality). It has also equipped a number of schools in the neighbouring communities with water and sanitation (ablution facilities) and has built two sports facilities. Anglo Platinum built a road to improve access routes between the villages in the Mapela area and its operations.

According to Anglo's Socio-Economic Assessment Toolbox Report (SEAT) for 2007, Anglo PPrust will contribute between 2007 and 2011 an amount of almost R50 million towards infrastructure such as roads, housing, water and electricity within the neighbouring communities.

PPrust allocated R18 million in 2007 for corporate social investment (CSI) projects including:

I. construction of sanitation facilities and the provision of water at four schools and three crèches in the neighbouring communities
II. building a school science laboratory
III. supplying equipment to a primary school
IV. construction of a clinic at Sekgagapeng in Mokopane

V. extending Mosesetjane clinic and adding a maternity section to the clinic
VI. a brick making plant at Armoede and the rehabilitation of mine dumps using local labour.

4.2.7 Social Responsibility

In response to the threat of HIV/AIDS, estimated to be approximately 15% in Mogalakwena, and other diseases, Anglo PPrust has implemented a Wellness Programme. It has trained and deployed 36 peer educators who are responsible for educating communities on HIV/AIDS and other illnesses and who also provide home-based care to assist and encourage community members around health and related issues.
It has also constructed clinics at Mosesetjane and Sekgagapeng villages which surrounding communities can use.

In November 2002, Anglo Platinum Group, and all the nine unions and associations, representing over 75% of the Group's workforce signed an HIV/AIDS agreement and established a *"Joint Working Group"* to meet monthly to give substance to the clauses of the agreement. Its objectives include supporting efforts to prevent the spread of HIV/AIDS and to assist employees living with HIV/AIDS and other diseases such as tuberculosis (TB).

According to Susan Lekalakala one of the project's coordinators, community peer educators have been doing *"a sterling job"* in and around Mokopane (in Mogalakwena) targeting places including taxi ranks, shebeens, schools and churches. Most of the interviewees acknowledged Anglo PPrust contributions in the field of health. Some were unaware of the programmes and projects undertaken by PPrust.

Anglo Platinum Group's Social Investment spending has trebled from under R 40 million in 2005 to over R 120 million in 2007. Approximately 28% was budgeted for infrastructure development, 15% for SMME development and 14% for educational development. Almost 40% (48 million Rand) was distributed through the Group's Chairman's Fund. (See appendix 6).

In the area of education and training, Anglo PPrust initiated a number of projects to address the low levels of education in surrounding communities following requests from stakeholders. It provides five bursaries per year for studies relating to mining and a further 24 bursaries in other fields of study.

Anglo PPrust offers a wide range of training and skills development opportunities including: Adult Basic Education and Training (ABET), internship, mentorship, leadership, bursaries and career path development (Anglo Platinum Limited, 2008).

Only a few hundred metres from the slimes dam of Anglo PPrust in Ga-Molekane village stands Langalibalele Secondary School. It hosts a sign at its entrance bearing the logo of Anglo Platinum and stating *"supported by PPL"* (Anglo PPrust).

Kenneth Chepape, Principal of the school, said that the company has financed half the cost of the fencing around the school and has given some funds to help with the water supply. It has also occasionally supplied the school with study guides, helped organise workshops and recently paid for building 10 toilets.

Kenneth said that these contributions were very small in financial terms and not what the school was asking for. *"We need more real facilities."* He said *"We need a library and computer equipment, for example. We ask them but normally they don't even bother to respond. They don't provide cash to us."* (See appendix 12 for picture of crack in school classroom floor).

Of 440 children in the school, one child has received a bursary from the company to study engineering, he said. When asked about the company logo on the school sign, Kenneth said: *"this is just a way of advertising the company."* When asked about Anglo Platinum's claims to be sponsoring hundreds of children in the area, Kenneth said he knew nothing about this (ActionAid, 2008).

4.2.8 Environmental Impacts

According to an E.I.A. report, by SRK consultants for Anglo Platinum in March 2002, for proposed mining expansion at PPrust the following concerns/issues were identified and prioritised from the perspective of the communities being resettled:

Table 7

Issues Identified and Prioritised by Communities Being Resettled

Community 1	Community 2
Houses	Jobs
Water	Houses
Jobs	Water
Health and Safety	Health and Safety
Graves	Schools
Schools	Electricity
Land for ploughing and grazing	Land
Electricity	Roads and transport
Community hall	Recreational facilities
Churches	Shops
Transportation	Graves

High Priority

Low Priority

Source: Anglo Platinum Limited, 2002

From Table 7, it is clear that the issues regarded as most significant by both communities centre around housing, water, land and employment.

In the Addendum to the Environmental Management Report, Volume 1 of 3, prepared by SRK Consultants in June 2002, for Anglo PPrust, the following issues were raised relating to socio-economic impacts of resettlement:

Table 8

Issues Raised Relating to Socio-Economic Impacts of Resettlement

I. The loss of arable and grazing land. II. Preferred employment of local people. III. Assistance from the mine with community development projects IV. Boreholes for the communities may be located on the site proposed for waste residues. V. Provision of an alternative water sources if expansion is going to affect/deplete the community's current water sources. VI. Dust will also affect plants and livestock. VII. Impacts of blasting and vibrations on the Ga-Tshaba community. VIII. The proposed site is currently used for ploughing and source of livelihood. Alternative land for ploughing and livelihood should be provided by the mine. IX. The mine should assist with upgrading of roads. X. The mine should assist local matriculants with bursaries to study mine related courses to be able to take up employment on the mine rather than employing skilled outsiders.

Source: Potgietersrust Platinum Limited (PPrust), 2002

The resettlement of households and infrastructure is considered to be an impact of high local significance. Resettlement is considered necessary due to the generation of noise and dust, blasting and vibrations, and safety concerns. Resettlement causes secondary impacts such as social dislocation, loss of social support networks, loss of access to infrastructure and services, etc.

Anglo Platinum has attempted to address some of the concerns identified by communities and it has sought to manage the negative impacts. Anglo has provided alternative housing, water and other facilities such as schools for the communities that were resettled. Anglo also purchased land which those communities could use for ploughing and grazing. Repairs to buildings damaged as a result of blasting and vibrations are paid for by the mine.

However the alternative water provision arrangements and the quality of the water being provided by Anglo are deemed inadequate by many residents of the relocated communities. ActionAid, an international non-governmental organisation (NGO), has challenged Anglo Platinum on behalf of the residents of local communities in Limpopo affected by its platinum mining activities.

According to its report entitled, *"Precious Metal: The Impact of Anglo Platinum on Poor Communities in Limpopo, South Africa",* independent tests conducted on water samples there found serious pollution at four out of ten sites and hence the water is deemed unfit for human consumption.

Scientific tests showed that high levels of nitrate in borehole water at the four sites probably originated from mining related activities since no other economic activity of note e.g. agriculture using chemicals is taking place there. The nitrate levels were found to be seven times higher than standard drinking water thus raising serious health concerns.

Carin Bosman, an independent environmental management advisor who undertook the tests said*:"the norm used in South Africa is 6 mg nitrate – N per litre".* Values between 6 and 20 could lead to illnesses in infants while values above 20 could lead to illnesses in adults.

ActionAid contends that Anglo Platinum has *"wreaked havoc with the lives of thousands of people"* in rural communities in Limpopo. The report also alleges that thousands of poor people have lost their agricultural land and have received little compensation. For instance, the report quotes local community members expressing their dissatisfaction with their current lot.

Anglo responded to these allegations by stating that ActionAid is more interested in making headlines than in protecting human health. Anglo Platinum responded by saying that they are unaware of where the water samples were taken and how the conclusions were reached.

Anglo asserted that communities had been allocated more land than they previously had. Prior to resettlement Motlhotlo village had 3 850 hectares of agricultural land and post resettlement 8 800 hectares of agricultural was purchased by Anglo for the local community.

Action Aid's view is that people were not relocated willingly but that the relocation of Ga-Pila *"was in fact a forced removal"* and that *"the overall amount of farm land available to all the relocated communities from Motlhotlo is far less than they had previously and much less than claimed by Anglo Platinum".*

According to Phillipos Dolo, a *"community activist"* on whose behalf ActionAid bought a share to enable him to attend the Annual General Meeting (AGM) of Anglo American in London on 15 April 2008 stated: *'we have lost our main means of survival-access to land and water, Relocation deals are inadequate…… my people are suffering"* (ActionAid, 2008).

Salome Ntoane, a 65 year old grandmother, has resisted relocation from Ga-Puka. According to her, she has lost forty acres of farm land in Zwartfontein and was shot at by police officers with rubber bullets, two of which lodged into her body. She insists that she will not leave Ga-Puka until *"we have been compensated fairly"* (Muslim Views, 2008).

Isaac Pila, 72, was among those who moved to Sterkwater from the old Ga-Pila Village in 2001. He says that *"there were so many promises (from the mine) but none of it was true".* He claims that there is no grazing land for the animals and people are no longer ploughing. The walls of his house are cracked and the floors unfinished. The septic tank, placed right in front of the kitchen, emits a wretched smell (Muslim Views, 2008).

Zanele Twala, ActionAid's Country Director for South Africa, contends that Anglo Platinum is failing to address serious concerns relating to the impacts of its mining operations on poor communities in Limpopo.

She has labelled Anglo Platinum's assertions that the communities have been allocated more land than they had previously as *"highly misleading".* According to ActionAid much of this land is unusable for agriculture and is over forty kilometres away from the village.

4.2.9 Spatial Impacts

Although mining has many positive spin-offs, it also creates new challenges for the local government which is already constrained by limited resources and technical capacity. The spatial analysis in the 2007 IDP (integrated development plan) document of Mogalakwena Municipality includes the following relating to mining:

I. the accelerated migration of people to Mogalakwena which is perceived by them to offer employment due to mining activities in the area but which places additional strain on the local municipality to provide services.
II. the population increase may lead to further unemployment and poverty in the sub-region.
III. the indiscriminate informal settlement of people, especially along arterial routes, in search of employment and economic opportunities, is adversely influencing new development initiatives and strategies.
IV. bulk water supply to industries and communities where water is scarce is a major challenge for local economic development.
V. inappropriate development could undermine the eco-tourism potential of the area and could lead to conflict between conservation and development needs e.g. rural waste management.

To deal with these and other related issues, the local government and Anglo PPrust initiated in late 2003, a Joint Development Forum tasked with developing a coherent approach towards development opportunities.

Its key focus areas include:

I. water and sanitation
II. spatial development,
III. health and welfare and
IV. local economic development

4.2.10 Social Impacts

The issue of the resettlement of the local communities who live in the vicinity of the mine is by far the impact that has the most social ramifications. The World Bank policy on resettlement states that involuntary resettlement should be avoided or minimised and that displaced populations should receive benefits from the project. (See appendix 1).

The World Bank also states that affected persons should be compensated and assisted to improve their living standards and income earning capacity. Community participation should be encouraged and the existence of customary rights should be recognised. Partnership agreements are imperative to maximise potential positive impacts and to mitigate the risks of adverse impacts to create an enabling environment based on accountability, equity and *"social license."*

Anglo PPrust is surrounded by rural communities who are reliant on access to grazing and agricultural land which mining activities are disrupting. The communities want compensation for lost crops and believe that they are entitled to royalties for mineral rights to land. (See appendix 11 for picture of land for grazing).

There seems to be either a lack of understanding on the part of locals as to what are surface rights (held by the community and traditional authorities) and what are mineral rights (held by Anglo Platinum), or it may be, that local communities are seeking to maximise the benefits they feel are due to them in the form of royalties.

In terms of the original agreement between the representatives of the local community of Motlhotlo village and the representatives of the mine, Anglo PPrust would make a once off R20 thousand payment as compensation to each household affected by relocation. It would also make an initial R1.2 million payment to a community trust fund and R50 thousand monthly payments for the lease of the land (approximately 4000 hectares) to the trust fund for the duration of the lifespan of the mine.

According to the attorney representing the disgruntled community members (Richard Spoor), the R20 thousand per family compensation and the R50 thousand monthly (rental) to a community trust for the lifespan of the mine is paltry when compared to the *“billions of dollars”* Anglo Platinum would derive.

The presence of Anglo PPrust has altered the power dynamics in the area and led to serious divisions particularly in the villages where relocations have occurred. The communities are divided between those that support the Section 21 Company and another faction which claims that the Section 21 Company is illegitimate and unaccountable. This faction alleges that Anglo PPrust has not used its leverage to make the Section 21 company representatives accountable by holding regular elections.

PPrust mine has established a number of forums as a means of engagement and communication with various stakeholders:

I. The Mineral Committee consisting of four members from each of 15 communities, whose executive meets regularly with mine officials.
II. The Traditional Authorities Forum which meets once a month where progress reports are given and where issues of concern are discussed and negotiated.
III. Meetings with suppliers, service providers and employment seekers on a monthly basis.
IV. Participation in local government structures relating to integrated development.

The stakeholders have indicated that Anglo PPrust should play a more active role in local economic development e.g. entrepreneurial training and assistance to the SMME sector.

Another issue of serious concern relates to the inconsistent supply of water with some community members complaining that they only have access to tap water for a couple of hours a week. Proper sanitation at homes and schools is also an issue of concern.

The provision of these services in the new villages continues to be a bone of contention between the mine and the Municipality which is supposed to be a shared responsibility in terms of the services agreements signed by all parties before the commencement of relocation viz. memorandum of agreement signed on 20th December 2001 between Mogalakwena Municipality and the Ga-Pila Section 21 Company on behalf of the local community and Potgietersrust Platinum Limited (PPL) mine as the developer.

4.2.11 Community Impacts

From the several face to face interviews that were conducted as part of this study with members of the local communities that are being resettled, the summaries of three of these interviews and observations from two field visits to these villages are presented hereunder.

The first person interviewed was a male resident of the new Ga-Pila village in Sterkwater. He is approximately 35 years old and had relocated from the old village in 2002 and was living in a three bedroom house that was built for him by the mine. He had a similar size house with a lockup garage and an outside toilet (pit latrine) in the original place. Now he was living in a house that had running water and a flush toilet.

This resident had over the years extended his house and was running an income generating activity from his premises, viz. a tuck-shop/spaza.

He confirmed the existence of three community factions in Ga-Pila viz.:

I. The Section 21 Company Committee and its supporters
II. The disgruntled members of the community led by one local Induna, and
III. The approximately 15 households that are refusing to move from the old Ga-Pila village.

Although the interviewee claimed to be *“non-aligned”* to any of the above mentioned factions he felt that the Section 21 Company lacked legitimacy since it was elected at the *“old site”* and *“no subsequent annual elections have taken place”* implying that it presently does not carry in his view a legitimate mandate.

The interviewee further also confirmed the high unemployment experienced there, and the fact that most households are dependant on government grants (pension, child support and disability) and on remittances from family members employed in other areas.

It was also his view that the mine had not provided sufficient alternative land for ploughing and had not provided an adequate irrigation/water system. His view was that this had been promised to the community by the mine authorities at the time of negotiations before resettlement commenced.

During a visit to the new village (Ga-Pila, Sterkwater) in February 2008, the researcher observed that many residents had 3 bedroom homes while some had smaller 2 room units. The interviewee explained that people who lived in shacks or informal structures were given smaller 2 room units by the mine.

To its credit, the mine had built over 1 000 houses, 3 schools, 1 clinic, 1 post office, 1 bar lounge, 1 bottle store (liquor outlet),and 8 shops for people in the new village between 2001 and 2006.

The overall view of the interviewee, referred to earlier, is that the community in the new Ga-Pila village is generally less well off financially and socially than before and that only a few people have actually benefited from the economic development resulting from the mining taking place in the area.

After interviewing some other residents in the new Ga-Pila village during the field visit there, it became evident that the community is seriously divided between those that support the Section 21 Committee (recognized by the mine) and those that are led by the induna (tribal leader) and who do not recognize the Section 21 Committee as the legitimate representative of the Ga-Pila community.

The faction led by the induna claims that the Section 21 Committee is pursuing its own agenda aimed at benefiting its members and supporters and often acts in the interests of the mine at the expense of the broader community. The Section 21 Company committee is totally dependant on Anglo Platinum for money, yet the mine has not prevailed on the committee to hold elections for almost ten years. The conflict between the groups deteriorated to such an extent that there are now two burial sites (one for each faction) which is only heightening the division and mistrust in the community.

During a field visit to the new Motlhotlo village in Armoede during March 2008, the researcher was made aware by local residents of the similar sort of problems facing these people as is the case with the people of Ga-Pila (Sterkwater).

In this instance, there also appeared to be three factions, viz.

I. The Section 21 Company representatives and their supporters
II. The faction calling themselves the M.D.C. (Motlhotlo Development Committee)
III. The group who are totally refusing to move.

An extensive interview was conducted with a female, approximately 40 years old and who had taken up residence in a new house in the new village one month prior to the interview. Most of her extended family had not yet relocated from the old Ga-Sekhaolelo section of the old village that the mine is relocating due to expansion.

This interviewee is aligned to the Induna (opposing the resettlement/relocation to Armoede by the Sekhaolelo faction of Motlhotlo village). She confirmed that the mine had built approximately 500 houses of which 400 houses have already been occupied. The remaining 100 households are refusing to relocate.

I was taken on a field visit to assess the standard of construction of the houses, and the quality of the water and sanitation provided by the mine. I found several occupied and unoccupied houses which had cracks in the floors and walls and the houses also had no consistent supply of running water making the toilets unusable. (See appendix 10 for picture of crack in house).

4.2.12 Relocation Challenges

The researcher also conducted a face to face interview with a representative of the Motlhotlo Development Committee which claims to represent 60-80% of the residents of the old Ga-Puka village. Some of the issues highlighted by this person include:

I. Most residents in the new village are dissatisfied with the process of relocation and with the fact that compensation for relocation has not been paid by the mine to them in most instances.
II. Some residents were given R 6 000-00 (six thousand Rand) and not R20 000-00 (twenty thousand Rand) in addition to the house that the mine had built for them
III. The poor standard of construction of the houses and schools, e.g. cracks in foundations and no central support for roofs
IV. Inadequate alternative arrangements for ploughing and irrigation. The interviewee claims that less land has been given than was originally agreed between the mine authorities and the community
V. The brick-making plant established by the mine is being run by an outside company and not by local residents whereas this could have been a good opportunity for empowerment
VI. The mine has contributed to the feelings of mistrust and division of what once was a socially cohesive group.
VII. The community was being disempowered
VIII. The local municipality does not intervene until there is some sort of community agitation or unrest.

The management of the mine responded by saying that compensation payments are being made and that this would be completed as per the agreement when the relocation is completed. In so far as the cracks at houses and schools are concerned, Anglo PPrust has established a local enterprise to repair the cracks and defects of the buildings at its expense.

On the issue of the brick making plant being run by outsiders, the mine management responded by saying that most of the employees of the plant are locals and that at the time of selecting the service provider, no local had the financial capacity and management skills required to establish the plant.

The Research and Evaluation Unit of the Provincial Legislature was tasked with investigating specifically the problems and challenges facing the people of Mothlotlo regarding relocation.

It released a draft report entitled: *“Displaced or Misplaced? Unpacking the truth behind the removal and relocation of the Motlhotlo community in the Limpopo Province.”* This report found the following:

I. Anglo PPrust set aside a budget of R 600 million to facilitate the removal and relocation process and to ensure that the conditions of the people been relocated were improved.
II. Although the signing of the agreement of the parties went well the problems started when the community began claiming that the layout of the land allocated for resettlement was not as originally agreed between the parties.
III. Although houses have been built for the community, many have not been properly constructed or finished, yet the contractors have already been paid off.

IV. No housing plans were approved prior to construction nor were subsequent inspections carried out.
V. Blasting done by the mine is causing houses to crack and blasting disrupts learners and educators at schools.
VI. The health of the community may be jeopardised due to the chemicals from blasting activities.
VII. The Section 21 Company Committee is not regarded as legitimate and lacks transparency.
VIII. The land provided for ploughing and grazing of cattle is inadequate and unsuitable.
IX. There are no programmes or projects aimed at empowering the youth.
(Limpopo Provincial Government, 2008)

A critical role in Anglo Platinum's mining operations in relation to relocations is played by Section 21 Companies, not-for-profit companies set up under South African company law by Anglo Platinum in the village where it operates. Around the Anglo PPrust mine, there are 14 such companies comprising some 15 community members each (ActionAid, 2008).

Anglo Platinum regards Section 21 Companies as legitimate representatives of the communities in which it works and although it claims to consult more widely, such as with tribal authorities and some individuals community members, it is largely through them that the company conducts its relations with the community.

The articles of Section 21 Companies established by Anglo Platinum at Anglo PPrust mine do not provide for any form of democratic control or accountability over them. Their members are the directors; villagers are not members and the majority have no right to vote or participate in the operation of the companies.

The members of the Ga-Pila and Ga-Puka Section 21 Companies were nominated in 1995 and 1998 respectively – none have since stood for re-election by the community (ActionAid, 2008).

The agreement that was signed in July 2005 between Anglo PPrust and Section 21 Companies in Ga-Puka and Ga-Sekhaolelo contains some extraordinary features.

First, it makes clear that Section 21 Companies *"were established for the purpose of relocation… to give vacant possession and occupation of the lease areas to Anglo PPrust."*

Second, as a result of the agreement, *"It shall be the obligation of the Section 21 Companies and the communities to give Anglo PPrust vacant occupation and possession of the lease areas."* .

Third, it also commits Section 21 Companies to, *"institute and prosecute to finality eviction proceedings…at its costs against any occupiers or possessors of the lease areas, including but not limited to members of the communities, who refuse to vacate the lease areas."* Thus the mine has made Section 21 Companies, its own creation, responsible for carrying out relocations (ActionAid, 2008).

Lawyers for some of the Mothlotlo villagers also argue that the relocation agreement between Anglo PPrust and Mothlotlo. Section 21 Companies is null and void, given that the companies are not democratic entities and therefore do not represent the community. They argue that *"Anglo PPrust is engaged in a forced relocation that is taking place outside of the framework of the law and outside of any valid and binding agreement with the community or individual residents."* (ActionAid, 2008).

Simon Tebele, the spokesperson for Anglo Platinum denied that the company was guilty of bullying tactics, saying that Anglo Platinum followed the rules to the letter and that this was just a small group of disgruntled people that are being instigated by parties from outside (Sunday Independent, 2007).

4.3. Anglo Platinum and Sustainable Development Principles

Mining and associated activities such as smelting and refining use a mix of renewable and non-renewable resources. In these processes land is transformed, ground and surface water are affected. Substances are emitted into the air and waste is generated.

After the adoption of the Mining Charter, Anglo Platinum incorporated long-term planning processes for each operating unit in the group, including the implementation of triple bottom-line reporting on all operations relating to sustainable development (Anglo Platinum Limited, 2008). *"Anglo Platinum was a forerunner in adopting sustainable operating principles".* (Bullock, 2007).

Each Anglo Platinum mine is required to formulate a sustainable development vision for its operations, taking cognisance of local and provincial authorities' integrated development plans (IDP's). The country's socio-economic development needs and the reality of eventual mine closure (should) also inform the kind of corporate social investment (CSI) and community development projects that Anglo Platinum undertakes. Anglo Platinum has committed to sustaining a safe and healthy environment for its employees and host communities.

It has established an integrated environmental policy that aims to:

I. Conserve natural resources.
II. Prevent or minimise adverse impacts.
III. Demonstrate active stewardship of the land and biodiversity.
IV. Promote good relationships with local communities.
V. Respect (local) people's cultural and heritage.
(Anglo Platinum Limited, 2008).

Anglo Platinum engaged the services of KPMG Auditing firm in 2004 to perform an independent audit of its (Anglo Platinum) Sustainable Development Report for 2007. In its Independent Assurance Statement, KPMG concluded that Anglo Platinum complies with the reporting requirements of the Mining Charter.

Compliance measurement with these aims and related management principles is done by a third party (ISO 14001 audit and verification). ISO 14001 certification is testimony of a company's commitment relating to especially environmental issues. ISO 14001 is an international standard for environmental management systems based on 3 key principles:

I. Prevention of pollution.
II. Compliance with relevant environmental laws.
III. Continual improvement in both the system and environmental performance.

According to one interviewee, Dr Hennie Du Preez, who is a consultant on environmental issues, *"Anglo PPrust's contribution to the local area is immense"* and that Anglo PPrust conducts its affairs in an environmentally sound manner.

If one considers the potential environmental risks associated with mining as listed in Table 3, one may conclude that Anglo PPrust has demonstrated significant commitment to mitigating risks. All Anglo Platinum's operations in South Africa are certified in terms of ISO 14001.

It seems that Anglo Platinum's policy relating to the mitigation of negative impacts centres around the concept of *"BATNEC"* i.e. Best Available Technology not Entailing Excessive Costs (Potgietersrust Platinum Limited, 1996). Some of the potential risks and negative impacts raised by consultants and local communities in the past have not been adequately addressed; e.g. water pollution and the loss of livelihoods as a result of lost natural resources.

In its Sustainable Development Report for 2007, Anglo Platinum considers only those risks and impacts at its operations and not the upstream or downstream risks and impacts of its operations (Anglo Platinum Ltd, 2008).

Mine closure has profound ramifications, not only for the mine and mines but also for the host regions, *"which for centuries often structured their economies, class relations, industrial and transport networks purely to serve the needs of mining"* (Nel, et al, 2003). The closure of the mine, even after many years, will have negative impacts on local communities.

Yet, it seems that Anglo does not have a plan (mine closure framework) in place for PPrust mine which is not expected to occur for at least another approximately 30 years according to Frank Pieterse of Anglo PPrust.

The cumulative effects of the negative impacts resulting from mine closure are difficult to project. Closure would certainly entail jobs losses thus increasing unemployment in the area.

Businesses providing goods and services to the mine may also close down as a result of lost income. Mining infrastructure would reduce the availability of agriculture and grazing land. Land used for the tailings dam, the open pit and waste storage would be permanently lost and cannot be rehabilitated. The livelihood options open to retrenched employees may thus be limited leading to increased poverty and migration. All of the above would result in economic and social destabilisation.

International experience contains lessons for failing to address and respond adequately at national and local levels to local crises such as mine closure. *"The landscape of Canada is scattered with ghost towns, mute witness to resource depletion. The lack of strategies to prepare for limited lifespans and closure has led to innumerable personal hardships"* (Nel, et al, 2003).

4.4 The Role of Government

The Preamble to the Mining charter notes that the policy objective of the MPRDA, 2004 is to expand opportunities for historically disadvantaged persons to benefit from the exploitation of the nation's mineral resources. It envisages government playing only a facilitating role whilst allowing the market to be the key player in achieving this objective.

The MPRDA and the Mining Charter do not specifically allocate responsibility to local and provincial government except that government is expected to create the enabling environment for the objectives of these laws to be met in a cooperative manner.

Yet, local government is expected to play a developmental role according to the White Paper on local government, 1998. It should work with all stakeholders within the community to *"find sustainable ways to meet their social, economic and material needs and improve the quality of their lives"*.

The role of the Municipality is to establish and reinforce inter-governmental and multi-sectoral consultations and co-ordination, and to ensure coherence of policies adopted at national, provincial, district and local levels.

Local municipalities are generally constrained by resources and time which do not allow for a full investigation of existing and alternative strategies and policies. Hence changes to policies are introduced and/or enforced incrementally since this is a seen as more expedient option and which is likely to reduce the potential for conflict between various parties according to Lindblom in Dye, 1995. Sustainable development is thus given less priority.

I conducted a simultaneous face to face interview, with a high-ranking politician and with a top-level manager who was delegated by both the Office of the Mayor and the Office of the Municipal Manager to talk to me. Both interviewees were of the opinion that the presence of Anglo PPrust has certainly provided positive spin-offs in the form of providing much needed employment opportunities, infrastructure e.g. bulk water. Anglo PPrust's role in stimulating the local economy was also noted.

Challenges that were highlighted include the following:

I. Anglo PPrust can do more to support local businesses and to promote local economic development through more local procurement.

II. The mine is represented at forums for local economic development e.g. when Integrated Development Plans (IDP's) are being considered "*but issues are only given urgent attention by the mine management when they impact directly on the mine operations".*

III. The communities of Ga-Pila and Mothlotlo are generally dissatisfied with compensation received from the mine.

IV. The infrastructure and services provided by the mine in the new villages are not of the standard agreed upon originally by all parties. Walls and floors are cracking and the water supply infrastructure is not meeting the basic water requirements of residents due to inconsistent supply.

V. The roads built by Anglo are of poor quality and are untarred. The main road in Sterkwater was only tarred after the Municipality put pressure on the mine to do so.

VI. There are no recreational facilities e.g. parks.

VII. In both cases i.e. Ga-Pila (Sterkwater) and Mothlotlo the mine did not allocate sufficient and adequate land for ploughing and grazing purposes and the mine has not compensated households for lost livelihoods.

VIII. There are several gaps in government policy relating to mining and local communities. The shared responsibilities between the departments of Minerals and Energy Affairs (DME), Land Affairs and the local municipality are unclear which has resulted in situations where *"communities are left on their own"* i.e. the local government cannot intervene on their behalf on issues that fall within the responsibility of DME or Land Affairs.

I conducted a face to face interview of approximately one hour with a top-level official in the Office of the Premier, Limpopo Province, Department of Development Planning. His view was that mining, particularly Anglo Platinum is a major player in the region's economy providing over 20 000 direct jobs and stimulating the provincial economy very significantly. Challenges highlighted by this official included:

I. The fact that the Section 21 Company structures are bank-rolled by the mine has compromised their legitimacy in the eyes of the community which is further compounded by the fact that the communities feel that the Section 21 Companies are not accountable to them but are acting in their own interests.
II. It is felt that some senior representatives of the mining industry are *"paternalistic"* and adopt an approach of *"they know best"* when dealing with government officials.
III. The issue of who is responsible for what was also raised e.g. Department of Land Affairs, Department of Water Affairs, Department of Minerals and Energy Affairs, are each separately responsible for certain aspects relating to mining, which sometimes result in uncoordinated actions.
IV. On a comparison between the Royal Bafokeng (Rustenburg Platinum) and the Mapela communities (PPrust Platinum) it was explained to me that the benefits accruing to the Royal Bafokeng of Rustenburg are considerably more than the communities in the Mapela area of Mogalakwena viz Ga-Pila and Motlhotlo because in the case of the Rustenberg the community owns the surface and mineral rights, while in the case, of the Mapela communities they own only the surface rights. The mineral rights were either sold by the Indunas (chiefs) to Anglo or had been given to Anglo by the previous homeland government.

From the perspective of this interviewee, most of the problems highlighted above can be addressed through changes to the current policies of government in relation to mining. Local officials and leaders may want to do more or see more being done, but they are constrained by policies and a regulatory framework that is very complex and sometimes vague on issues that are of a cross-sectoral nature. This also lends itself to a *"passing the buck"* scenario where it becomes easy to apportion blame to others.

It was also stated by this interviewee that a more appropriate and accountable institutional model needs to be developed that can best cater for and balance the competing interests of all the stakeholders affected by mining.

4.5 Summary

The findings of this study suggest that the presence of Anglo Platinum PPrust is certainly having a major positive impact on the economy of the Mogalakwena sub-region. If one takes into account Anglo PPrust's contribution to the fiscus of over R300 million for 2007 in taxes, royalties and levies, besides its spending on infrastructure and other projects its contribution becomes more significant.

The economic dependence of a community on a mine is often attributed to the purchasing capacity of that operation. However, while the community is primarily dependant on the wage flows of mine employees, procurement usually benefits industries remote from that operation. Some interviewees were of the opinion that the mine was not having as significant an impact on the local economy since most of its procurement is sourced from outside of Mogalakwena.

CHAPTER 5 - RESEARCH ANALYSIS

5.1 Introduction

This study has sought to explore the extent to which the economic benefits arising from platinum mining activity at Anglo Platinum PPrust is contributing to the development of the local communities of Mogalakwena in the socio-economic spheres and to establish the extent to which the mining activities are impacting on the affected communities and the wider sub-region of Mogalakwena.

As noted earlier the direct economic benefits created by mining enterprises are quite apparent and quantifiable at national and local levels. The environmental and social impacts are often not so apparent particularly at local level and cannot be easily quantified. The findings of this study suggest that this is in fact the case at Anglo PPrust where the direct and indirect benefits are apparent but the adverse direct and indirect impacts are only now, approximately 15 years after establishment, beginning to come to the fore.

5.2 The Local and Regional Effects of Mining

If economic wellbeing, as the first dimension of development, is measured by per capita income, or income levels, it may be concluded from the findings, that the people of Mogalakwena are impacted on very differently by the mining activities taking place there.

Twenty five percent of the population of Mogalakwena have an average monthly income between R1601 and R6402. This segment has partially benefited from the economic spin-offs generated by Anglo PPrust. A significant number of persons (over 50% of the population) have an average income of less than R 800 per month which is far less than the provincial average of R 2542 as calculated in 2007. Most of this segment of the population is unemployed, under skilled and likely to remain unemployed.

The mine employs on average 1000 people on long term contracts. Environmental Resource Management Consultants estimate that Anglo PPrust has created approximately 2500 other jobs in the formal sector of Mogalakwena and approximately 1800 jobs in the informal sector which has improved the standards of living for a significant number of households.

Yet, very few locals employed at Anglo PPrust are from the resettled communities. Most of these locals are underskilled and hence unemployable. A significant number of employees at the mine, particularly at supervisory and management levels which require high skills levels are resident in Mokopane for the duration of their contracts but are in fact from *"outside"* since there is a shortage of the specialised skills required for certain job specifications.

The expectation by locals that the mine employ more locals and which is often a bone of contention may thus be regarded as unrealistic. This study reaffirms the proposition by Buitelaar, 2001 that mining generally does not generate massive local employment.

Some of the people who lived in the close proximity to the mine, but who were relocated, are less well off now having lost their opportunity to pursue subsistence farming and to live off the land as they had done in Ga-Pila and Ga-Puka prior to the mining operations. The mine built shops in Ga-Pila only for those who previously had shops and some residents claim that the Section 21 Company representatives only are benefiting and have not permitted others to have shops. Some of those who resisted relocation claim to be losing between R 1000 to R 2000 per month in their old villages because they do not have access to the land and have also had their electricity cut off.

The land that has been reallocated to the resettled communities for ploughing of crops or grazing of animals is unsuitable and /or inadequate, e.g. insufficient land and water, for them to farm as they had done on their lands in the past. Some people have been given land by the Section 21 Company and others haven't. Some were given land that is stony and uncultivable. The situation for these resettled communities is similar to what has been documented in resettlement experiences in other parts of the world e.g. India, Pakistan and China where millions of people were displaced to make way for huge dams and/or mining projects.

"Instead of a forest from which they gathered everything they needed – food, fuel, fodder, rope, gum, tobacco, tooth powder, medicinal herbs, and housing materials…… Instead of a river, they have a hand pump. In their old villages, they had no money, but they were insured. If the rains failed, they had the forest to turn to and a river to fish in. Their livestock was their fixed deposit. Without all this, they're a heartbeat away from destitution" (Roy, 2002).

Anglo PPrust's impact on the GGP of the local economy is certainly significant. The R 10 million per month which it spends on wages and the multiplier effect that has on growth of the local economy cannot be regarded as insignificant.

The percentage share of mining to GGP has increased considerably and which could be regarded as the main source of stimulating other sectors of the local economy such as trade and services. Some sub-sectors of the economy of Mogalakwena such as the hospitality, transport and fast moving consumer goods (FMCG) have been very positively impacted by the presence of Anglo PPrust and the economic spin-offs resulting from the mine and its employees' spending locally.

Of the almost R 4 billion spent by Anglo PPrust in 2006 on capital expenditure due to mine expansions, R 225 million was spent on the relocation of Motlhotlo village. The project manger of Anglo Platinum expects the total relocation costs of that village to be in the region of R 500 million. The bulk of capital and working cost expenditure is done with suppliers outside of the sub-region. The local business chambers' representatives estimate that Anglo PPrust spends at most 10% of its working cost expenditure in Mogalakwena.

Anglo PPrust spent approximately 12% (R26 million) out of R 220 million for non capital procurement in Mogalakwena. Approximately R 6 million of this was from local enterprises in the wholesale and retail sub-sector of trade. Anglo PPrust has adopted a preferential procurement policy in favour of local HDSA's but this has not as yet translated into substantial local procurement.

On the issue of infrastructure improvements, Anglo PPrust has budgeted almost R 10 million per annum for the next five years (2008 – 2012) towards the provision of infrastructure such as roads, housing, water and electricity in the areas surrounding it. Its bulk water project for Mokopane town where it previously spent R 80 million is generally perceived as being beneficial for the area. Much of the corporate social investment budget of approximately R 120 million is spent on community projects e.g. building and upgrading of schools and clinics.

The spatial challenges facing the local municipality resulting primarily from the platinum mining at Anglo PPrust such as the accelerated migration of people to Mogalakwena in search of employment has been noted previously. Anglo PPrust is cooperating with the local municipality and other stakeholders in a joint forum towards developing strategies to deal with these challenges.

Over 80 000 people are employed directly and indirectly by Anglo Platinum national with total payroll benefits of over R 8 billion annually. Anglo Platinum Group’s annual contribution to the national economy of approximately R 950 000 value added and its contribution to the national fiscus of R 7.50 billion for the year 2007 is evidence of the strategic value of mining to the South African economy.

5.3 Environmental Quality and Sustainable Development

Anglo Platinum has committed to sustainable development principles and is complying with the reporting requirements of the Mining Charter according to KPMG Auditors.

It's compliance with environmental regulations and sustainable development principles are also certified by ISO 14001 International Standards. Anglo Platinum is doing even more than current legislation requires, in its view, in dealing with the mitigation of risks and the limiting of negative environmental impacts.

The major issue on environment appears to be related to the pollution of water resources in the areas in close proximity to the mining operations. The research findings by Carin Bosman, an independent environmental management advisor, and other parties e.g. ActionAid have been very scathing of Anglo Platinum. The tests at four sites out of ten found high levels of nitrate in the water and hence the water is regarded as *"unfit for human consumption".*

Even if the allegations by ActionAid are sensationalist as Anglo Platinum contends, yet the issue of water quality is a very serious one that requires all stakeholders, especially government, to address as a matter of urgency. Contamination of water can cause permanent ecological damage to the environment and lead to species loss, etc.

The effect of the air and ground pollution on farming activities in the area has not yet been fully researched by other independent parties and the impact of these may only become apparent in the future.

On the issue of alternative land allocated by the mine to the relocated communities for ploughing and grazing, various stakeholders are making very contradictory statements as to whether the land allocated is in fact adequate and/or suitable for farming activities. Anglo PPrust and government cannot just dismiss the complaints of the communities on the basis that Anglo Platinum is complying legally with the terms of the original agreements between itself and the local communities. The fact is that these communities and their generations to follow will have to deal with these environmental issues long after mining operations cease in the area.

Another issue for consideration is that almost every E.I.A. report by Anglo PPrust in the past 15 years has been conducted by the same consulting firm, SRK Consultants. Other stakeholders in the area, including local government, lack the resources to undertake comprehensive environmental impact assessments and hence the findings and recommendations by the aforementioned consultants are generally accepted without other independent investigation.

5.4 Social Issues

It is clear from this research that the very unequal powers that the various actors wield determine to a greater extent whose interests are given priority. Anglo PPrust uses its financial muscle and legitimates its actions through the Section 21 Companies and the consultants all of whom are paid by Anglo Platinum.

The Section 21 Companies are regarded as illegitimate and unaccountable by a significant number of local stakeholders, and Anglo is regarded as complicit in this, in that it has not used its leverage to make the Section 21 Companies accountable by holding regular elections.

The resettled communities believe that they have a right to be adequately compensated by the mining house which derives huge profits from its operations there, and/or from the government which receives substantial revenues in the form of various taxes from the mining houses.

The community members who are dissatisfied feel that the facilities provided by the mine are of standards less than what was promised to them during negotiations. The R 20 000 per household compensation is considered as paltry. These faction members claim that the once off payment of R1,2 million and the R 50 thousand monthly payments into a community trust fund are similarly paltry and they allege that the benefits from this fund accrues only to the Section 21 Company leaders and their followers.

According to Richard Spoor, their attorney, the communities have lost their land, had their houses damaged by blasting, their ground water depleted and their social structures disrupted. Spoor contends that no effort was made (by government officials or Section 21 representatives) to use the community's land rights as a lever to secure favourable terms for all the members of the relocated communities.

Simon Tebele of Anglo Platinum felt that Spoor's assertions *"are unfair on us because we are really doing a lot with those communities".* Ralph Havenstein, then CEO of Anglo Platinum told reporters in 2006 that at the root of this unhappiness was *"a struggle for leadership as well as rivalries between the different groups in the area".*

According to an official from the Department of Land Affairs, Nicolas Magado, community members cannot now claim that they were unaware of the implications of the agreements facilitated by the Department of Land Affairs at the time of negotiations between the mine and the representatives of the community (Sunday Independent, 2007).

On the issue of community engagement some managers of the mine expressed a sense of frustration that development is being hindered and delayed as a result of external parties and outside agitators who are influencing members of the local communities to be confrontational towards the mine. The mine managers cite the fact that communities at first agreed to the terms of relocation as had been negotiated with their representatives and only later began expressing their dissatisfaction.

Several incidents of community engagement meetings that were disrupted by the faction opposed to the Section 21 Company are given as evidence of outside agitation.

In the interviews conducted with local officials they confirmed that there were *"serious problems"* between the resettled communities and the mine. Some of these relate to the poor quality of housing and other infrastructure provided by the mine, in terms of the undertakings in the memorandum of agreement signed between the Mogalakwena local municipality, the Section 21 Company and the mine as the developer.

On the issue of engagement with the local municipality, the mine mangers felt that although, the relations with local leaders and officials are good; the local government should also better manage the expectation of locals which are sometimes unrealistic.

Local and provincial government leaders and officials are not able to assist the mine and the affected communities greatly in achieving the objectives of the Mining Charter for a variety of reasons, mainly relating to policy gaps as noted earlier, and the vagueness around who is responsible for implementing the policies of National Government as espoused in the MPRDA.

On the issue of local economic development (LED) Anglo PPrust has shown significant progress in recent years to broaden the benefits on issues relating to employment equity, affirmative action and black economic empowerment.

Yet the general view of most participants at the district growth and development summit is that Anglo PPrust should purchase more of its goods and services locally and it should be more proactive in fostering the creation of a mining cluster with forward and backward linkages to the mine. This could substantially broaden the benefits for the people in the area wherein it operates.

Despite mining's contributions to GDP/GGP, its contribution to the local economy is (mostly) perceived by the population (host community) as being unsatisfactory. Mining, without doubt, provides economic benefits for the regions where it takes place, but compared to the magnitude of investments these benefits are perceived to be marginal (Buitelaar, 2001).

Anglo PPrust, as a major player in the local economy, should in partnership with government find ways to increase *"the multiplier effect"* that its expenditure and investments is having, in a manner that can provide greater benefits for locals. Anglo PPrust should begin to embrace concepts such as local economic development and move beyond just focusing on doing business, earning profits and paying taxes.

On the related question of whether mining is proving to be a blessing or a curse, one's view may depend on where one sits i.e. for those individuals and businesses that are benefiting from the mine financially, it (the mine) is a huge blessing, but for many others, especially members of the local communities who are the most exposed to the adverse impacts of mining, it (the mine) is viewed as a curse, since it has in their view worsened their socio-economic conditions.

CHAPTER 6 - CONCLUSIONS AND RECOMMENDATIONS

Every nation wants development but development is not purely an economic phenomenon. It should be perceived as a multi-dimensional process involving the reorganisation and reorientation of the entire economic and social systems (Todaro, 1994). Development cannot be measured only in terms of growth rates. The development process must emphasise human beings and human potential as the ultimate purpose of the development effort.

Mining can be a powerful force in economic development and poverty reduction in the Mogalakwena sub-region of Waterberg District, especially through the processing and beneficiation of the mineral resources that are in abundant supply.

Anglo PPrust particularly needs to reassess its procurement and beneficiation policies so as to provide greater benefits to locals. It needs to proactively engage the local players to facilitate the creation of forward and backward linkages in a cluster with mining at the centre.

In the light of its unique situation and given the legacy of several centuries of colonialism and several decades of apartheid, it seems that South Africa needs to pursue a two-pronged approach to local economic development, viz; a market-led approach of business development and a market-critical approach of community development, in which the overriding goals would be those of empowerment, participation, co-operation, self-reliance and sustainability (Rogerson in Nel and Binns, 2002).

Although these two approaches may appear to be contradictory, they are nevertheless equally necessary to redress the imbalances of the past and to address the issues of skewed and *“enclave”* type patterns of development.

New local enterprises should be encouraged to facilitate the supply of intermediate products to create forward and backward linkages. There certainly exists an opportunity in Mogalakwena to create a mining logistical hub or cluster which can also serve as a nodal point for production and act as a stimulus to local economic growth.

Currently most minerals mined in South Africa are sent to other parts of the world for beneficiation. By developing processing and beneficiation plants, numerous jobs could be created and greater value can be added to the local economy. An enabling environment should be created that can help unlock the latent potential that exits. Infrastructure investment should be the main focus.

Anglo PPrust should develop a comprehensive closure framework/plan as a matter of urgency that can already begin to mitigate the negative impacts on the communities and environment. The fact that much of the land used by mining which is estimated to be between 5 and 10 thousand hectares would not be able to be rehabilitated and thus reduce the opportunity for farming and hence limiting the options for livelihood earnings for locals must be a central focus of the closure plan. These local communities will have to deal with the negative environmental effects long after mining operations cease in the area.

The scenario of mine closure has played out previously in South African towns hosting gold mines and is likely to reoccur in the future in those towns hosting platinum mines. The response to possible mine closure requires that national and local government work with local communities and the private sector to pursue alternative economic opportunities through appropriate development interventions.

It is imperative for government in partnership with major private enterprises to proactively attempt to further diversify the local economy and to develop new enterprises in other sectors in places where mines may close down. Anglo PPrust in partnership with Mogalakwena Municipality and others have committed to doing this. Initiatives such as the Joint Development Forum are still fairly recent to assess whether these initiatives are actually meeting their objectives.

Hence the imperativeness for government and the mining houses, in this case Anglo PPrust, to move beyond the rhetoric of *"developmental local government"* towards partnership agreements with local communities that ensure distributive justice and accountability. Strategies should be developed now that can provide alternative options for the affected communities

The disillusionment of local communities affected by relocations is clearly evident in the findings of this research and hence their feelings of betrayal and marginalisation. The findings of this study also suggest that PPrust has not demonstrated sufficient appreciation of the formal and informal community processes and it seems to have relied on a policy of co-option to achieve a sort of *"social license"*.

Anglo PPrust needs to earn the"*social license"* by involving all the legitimate representatives of local communities. It needs to address their issues of concern if it wants to contribute to economic and social development in a sustainable way, which may involve some costs and delays now but may yield greater dividends in the future.

Open, participatory democracy processes may result in delays in policy making and implementation because this entails a process of consensus-building. But if a policy decision is arrived at after such a process, it will more likely not need to be revisited and hence will allow for the debate to move forward. By contrast if policies are imposed, they themselves become the subject of debate and discord thus lessening their credibility and the likelihood of sustainability.

Social development will occur in a society when it is able to "*peacefully resolve conflict and to amicably address sources of common concern… Social development enhances economic development. The problem is that in the process of economic development, countries often regress in terms of social development …. Participation itself can help create a sense of community, a sine qua non for a high level of social capital. If individuals believe that they have had meaningful participation in the decisions affecting them, they will be more willing, to accept changes, even if they are adversely affected" (*Stiglitz, 1999)

In South Africa, the simplistic assumption that development entails the rolling out of infrastructure to the marginalized poor has lately been recognised to be profoundly damaging and significantly out of step with their real needs (Du Toit, 2004).

It cannot be assumed that chronic poverty and under-development will disappear as a result of growth and development through mining of natural minerals. Mineral wealth should be distributed equitably so that the total welfare of all stakeholders is maximised. This is certainly not a simple and straight forward exercise.

Government has a central role in ensuring that the mineral rents received are reinvested in infrastructure, education, and health and diversified economic development which can promote sustainable development.

Local and provincial government departments must be capacitated technically and otherwise to undertake comprehensive impact assessments. This can facilitate government to better fulfil its developmental agenda.

In a report entitled: Draft Institutional Model for the Empowerment of the Communities Hosting Mining Houses in Limpopo the following is proposed:

Each traditional community under the authority and leadership of the local municipalities and traditional leaders affected by mining activities should establish a development company or trust on behalf of the traditional communities. These boards should be registered as profit making organisations and not Section 21 Companies. The board of directors should be composed of members from the directly impacted communities, local municipalities, traditional authorities, local business and others.

At least 60% of the board must be constituted of local people. The structure should also be constituted of multi-disciplinary business units carrying out the mandates of their individual working communities. The directly impacted communities should hold reasonable or equitable stake in the form of shares (not less than 25%) on each and every project.

The report also recommended that a provincial coordinating structure be established to: empower traditional communities to establish the necessary institutional structures to meaningfully engage the mining houses on lease agreements, equity deals and skills development programmes and to ensure that the social and labour plans of the mining houses comply with the provincial spatial development frameworks and the local municipal IDP'S.

Clearly the Section 21 Company model has created more problems than it is solving for local communities and the draft model proposed above to empower the communities hosting mining houses may possibly be more suitable in realising the objectives of the MPRDA and the Mining Charter.

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Appendix 1

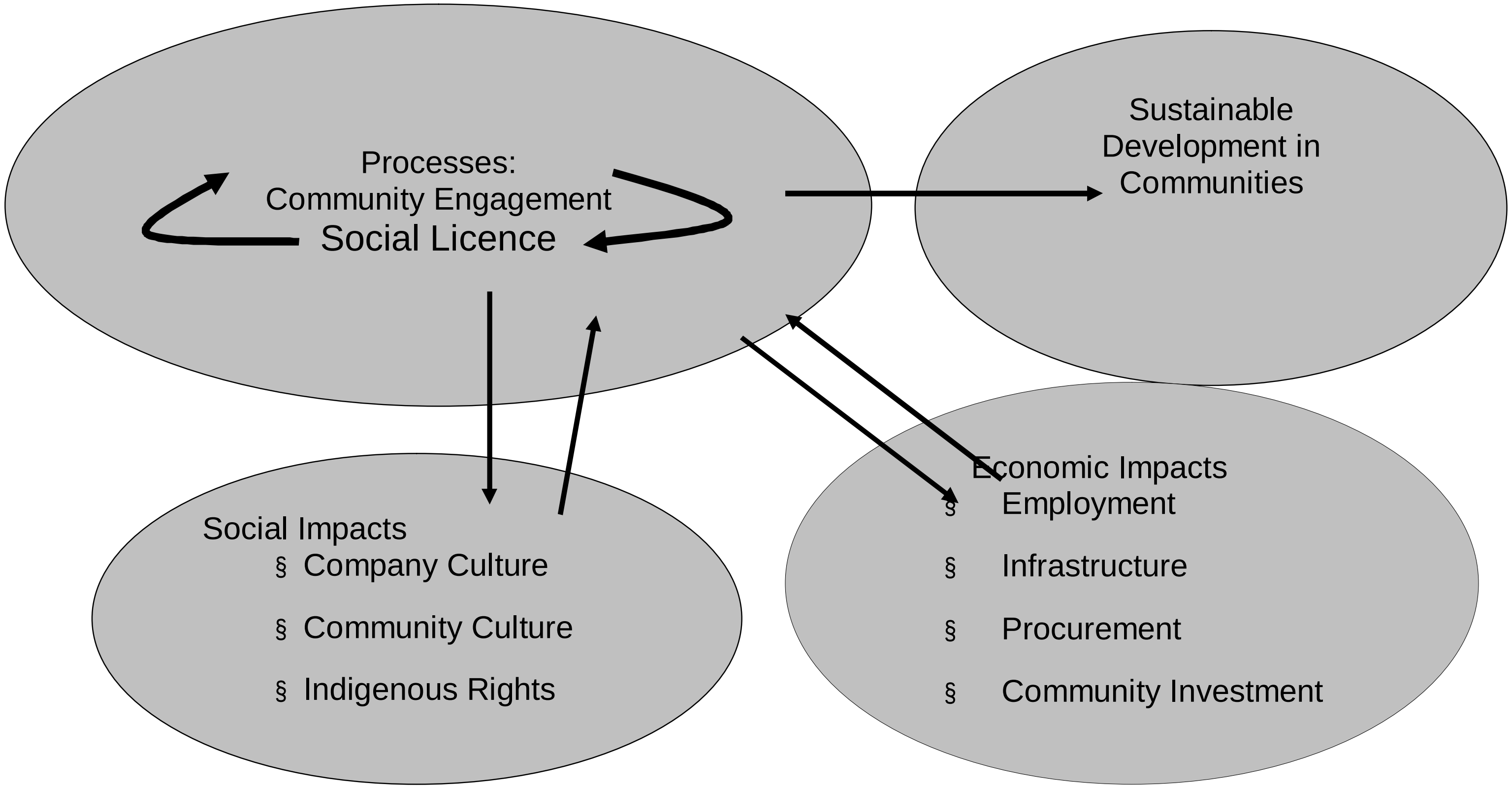
World Bank Involuntary Resettlement Policy

- Involuntary resettlement should be avoided or minimised where feasible by exploring all viable alternative project designs.
- Resettlement plans should be developed for cases where displacement is unavoidable.
- Involuntary resettlement should be integrated into project design and dealt with from the start of project preparations.
- Displaced populations should receive benefits from the project.
- Resettlement should be conceived and executed as a development programme.
- Affected persons should be:
  - Compensated for their losses at full replacement cost prior to the actual move.
  - Assisted with the move and supported during the transition period in the new resettlement site.
  - Assisted in their efforts to improve their living standards, income earning capacity and production levels, or at least to restore them.
- Community participation in planning and implementing resettlement should be encouraged.
- Resettlers should be integrated socially and economically into host communities through planning resettlement in areas benefiting from the project and through consultation with the future host communities.
- Compensation and resettlement assistance should not only be limited to affected persons that hold legal title to the land. The Bank recognises the existence of usufruct or customary rights to the land or use of resources.

Source: Institute of Social and Ethical Accountability, 2004

Appendix 2

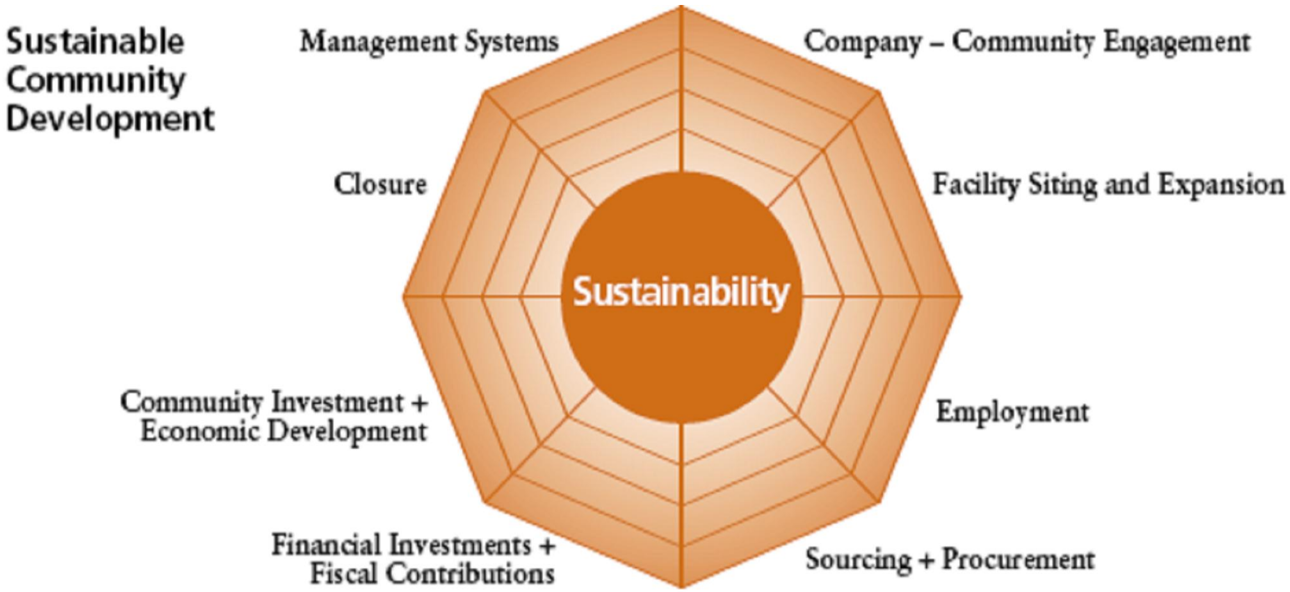
FRAMEWORK OF SUSTAINABLE DEVELOPMENT FOR MINES AND COMMUNITIES



Source: Institute of Social and Ethical Accountability, 2004

Appendix 3

SOCIO-ECONOMIC ASSESSMENT TOOLBOX (SEAT)



Source: Institute of Social and Ethical Accountability, 2004

Appendix 4

ECONOMIC IMPACTS

Direct value added to South Africa

Anglo Platinum adds direct value to the following sectors of south Africa society:

Employees

Total payroll and benefits paid in South Africa, R millions	2007	2006	2005	2004	2003
Gauteng	663	445	496	332,5	303,0
Limpopo	3,784	2,980	2,524	2,349,2	1,929,7
North West	3,863	2,993	2,886	3,092,6	2,742,3
Total	8,311	6,418	5,906	5,774,3	4,975,0
Wages	7,414	5,840	5,296	5,211,7	4,511,1
Pension	585	438	375	383,7	374,0
Other benefits	301	96	101	56,1	88,9
Redundancy payments	10	44	134	122,8	1,0
Total	8,311	6,418	5,906	5,774,3	4,975,0

Public sector

Taxes paid of all types in South Africa, R millions	2007	2006	2005	2004	2003
South African normal taxation	4,976	728	217	98,3	1,020,2
Secondary tax on companies	1,645	416	249	197,5	340,9
Royalties	197	212	161	169,2	21,6
Total	6,818	1,356	627	465,0	1,382,7

Donations in South Africa, R millions	2007	2006	2005	2004	2003
Community groups:					
Cash	52	25	30	18,0	6,4
In-Kind	0,0	0,0	0,0	0,2	0,7
Civil society groups:					
Cash	26	16	6	20,0	6,6
In-Kind	0,0	0,0	0,0	0,0	0,0
Other groups:					
Cash	48	9	18	53,8	41,2
In-Kind	0,0	0,0	0,0	0,1	0,0
Total	126	50	54	92,1	54,9

Non-core infrastructure development *, R million	2007	2006	2005	2004	2003
Total	35	4	15	24,2	23,1

Private sector

Suppliers

Costs of goods, materials & services purchased, R millions	2007	2006	2005	2004	2003
Total	23,100	18,900	14,504	12,506	13,149
Of which, sourced from South Africa	22,520	18,711	13,789	12,412	12,941

Source: Anglo Platinum Annual Reports

Appendix 5

The breakdown of employment equity per occupational level in Anglo Platinum

Occupational levels	Male			Female				White Male	Foreign National		TOTAL
	African	Coloured	Indian	African	Coloured	Indian	White		Male	Female	
Top management	1	0	0	0	0	0	0	11	1	0	13
Senior management	74	8	14	5	0	5	33	316	12	0	467
Professional qualified and experienced specialists and mid-management	356	25	11	73	6	18	180	927	15	0	1,611
Skilled technical and academically qualified workers, junior management, supervisors, foremen and superintendents	3,636	46	7	343	8	12	446	2,136	300	2	6,936
Semi-skilled and discretionary decision-making	29,632	58	4	1,069	17	7	246	443	2,810	0	34,286
Unskilled and defined decision-making	3,862	11	0	1,023	1	0	5	65	264	1	5,232
Total Permanent	37,561	148	36	2,513	32	42	910	3,898	3,402	3	48,545
Non-permanent employees	59	2	3	94	2	1	30	37	4	2	234
Grand Total	37,620	150	39	2,607	34	43	940	3,935	3,406	5	48,779

<u>Source:</u> Anglo Platinum Annual Reports

Appendix 6

Corporate Social Investment, R million			
Socio Economic Development (SED) Programmes			
	2007	2006	2005
Health and welfare	6.6	0.7	1.6
Arts,culturre and sports	0.5	1.9	3.6
Infrastructural development	35.2	19.5	14.5
SMME development and capacity building	18.6	4.6	2.2
Education	17.1	12,0	6.5
Chairman's Fund contribution	48	15.5	9.2
Total	126	54.2	37.6

Source: Anglo Platinum Annual Reports

Appendix 7

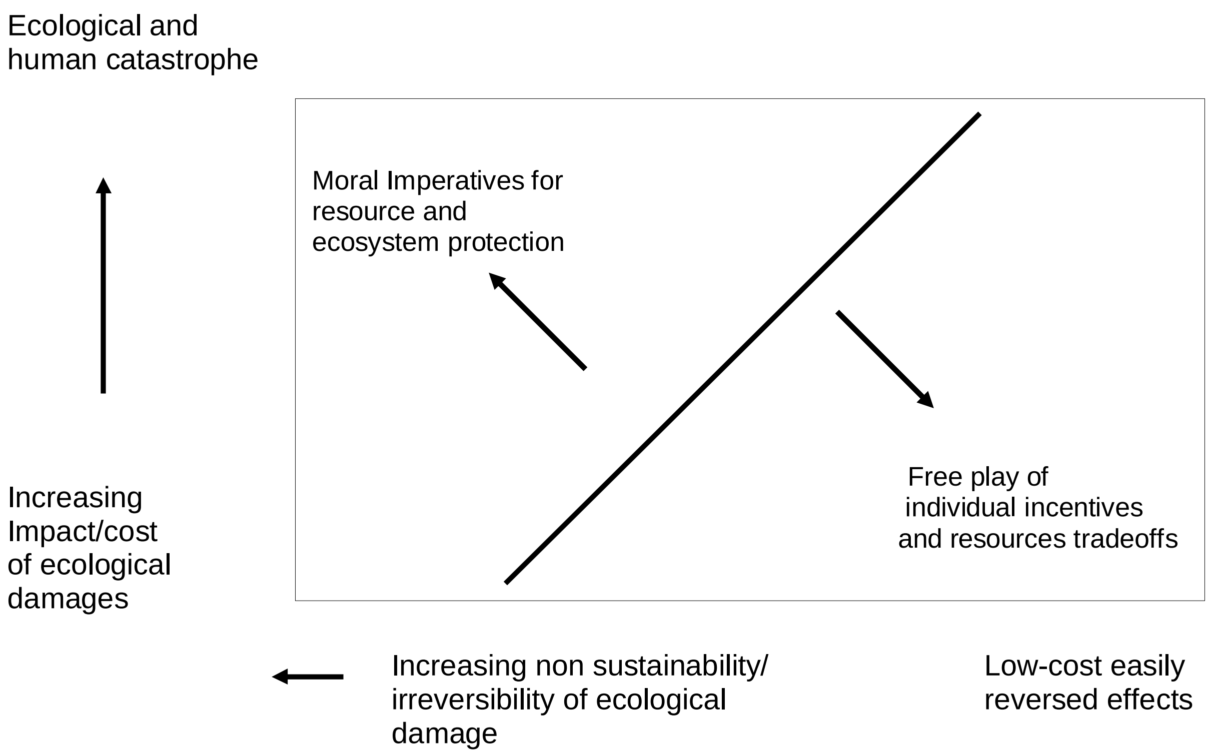
RURAL VILLAGES LOCATED IN THE CLOSEST PROXIMITY TO ANGLO PPRUST

Mapela Villages		Mokopane Villages
Danisane	Mammala	Ga-Madiba
Fothane	Mashaleng	Ga-mitchell
Ga-Chaba	Matlou	Ga-Mokaba
Ga-Chokwe	Matopa	Malepetleke
Ga-Maboela	Mesopotamia	Masodi
Ga-Mabusela	Mmatlhogo	Mosesetjane
Ga-Molekane	Mosoge	Moshate/Vaaltyn
Ga-Rawele	Motlhotlo (Ga-Puka & Ga Sekhaelelo)	Mountainview
Ga-Seema	Phafola	Sandsloot
Hans	Ramorulane	Sekgakapeng
Kwa-Kwalata	Skiming (Old & New skiming)	Tshamahansi
Lelaka	Sekuruwe	
Magope	Sterkwater	

Source: Potgietersrust Platinum Limited, 2007

Appendix 8

SAFE MINIMUM STANDARD FOR BALANCING NATURAL RESOURCE TRADE-OFFS AND IMPERATIVES FOR PRESERVATION



Source: Harris, et al, 2001

Appendix 9

View of Anglo PPrust Mine

The newer extension of the PPL mine, near Ga-Puka.

Source: ActionAid, 2008

Appendix 10

Picture of crack in house

Source: ActionAid, 2008

Appendix 11

Picture of grazing land

Source: ActionAid, 2008

Appendix 12

Picture of crack in school classroom floor

Source: ActionAid, 2008