

AN INVESTIGATION INTO THE SOCIAL DIMENSIONS OF MINING IN AFRICA: A CASE STUDY OF KAKANDA
CITY IN THE DEMOCRATIC REPUBLIC OF CONGO

Yvan Yenda Ilunga

BSocSc (Honours) International Relations, *University of Lubumbashi*, BA (Honours) Development Studies,
University of the Western Cape

Student Number: ILNYVA001

A minor dissertation submitted in partial fulfilment of the requirements for the award of the degree of
Master of Social Development

Faculty of the Humanities

University of Cape Town

2013

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

COMPULSORY DECLARATION

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works, of other people has been attributed, and has been cited and referenced.

Signature: _____ Date: _____

Signed by candidate

AN INVESTIGATION INTO THE SOCIAL DIMENSIONS OF MINING IN AFRICA: A CASE STUDY OF KAKANDA CITY IN THE DEMOCRATIC REPUBLIC OF CONGO

Yvan Yenda Ilunga, University of Cape Town, 2013

ABSTRACT

The Democratic Republic of Congo (DRC) is one of the few countries which has immense riches in terms of natural resources. These resources, especially mineral resources, have for many decades been the cause of conflicts. The paradox, within the DRC is that, although the country has great mineral wealth, its population is listed among the poorest in the world. Life in mining communities all around the world and in the DRC in particular, has many challenges and downsides. This study explores the social dimensions of mining activities in Kakanda, a mining city in the province of Katanga in the DRC. It investigates the social dimensions of mining activities in terms of community access to and utilisation of health services, education, and job creation. This study utilised a qualitative research approach to assess the sustainability of the livelihoods of people living in Kakanda and neighbouring communities. A total of 21 community members participated in the study, including women, men, the unemployed and mineworkers, as well as key informants. Key informant interviews and focus group discussion (FGD) were used to explore experiences and views with regard to mining activities in Kakanda.

This study was theoretically informed by social cohesion theory, social capital theory, as well as empowerment theory.

Findings were drawn from the responses of the participants, and analysed with reference to literature that have discussed similar issues. It was found that although mining activities have created new social and cultural forms and interconnections within communities, yet poverty is not alleviated or reduced, and people's livelihoods are not sustainable. Good health services, education and employment are not yet guaranteed to all community members, which constitute a major threat to human development and the security for people in Kakanda and the surrounding communities. Multi-stakeholder approach is needed to promote development in Kakanda that include the participation of the national government, civil society's organisations, and mining companies and communities members.

DEDICATION

I sincerely dedicate the work to my parents, especially my mother, who ensured that I received the very best education. Thank you for believing in me and encouraging me to reach my fullest potential. Thank you for your wisdom and prayers throughout my life. My success is yours.

To my sister Octavie, and brothers, Valmy and August, who have set a standard of excellence that has been a constant inspiration, and that I continue to aspire to. To you, I am grateful.

To everyone who believes that change is not a fiction, but a reality which comes with hard work and discipline.

University of Cape Town

ACKNOWLEDGMENTS

To begin with I would like to thank God, for giving me so many wonderful blessings, which I still cannot fully fathom. Thank you my Lord and Savior Jesus-Christ, for taking my hand and guiding me through the different seasons in life.

I thank you, my supervisor, Dr. Johannes John-Langba, for your help, direction and thorough guidance during my studies. Your patience and support have been remarkable.

Many thanks, to the Professors and lecturers of the Department of Social Development, for sharing their knowledge, and for igniting in me the passion to excel academically

This study would not have reached fruition without the support of many people. In particular, my uncle, Oscar Kabash, my spiritual mentor; and Dr. Bernadette Longo, my academic and career mentor.

I extend my thanks to all the other participants in the project. Since it is not possible to mention everyone, I would like to state my heartfelt appreciation of all the people who have supported me, in one way or another, during my Masters studies.

TABLE OF CONTENTS

ABSTRACT	i
DEDICATION	iii
ACKNOWLEDGMENTS	iv
TABLE OF CONTENTS	v
LIST OF FIGURES	vii
CHAPTER 1: INTRODUCTION	1
1.0. Background and Context.....	1
1.1. Statement of Research Problem	2
1.2. Aims and Objectives of the Study.....	4
1.3. Significance of the Study	5
1.4. Clarification of Concepts/ Definition of Terms.....	6
CHAPTER 2: LITERATURE REVIEW	9
2.0. Socio-economic Perspective on Mining Activities	9
2.1. Mining Activities and Public Health.....	15
2.2. Mining and Social Development.....	18
2.3. The Political Economy of Mining.....	21
2.4. Theoretical Framework	26
2.4.1. Social Cohesion theory	26
2.4.2. Social Capital	28
2.4.3. Empowerment theory.....	29
CHAPTER 3: METHODOLOGY	31
3.0. Research Design.....	31
3.1. Study site	32
3.2. Population and Sampling	33
3.2.1. Participants - number and criteria for selection	33
3.2.2. Participants - selection procedure	34
3.3. Data Collection.....	35
3.3.1. The Interview process	35
3.4. Data Analysis and Management.....	37
3.4.1. Data Verification.....	38
3.5. Ethical Considerations.....	39
3.5.1. Human subjects' protection	39
3.5.2. Informed consent	40
3.5.3. Confidentiality and anonymity	40
3.5.4. Voluntary participation	41
3.5.5. Competence of the researcher	41
3.5.6. Avoidance of harm and deception of participants	42
3.5.7. Reflexivity.....	42
3.6. Limitations of the Study	42
CHAPTER 4: RESULTS	44
4.0. Socio-Demographic Background of Participants.....	44
4.1. Social and Economic Dimensions of Mining Activities	45
4.1.1. The Economic dimensions of mining activities.....	46
4.1.2. Social dimensions of mining activities	49

4.2. Towards poverty alleviation.....	54
4.3. Barriers and Challenges to Accessing, Health, Social and Education Services.....	62
4.3.1. Barriers and challenges to accessing health services.....	62
4.3.2. Barriers and Challenges to accessing education.....	65
4.3.3. Barriers and challenges to job opportunities.....	67
4.4. Implication of Mining Activities on Social Cohesion.....	69
4.5. Mining Operation’s Investment in Education and Job Creation in Kakanda.....	71
4.6. Issues of social and economic sustainability in Kakanda	75
4.6.1. Social and economic situation of community members	75
4.7. Expected role of key stakeholders in the development of Kakanda city	77
4.7.1. The role of the national government.....	77
4.7.2. The role of civil society organisations	79
4.7.3. The role of the mining companies	79
CHAPTER 5: DISCUSSION AND CONCLUSION	82
References.....	89
Appendix A.....	98
Appendix B.....	104
Appendix C.....	110
Appendix D.....	111

LIST OF FIGURES

Figure 1: Geographic Map of Kakanda.....	31
--	----

CHAPTER 1: INTRODUCTION

1.0. Background and Context

The recent mineworker' strikes and instability in the mining sector of South Africa, which is due to dissatisfaction with low wages and their communities' lack of social services, have raised some fundamental questions around the social responsibilities of mining operators, on the one hand, and, on the other, the effectiveness of government's provision of social services to mining communities. These social and political concerns appear to be common to many mining communities all over Africa (Kapelus, 2002), include the Democratic Republic of Congo (DRC), mining communities in Africa face the on-going challenge of inadequate or absent health services and clean water.

For many communities around the world the consequences of the industrialisation, and in particular, the destruction of agrarian lands in the commercial pursuit of the mineral resources which lie beneath, have brought major social, environmental and economic changes (Warhurst, 1994). The areas most impacted are: education, health, the environment, social structures, and human security (Benatar & Brock, 2011). Because of the mining industries' dominant position within the global political economy, the consequent impact of the mining sector on wealth distribution, the disruptive social changes that have followed the large-scale exploitation of mineral resources, an investigation into the social dimensions of mining activities is warranted (Alnasrawi, 1994). This research focuses on mining activities in the city of Kakanda, which is in the Democratic Republic of Congo (DRC). The study investigates: access to, and utilisation of

health services and education, together with job creation (both formal and informal) in mining communities.

Not much research has been directed at establishing the effect that mining industries have on social sustainability of local communities. Thus, the investigation of social dimensions of mining activities will also consider the national mining policy, and the socio-economic programmes developed in this specific community. The Government of the Democratic Republic of Congo has proposed several policies directed at promoting economic growth and poverty alleviation: land reform and rural development, and the economic development of local communities (International Business Publications, 2009). In the mining sector, some reforms have attempted to set up standards for regulating mining investment and activities, as well as setting out the social responsibilities of mining companies. Similarly, in South Africa, not much has been done to establish policies and an intervention framework for assessing public health and social issues which challenge mining communities (International Monetary Fund, 2003).

1.1. Statement of Research Problem

From a practical point of view, identifying a research problem is not always easy; the researcher needs to have a good understanding of the area of study. There are certain criteria which must be considered when defining any research problem. Novelty is one of the criteria (Santosh, 2007). Novelty implies that the research problem “should be sufficiently original so that it doesn’t involve objectionable duplication. Talking about originality, it doesn’t mean that problem was not investigated in the past, but there is a constant need for verification of the previous investigations.”(Santosh, 2007:59)

Another consideration is that the research problem has to be interesting, feasible, and data must be available. The research problem must be defined so as to clearly delineate the nature and scope of the investigation. It must have a clear and specific unit of analysis. Leedy (1997: 45) states that “the problem or question is the axial centre around which the whole research effort turns. The statement of the problem must be expressed with the utmost verbal precision. The problem is then divided into more manageable sub problems. So stated, we can then see clearly the goal and direction of the entire research effort.”

During the colonial period, the economic activities of many African countries were determined and regulated in accordance with the policies and politics of certain colonial powers. These policies limited economic activities because they catered primarily to the interests of the colonial administration (Sandbrook, 1985). In the case of the Democratic Republic of Congo, the economic activities created by the Belgian Government were directed at the exploration and exploitation of diamonds, copper and cobalt, and various other minerals. In fact, this economic policy has been limited to developing the mines (Billon, 2007). (It should be noted that the price of minerals was, and still is, regulated by the international market.) As a consequence, not much investment has been put into other sectors, such as agriculture and manufacturing industries.

This study explored mining communities in the DRC, within the context of economic dependency and limitations on economic activities. In fact, mining activities occupy the first place in the DRC economy, especially in the Katanga province. Being a copper belt region, the Katanga province has many areas where there are mines. Among them is the city of Kakanda. Kakanda is dependent on mining. Its main economic activity is the exploitation of copper and

cobalt deposits. All other economic activities are secondary to mining. Socially and economically, the lives of the people of Kakanda are sustained by the mines. The city and its surrounding communities also have very large areas suitable for agriculture. Unfortunately, these are not much exploited. Thus, this research seeks to understand how life in the communities in and around Kakanda is affected by the dependence on mining activities.

To sum up, this study explored a research problem which focused on gaining insight into the social dimensions of mining activities in Kakanda and its neighbouring communities. In addition, it tried to understand the effect of these activities on the livelihoods and sustainability of these communities.

1.2. Aims and Objectives of the Study

This study aimed to explore the social dimensions of mining activities in the city of Kakanda, Democratic Republic of Congo, which appears to be socially and economically dependent on mining activities. The specific objectives of this study include:

- Identifying barriers to access to, and utilisation of, health and other basic social services
- Examining the nature and extent of mining activities in the city of Kakanda
- Understanding the role that mining plays in the alleviation of poverty in Kakanda
- Assessing the utilisation of social services in relation to equity, and their quality
- Assessing the socio-economic effects of mining activities in Kakanda

This research attempted to answer the following questions:

- What is the impact of mining activities on livelihoods in Kakanda?

- What role has mining played, or is playing, in alleviating poverty in the city of Kakanda?
- What are the barriers which prevent access to, and the utilisation of, health services, education and jobs?
- How do mining activities impact social cohesion in Kakanda?
- What investment has there been in education, and in the creation of jobs, as the means of ensuring the long term sustainability of Kakanda?

1.3. Significance of the Study

This study aimed at contributing to the understanding of the socio-economic dimensions of mining activities, in order to help policy makers understand what policies will promote the development of the mining sector. The research is of significance to any governmental institution that aims to regulate the activities of mining companies. Most governmental institutions struggle with low levels of compliance with regulations. One of the reasons given for non-compliance is a lack of knowledge. The research is also of interest to support government, as well as private agencies, with information on relevant social and economic policies which may be important for people in mining communities. Additionally, the research has also raised important factors such as those related to problematic of accessing health services in mining communities. These elements are of significance because they are informing stakeholders on social intervention programs which will help to uplift the living standard of people in mining communities.

Through the interviews and group discussions, awareness of social dimensions of mining activities has been raised. The debates that followed the interviews in many instances provided the participants with more accurate information regarding social need of the city of kakanda, and

through this, positive social engagement might have been born. By discussing on pertinent social and economic issues affecting the city of Kakanda and its population, the participants were motivated to seek solutions by engaging different stakeholders in the process. This might have encouraged them to take a further step and create development in the city.

1.4. Clarification of Concepts/ Definition of Terms

Mining. This concept has many meanings. The researcher is in agreement with John Southalan (2012:5) in defining mining as the “whole process and any stage within the process” relating to the development and operation of mines, for example, exploration, extraction of ore and other materials, transport etc. Mining activities refer to all activities performed by all companies involved in the process of mining on an industrial scale.

Social dimensions of mining. This concept will refer to all the social outcomes related to the existence of mining operations within a community. These outcomes can be the influx of migrant workers, types of disease that are directly related to the mining activities, the education system and standard of living of a mining community; there is also, social change resulting from the establishment, operation and closure of mines.

Community. The concept of community is often understood based on different perspectives. From an ideological point of view, community has been defined by Delanty Gerard (2010) as “the domain of immediate social relations, the familiar, proximity – and on the other hand, it refers to the universal community in which all human beings participate” (Delanty, 2010:4-5).

The concept of community can be subjective in that it represents an individual’s perception. Community can also be understood as a system of interaction, and interpersonal contact, and can

also refer to a geographic area. The mere fact that people lives together “gives rise to common problems that push them toward common perspectives and induce them to develop organizational vehicles for joint action” (David & Scott, 1969:47).

David and Scott’s approach focuses on community as the source of common action directed at addressing particular issues. Irwin T. Sanders (1975) sees community as place where people interact, and where other elements such as clear location, shape, size, communication and transportation routes, can play a part in shaping a community. All the above are aspects of community; in this study community is understood as a geographical space where people share some ground.

Mining community. This concept refers to the physical and geographic environment of the mines. The particularity of this community is that mine workers and their families stay here, as this is the primary residential area for workers.

Surrounding communities. The concept of surrounding communities may differ from one nation to another based on national or regional regulations. For the purpose of this thesis, surrounding communities refers to villages and cities which socio-economic status is directly influenced by mining activities. The difference with mining community is that these communities are not primary residential area for workers, but are classified within areas where mining industries have their social responsibilities. Democratic Republic of Congo’s mining code ((code minier) 2002) stipulates that the social responsibility of mining companies extends to 30km beyond the site of mining operations.

Investment. Gitman and Joehnk (2003:3) define investment as “any vehicle into which funds can be placed with the expectation that it will generate positive income and/or preserve or increase

its value.” This definition of investment shows that all investment projects developed are directed at increasing income or value. Unfortunately this definition only sees value in economic terms. This research project views investment as “investing in a variety of ways in the advancement of certain socially and/or environmentally, defined needs, projects or causes extraneous to their regular business activities.” (Njenga & Smit, 2007:4)Such investment can refer to education, health services, skill training, women empowerment etc.

University of Cape Town

CHAPTER 2: LITERATURE REVIEW

This chapter presents the literature which has informed the research on issues of social dimensions of mining activities in Africa. The chapter is divided into the socio economic perspective on mining activities, Mining Activities and Public Health, Mining and Social Development, The Political Economy of Mining, Mining policies in Africa, and then followed by the theoretical framework. This literature including the theoretical framework has established the foundation upon which the finding has been analysed.

2.0. Socio-economic Perspective on Mining Activities

Mining in Africa goes back thousands of years. Following the Industrial Revolution the mechanisation and industrialisation of mining have had a great impact on societies around the world. Industrialisation driven by the “laws of supply and demand and of profit” has seen the transformation of the global economy as the consequence of rapid and extensive technological progress (Wallerstein, 1979). Industrialisation has shaped the economic policies of governments, and governments’ regulation of economic activities. Mining has brought great changes to communities where mines are located. These changes have affected the environment, the social and, economic life and the politics of communities and states (Warhurst, 1994).

Of particular note are the issues related to the provision of health and social services. In fact, both health and social services seem to be the most challenging domains due to their direct impact on people’ lives.

From a purely economic view, failing to provide adequate health services for workers and their families living in the surrounding community may affect a mine's economic sustainability and productivity. In fact, many studies claim that most of the time mineral resources impact negatively on economic growth, particularly in developing countries (Pedro, 2006). Although economic growth is often measured by macro-economic indicators, it is important to acknowledge that poverty is a manifestation of economic challenges at the community level.

A review of the literature which deals with the social dimensions of mining activities reveals the significance of the concept of poverty. This concept has various definitions and interpretations in the literature as shown. Firstly poverty is defined as the situation where someone has less than the absolute minimum of income and basic good required by society, (Aldi & Klass, 1988) for example, people who are said to live below the poverty line. Secondly, poverty is also understood as having less than somebody else in the same society. This definition is based on comparison. Thirdly, poverty is seen as the feeling of not having enough. These ways of defining poverty show that the term can be measured against subjective or objective indicators.

According to Gordon David (2005), the United Nations Statement of June 1998 signed by the heads of all UN agencies defined poverty as “a denial of choices and opportunities, a violation of human dignity. It means lack of basic capacity to participate effectively in society. It means not having enough to feed and clothe a family, not having a school or clinic to go to; not having the land on which to grow one's food or a job to earn one's living, not having access to credit. It means insecurity, powerlessness and exclusion of individuals, households and communities. It means susceptibility to violence, and it often implies living on marginal or fragile environments, without access to clean water or sanitation” (Gordon, 2005:4).

This United Nations' definition is very broad; it does not explain or indicate the degree against which these indicators are measured. Therefore, there is the need for a list of standard indicators which are used by, and accepted by all. Many definitions of poverty used by several agencies or institutions, such as World Bank and Monetary International Funds, are based on the per capita Gross National Product, in other words, poverty is solely measured in terms of economic indicators (Taylor, 2012).

Indeed, we cannot separate poverty from material or economic indicators such as income, but it is also important to note that there are many other factors which should be considered when defining or measuring poverty. In fact, according to the World Bank (2000/2001), the concept of poverty refers to the situation where there is material deprivation, low levels of education and health, vulnerability and exposure to risk, as well as "voicelessness" and "powerlessness". This definition of poverty appears to be well balanced; not only does it take income as the main indicator of poverty, but it includes social and environmental dimensions as well. This leads us to the approach taken by Gordon David (2005). He sees poverty as "a condition characterized by severe deprivation of basic human needs, including food, safe drinking water, sanitation facilities, health, shelter, education and information. It depends not only on income but also on access to services." (Gordon, 2005:3) This perspective includes access to services as component of the concept of poverty. It is also necessary to emphasise, following Aldi and Klass (1988), that the notions of absolute and relative poverty are very important for gaining a holistic understanding of poverty.

Aldi and Klass (1998), argue that absolute poverty refers to a situation where people do not have the means of satisfying human basic needs. For instance, the exploitation of natural resources in a specific place does not necessarily benefit local communities, either economically, or as social betterment, for example, health services and education. The concept of relative poverty refers to situations where there is unequal distribution of resources and/or benefits within communities, cities, and even nations. The challenge represented by the concept of relative poverty is that there is no unambiguous, universal measurement of poverty; poverty and riches are matters of perception, i.e. subjective, and of fact, i.e. objective. In Addition, Sen (2007) argues that poverty should also be seen as lack of capabilities to make rational choice and to decide for one's destiny.

For the purpose of this study, the approach of the World Bank was adopted. However, additional elements from other definitions of poverty were also included from time to time. The concept of poverty reflects the social and economic realities in many communities. In the case of poverty and mining communities, Marcello et.al.(2001:191) argue that “globally and domestically, the politics of mining are increasingly being played out at the local community level, monitored closely by variety of media and non-governmental organisations around the world. Investors, insurance companies, banks, governments, and citizens increasingly want little to do with an industry that is seen as indifferent to the present and future socio-economic and biophysical welfare of local communities.” These various stakeholders want to see industries developing local communities, and for mining companies to facilitate sustainable development in the communities where they operate. Both globally and locally, mining companies are often depicted as institutions that do not listen to, or respond to the needs of the neighbouring communities.

If mining investments and activities are to be conducted so as to promote socio-economic development that is sustainable, then one needs to ask “what does sustainability mean?” Morris (2002) argues that the concept of sustainable development should not be evaluated solely in terms of economic growth or incomes. He points out that the World Commission on Environment and Development defines sustainable development as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (Morris, 2002:2). In addition, he argues, that although some analysts conceptualise sustainable development on indicators around poverty, environmental degradation, disease and other problems, in fact, these elements are threats to sustainable development, and addressing them is one of the best ways to create and promote development.

The sustainability of mining activities is often measured in terms of the employment rate within the community. However, Marcello et.al (2001) argue, that even though employment can signify positive economic activity, unfortunately, this is not what sustainability always means where the mining industries are concerned. Local communities expect mining activities to provide more jobs. Because of the mining industries’ potential for destruction, mining companies are often viewed in a negative light. However, Morris (2002) claims that even if companies explore mineral resources solely from the desire for profit, they have also improved our world; therefore, they should not be treated as only promoting unsustainable development.

In determining whether a development initiative promotes sustainable development, whether it relates to a mining community or not, it is necessary that it include mechanisms for alleviating poverty.

Pegg's (2006) analysis of mining activities and poverty reduction mechanisms, which is based on the World Bank categories, distinguishes three types of countries where mining companies operate. This categorisation is based primarily to the economic contribution of mining activities to the Gross National Product; it does not reflect the social dimension inherent in the concept of sustainable development. The first category includes countries where mining industries dominate the national economy. Mining output makes up more than 50% of all these countries' exports. These countries are economically dependent on mining. The Democratic Republic of Congo also belongs in this category.

The second type is titled critical mining countries. In these countries, mining activities contribute between 15 and 50% of all exports. The last category denotes countries where mining activities contribute between 6 to 15% of all exports. All these categories are based on the percentage of exports derived from mining, however, this does not equate with the poor living conditions of most citizens in these countries.

In addition to the economic contribution of mining industries to communities and countries, there are several other consequences which can be linked to the scale of mining activities, for example, the structure and service delivery in sectors such as, education and health, (Pegg, 2006).

2.1. Mining Activities and Public Health

Although, mining industries create economic growth, yet “mining projects also create a number of public health risks such as migrant workers spreading sexually transmitted diseases such as HIV/AIDS which adversely affect the health of local residents” (Pegg, 2006:378) of communities in mining areas. This is true of miners in both small-scale mining and large-scale mining who are often migrant workers, and live without their families and within disrupted social contexts (Pegg, 2006). In fact, the mobility of mine workers appears to contribute to high prevalence of human immunodeficiency virus (HIV) and other sexually communicable diseases in mining communities, as well as in the miners’ home communities.

In addition to having a negative effect on health, there is the vulnerability of mining communities due to rapid changes in the economy and the fabric of society. Mining activities can expose the poor to many social risks. For instance, the influx of people can contribute to social tensions between different communities, and it can also create new forms of poverty and increase the magnitude of social ills. It can lead to increased alcohol abuse, prostitution and child labour (Pegg, 2006). Because of the above mentioned negative consequences, Marcello et al (2001) feel that mining activities should adhere to the principles of ecological sustainability, economic vitality and social equity. These principles should be incorporated into the long term plans of the mining industries. Therefore, a sustainable mining community can be seen as the one that could realise a net benefit from the introduction of mining that lasts through the closure of the mine and beyond (Marcello et al., 2001). In addition, George Francis (1999), as cited in Marcello et al. (2001:192), argues that “sustainability meshes well with the desires of most people to achieve

decent levels of health and well-being, in pleasant surroundings, with strong community networks, and a diversity of opportunities for work and fulfilment.”

This is an example of pollution which has environmental consequences as the health of communities is negatively affected. The case of Ok Tedi mine, in Papua New Guinea, illustrates the environmental impact of mining activities and its social consequences. In fact, BHP (1999), mentioned by Marcello et al (2001) reported that since the beginning of the project, the mining company was not able to construct the planned tailings or waste rock storage facilities, as a consequence the materials have been discharged into the river system under government permit. Community leaders and nongovernmental organisations have objected to this practice, which they consider to be one of the “world’s worst mining disasters” (Mining Policy Centre, 1999a). As a result of the community’s objections, a project which will “reduce [the] mine’s environmental impact with engineering, social and environmental evaluations, including a risk assessment” (Marcello et al., 2001:193) is in development.

Another mining project, the Xolobeni Mineral Sands Project has been studied by Gqada (2011). In this case, “the often-adverse environmental effects of mineral resources exploitation have encouraged local community resistance to mining initiatives” (Gqada, 2011:10). Resistance is due to the negative impact of mining activities on health, livelihoods and social arrangements. Similar resistance has also occurred in Latin America during the 1990s and 2000s where for instance, in Costa Rica, a community opposed a mining project because they were not consulted about the development; and they knew that the use of sodium cyanide in the processing of metals could lead to deforestation and pollution, in particular, the pollution of water resources (Gqada, 2011).

Poor community health also jeopardises the long term sustainability of the community at large. Mining companies in these regions are not legally responsible for improving the living standard of the greater community, and do not care much about workers and the wider community. Hilson and Pardie (2006) have pointed out the need to establish whether the pain experienced by the miners is due to the physically demanding work, or the lack of safety measures regulating the handling of mercury. The literature has shown that there are obvious signs that people's overexposure to toxic mercury and failing to use the appropriate safeguards pose a significant cost burden to miners (Hilson & Pardie, 2006).

The question of health cannot be separated from the technology used in the mines. According to Hilson and Pardie (2006) the government has failed to provide innovative technology which would prevent or protect miners from being exposed to toxic chemicals, which would reduce pollution of the environment and, at the same time, would increase production. Yakubu (2003), as cited in Hilson and Pardie (2006), has highlighted several failures, on the part of the Ghanaian government, to support technological improvement in small-scale mining operations. He argues that the government has not been in a position to support small-scale mining operations economically, or by providing technical know-how. This has led miners to look to China as a source of low cost equipment and materials. Chinese equipment carries no guarantees or warranties, and replacement parts are not widely available. Besides the low quality of the machines, their effectiveness in protecting miners from mercury poisoning is unproven.

The government's failure to support small-scale mining has led to a growing distrust in government. This distrust is due to its ineffectiveness in combatting mercury pollution (Hilson et.al., 2007). In Akwatia in Ghana, health issues are directly or proximately related to mining.

Malaria is endemic in the region, and many people suffer from this disease, and the only healthcare facility is St Dominic's Hospital. This hospital was established to serve the miners, providing healthcare for everyone in the region was not a priority for mining companies (Hilson et.al., 2007). Still the hospital has extended its services to the whole community. The hospital does not have the resources to meet the increasing demand for health services required by community members. The community is also facing a rising incidence of HIV/AIDS, which is due mainly to migration, as well as social and familial disruption (Hilson et.al., 2007).

In Botswana, the main health issue associated with the mining areas is tuberculosis, which was identified when miners returned home (Maganu, 1988). Migrant labourers are considered to be responsible for widespread illness rather than the conditions in which people live. This approach ignores the impact of the environment on health. Maganu (1988) argues that the health problems of miners in South Africa and Botswana are similar. However, resistance to disease and survival often does not depend on the quality of healthcare service alone, but also on the capacity to adapt to a new environment. Even if mining companies provide quality healthcare, the individual response to exposure to disease differs from person to person.

2.2. Mining and Social Development

In the past mining companies aimed to develop their operations as follows: 1. Exploration for ore deposits; 2. Exploitation of the mineral resources: building the necessary mine infrastructure and attracting a workforce; 3. Leaving behind a functioning infrastructure, such as roads, housing and a power supply, for the use of the local community when a mine closes (Marcello et al., 2001). Yet, this has not been common practice.

Investment in “bricks and mortar ...[is] no substitute for enlightenment, education and organisation” (Marcello et al., 2001:199). Education and training are necessary for the future development of the community and to sustain the community after the closure of a mine. Community participation is essential throughout the life history of every mine. This pro-active approach will minimise false expectations on the part of the community during the early days of exploration and therefore mitigate the impact of closure (Marcello et al., 2001). The foundation of community development and/or sustainability is not infrastructure development, but local capacity building.

In Africa, in Ghana in particular, mining activities have been the focus of development studies. According to Hilson and Pardie (2006), the small-scale gold mining sector in Ghana contributes to sustaining local communities by alleviating poverty. Although, the main focus of their study is directed at the miners’ economic dependency on the mercury providers, the authors suggested that this dependency can be stopped by introducing a technology which does not use mercury in processing gold, and through education.

As for many economic activities, the study has shown that small-scale mining in this region has not helped to alleviate poverty. The World Bank hosted an international roundtable on artisanal mining. There it was agreed that “to [a] large extent, informal mining is a poverty driven activity” (Barry, 1966:1, cited in Hilson & Pardie, 2006: 107). However, the fact is that small-scale mining and artisanal mining sometimes referred to as informal mining, contribute in different way to bring income in household. Unfortunately some governments and multinational companies consider artisanal or small-scale mining as illicit mining.

Stopping small-scale operations without providing alternative sources of employment will do more harm than good because it will lead to greater unemployment and many other social ills. In Ghana the battle to regulate mining is due to many critical health issues observed in communities where small-scale mining operates (Hilson & Padrie, 2006). There is lack of qualified medical practitioners and appropriate health infrastructure in these communities. As a consequence community members, particularly women, buy pain killing drugs, such as Panado, almost every day in order to relieve the physical pain caused by the hard work (Hilson & Pardie, 2006).

The African Labour Research Network (ALRN) (2007) compared the working conditions at Gold Fields Limited, AngloGold Ashanti and Metrorex Limited, in Namibia, Zambia, Ghana and Zimbabwe. Wages differed from one country to another. This is mostly due to differences in working conditions and the cost of living. In Zimbabwe, for instance, the Freda Rebecca mine, which is owned by AngloGold Ashanti, pays miners less than elsewhere. Poor wages often lead to illegal mining and the corruption of some local government leaders. The ALRN report argues that across these gold mining companies there are huge income inequalities in the wage structure. In addition to wages, health and safety are also concerns. Some companies do provide health facilities and ensure the safety of their mineworkers. Furthermore, many mining companies subcontract recruiting, so miners do not have permanent jobs. Such an arrangement means that mining companies are not obliged to provide job security and benefits. Workers are without a social security safety net, and sometimes without the protection of trade unions.

The ALRN (2007) report notes that besides the protection and safety of workers, protection of environment is an important matter. Even if mining companies try to reduce environmental degradation, issues of water pollution, and the relocation of villages are still of critical concern.

Despite the criticisms often directed at the practices of mining companies, the ALNR (2007) recognises that in terms of social investment, mining companies have shown great progress. For example, the Gold Fields Company has set up a foundation and trust which supports education, health and community development projects wherever it operates. In South Africa, these initiatives include support for schools, universities, clinics, hospitals, and nursing colleges, and community-based healthcare for people living with HIV/AIDS.

Although social, economic and environmental initiatives have been established to better peoples' lives, in Africa, people and communities have, by and large, derived limited benefits from mining operations. Mining activities should benefit local communities: firstly, economic linkages need to build local supply chains for the mines; secondly, by encouraging value added services, local communities should benefit from the creation of additional jobs. Thirdly, governments should implement, most strictly, policies which protect natural resources, such as water and green pastures, and the communities surrounding mining areas. Fourthly, since mines have a limited lifespan, the government as well as trade unions should insist that a mining company has plans for the full rehabilitation of the affected area after a mine closes. Lastly, there also need to be plans for economic diversification so as to offset retrenchments at the end of a mine's operating life (ALNR, 2007).

2.3. The Political Economy of Mining

The political economy of mining operations in many countries globally often relates by conflict, and even violence, between communities, mining companies and government. This may happen because a community's views are often ignored during negotiations about the establishment of mining industries by government and investors. Conflict can arise because mining operations

pollute water sources, or land is confiscated without fair compensation, or the resources that locals rely on for a livelihood are completely destroyed (Roger Moody et al., 2001). Examples of this sort of conflict is the “bloody revolution started in Bougainville in 1988, blockades at mine or exploration sites as far afield as the Philippine Cordillera, the Ecuadorian rainforest, the Papua New Guinea highlands, and a rash of court cases” (Moody et al., 2001: 138).

The exercise of force in solving mining conflicts is not necessarily the best solution. Some communities, due to their economic and social dependence on mining operations, are unable to survive even a temporary closure of a mine; they are, therefore, willing to compromise their fundamental rights in order to continue earning a living. In such cases, a mining company will become stronger because the power relations favour the mining company. In order to protect a community, socially and economically, Moody et al. (2001) call upon mining companies to make a commitment to sustainable development. This requires that they protect the environment, create alternative job opportunities and support the livelihoods of the people in the surrounding communities. The recruitment of outsiders to work in the mines, because the local community cannot provide workers with the appropriate skills, may also lead to social conflict among workers. Therefore, mining companies’ social investment in local communities should also be directed to establishing training centres where the local workforce can acquire the necessary skills (Yukiko et al., 2010).

Government policies should also prioritise sustainability when negotiating with mining companies. Mining operations have such far reaching effects on local communities, that it is essential to investigate the association of mining and a variety of health and social problems, for example, prostitution and drug abuse, the high cost of living, inadequate housing and education,

family instability and the absence of one or both parents, which so often characterise mining communities. Unemployment, especially among local youth, remains the major challenge that disrupts mining communities, and mining companies have yet to solve it (Moody et al., 2001).

Therefore, it is argued that mining industry has the duty to balance the imperative for economic growth with the necessity for poverty alleviation. For instance, empower people to increase production, as well as invest in people 'capabilities with entrepreneurial skills. In many cases, where mining companies have been the main economic actors, community members do not benefit, because mining is directed at making a profit for the company directors and shareholders, and social welfare is seldom their concern (Hilson, 2006).

Hilson (2006) argues that if artisanal small-scale mining activities are allowed to operate legally they will quickly produce tangible results: the creation of additional entrepreneurial endeavours, such as the manufacture and repair of tools, the provision of transport, food and catering services. He buttressed De Mowbray's (2002) view of the benefits of artisanal small-scale mining "[it] feeds into a larger global movement of socially and economically disenfranchised people becoming more proactive and self-reliant in initiating poverty-alleviation strategies of their own" (Hilson, 2006:50).

Artisanal small-scale mining provides a means for women to climb out of poverty. In many third world countries, women are marginalised or ignored when it comes to employment, especially in countries where traditional values and religions regulate social life. In some countries, Burkina Faso, for example, government has supported the promotion of women to manage small-scale mining enterprises said Gueye, (2001) as cited in Hislon (2006). Research has shown that small-scale mining helps to reduce suicide and reliance on crime among people who are economically

disempowered. However, small-scale mining also has negative consequences; there are concerns about child labour and violation of human rights. Alcohol and drug abuse, the degradation of morals values, the rising incidence of prostitution and sexually transmitted disease, and a high crime rate may also be social problems in these communities.

Anna Marriot (2008) has researched the extension of healthcare and occupational safety to people employed in a small-scale mining operation in KwaZulu Natal. The object of her study was to analyse any exclusion of informal workers from the conventional occupational health and safety (OHS) mechanisms. According to Marriot (2008) despite the signs of commitment, from the national government, to the support and promote small medium and micro enterprises (SMMEs) and informal workers in South Africa, the current regulatory and economic environment in which informal workers operate and the way in which mainstream services are structured leave many without support or protection. Therefore, it is important to consider the correlation between informal work and poverty when analysing the social impact of mining activities.

Mutemeri and Peterson (2002), as cited in Marriot (2008), point to post-1994 South Africa as an example where small-scale mining has received considerable support from the government. This is because the government views small-scale mining as an instrument which is part of programmes and strategies for rural employment and local economic development. For Marriot (2008), government and workers involvement in small-scale mining is the way to go, because firstly, health and safety are not a priority for workers. They are more concerned about making a profit rather than thinking of their well-being while working; secondly, the overcrowding in a particular community (mining community) may affect service delivery, for example, provision of

a water supply and healthcare infrastructure; Thirdly, the illegal status of workers and some enterprises may discourage investment in that particular location. Therefore, social and economic situation of people in this type of community may be negatively affected by the lack of government investment.

Low wages and pre-existing health issues, especially HIV/AIDS, may also increase the risk of illness in such a community. In order to address these social threats, especially those related to health, the recognition of informal enterprises is a precondition for change, as it will produce strong structures and policies that will support sustainable local economic development, the social protection of workers and their families, as well as the establishment of health and safety structures in communities.

Natural resources in Africa always pose problem, especially with regards to create sustainable development in Africa. Each country has its own mining policy, yet issues of resources management seem to be similar in many countries. This study has looked on African perspective of mining industry. The main issue to be addressed by governments in Africa is the negotiation capacity with transnational corporate, and the improvement of mineral resources management. In fact, once these two are addressed by African governments, it would be easy to initiates social investment in communities based on natural resources and therefore promote development (Africa Union, 2009). The literature also mentioned the weakness for many African governments to have strong mining policies is the lack of financial resources or financial institutions to promote transparency in the mining sectors. This leads to lack of control with regards to mining operations and therefore, people are kept in poverty (Africa Union, 2011). The Democratic Republic of Congo is also engaged in the same process of creating a social environment whereby

mining policy in the Country will promote social and economic development. However, it has to be noted that the political stability in the Democratic Republic of Congo remains fragile and this has major impact on government accountability, especially on the mining sector. This has implications on less funding available for social and economic project within mining communities and the all country at large (Hinde, 2010).

2.4. Theoretical Framework

Conceptualising the theoretical framework of the research clearly and concisely helps to explore the research problem and set its boundaries (Morse & Field, 1995). This investigation is grounded on social cohesion theory, social capital and empowerment theories and each will be critically reviewed below.

2.4.1. Social Cohesion theory

The concept of social cohesion has different definitions and indicators which are used depending on the context. The social cohesion theory analyses the integration and interaction of individuals or groups within specific organised or non-organised social structures (Stansfeld, 2006). He describes social cohesion as the cohesive community relationships in which there are high levels of participation by community members in activities related to the life of the community and to public affairs. Berger-Schmitt (2002), as cited in Jenson (2010), points out that the concept of social cohesion has two dimensions; the first is the inequality dimension, and the second is the social capital dimension. Jenson (2010:3) argues that the first dimension refers “to [the] goal of promoting equal opportunities and reducing disparities and division within a society. This also includes the aspect of social exclusion” The second dimension relates to “the goal of

strengthening social relations, interactions and ties and embraces all aspects which are generally considered as the social capital of a society”.

The Council of Europe (2001) as cited by Battaini-Dragoni and Dominioni (2003) emphasised the fact that social cohesion at its operational level should ensure that people within a community have the same opportunities to access the means necessary to secure their basic needs, to progress, and to dignity. Hence, at a functional level social cohesion is seen as “the capacity of a society to ensure the welfare of all its members, minimizing disparities and avoiding polarization.”(Battaini-Dragoni & Dominioni, 2003: 6)

Both levels of social cohesion lead to the need of quantification. In fact, social cohesion should not be seen as abstract concept. Hence, Friedkin (2004) argues that it is necessary to measure social cohesion in order to get a clear understanding of the concept. The first measure is demonstrated by the situation where a person is characterised by an individual attitude with the intention or desire to remain in the group, being loyal to the group and to be identified with the group. Secondly, in addition to the attitude, behaviour is one of the most significant indicators with which to measure the level of social cohesion. For community members, social cohesion can be measured in terms of the willingness to serve as active member of the community, to participate in community activities, and moral and physical attachment to the community. This attachment can be demonstrated by the fact of taking part in action such as protest due to lack of services delivery, representing the community's interest in different platforms. This theory is relevant to this study of the social dimensions of mining activities because it has helped to understand social dynamics brought by the mines, and the extent to which social capital is manifesting as

cohesion and identity are strengthened or weakened in Kakanda. These dynamics are related to migrant labours, shock of ethnics, tribes and cultures.

2.4.2. Social Capital

Social Capital theory refers to the way social relations, which link different actors, are interconnected within or outside the community. Social relations are based upon mutual trust (Longo Bernadette & Ilunga, Y.Yvan, 2013). Social capital can be viewed from the perspective of an individual or that of a collective. In both cases social capital should be seen as engagement in interactions and networking in order to produce profits (Lin et al. 2001). At the individual level, social capital built based on social relations “reinforce identity and recognition. Being assured of one worthiness as an individual and a member of a social group sharing similar interests” (Lin, 2001:7). As from the collective perspective, social capital is mostly seen as mechanisms through which a formal or in formal networks are build which contribute to the governance of an organisation (Lin et al.2001).These mechanisms lead to an interdependency in individual decision making process because the perception of “Us” as community will characterise all members(Durlauf & Young, 2001).

The applicability of social capital theory to this investigation is based on the understanding of the level of trust toward local government institutions and mining companies, and also the level of trust between community members based on their cultural diversities. In fact, this diversity should to some extent constitute a tool for addressing the challenges which development has created for Kakanda and its surrounding communities. In fact, social capital works hand in hand with the concept of social cohesion. The implementation of these two theories is often linked to the satisfaction of basic human needs. In fact, if these needs are not met, people can go on strike

and oppose governments and mines institutions for instances, which may have a negative impact on community social structures. However, if the needs are met satisfactorily, the level of trust and participation will be positive, and will facilitate social and economic development because people will develop a common interest and mutual trust.

2.4.3. Empowerment theory

Empowerment is the act or process of vesting power on someone or some group. Lukes (1974) sees power as the capacity to affect the behavior of others, both individuals and of social groups. Kenneth E. Pigg (2002) sees empowerment as giving power to another so that an individual can decide on what he or she will do. In terms of community development, empowerment can be analyzed from three perspectives: the self-empowerment of individuals, i.e. individuals gain power through their own efforts; empowerment within organizations, and empowerment through social action (Pigg, 2002).

Empowerment in organizations is usually perceived as empowerment associated with holding managerial or leadership positions within an organization (Pigg, 2002). The third approach is empowerment through social action aimed at redressing structural inequalities. Hence, by incorporating these perspectives one can explore how empowerment theory helps to explain how people build their moral and intellectual capacities in order to become self-sufficient. The following definition summarises the approach used in this investigation: “empowerment theory represents an expansive view of individual and collective behavior that includes the active participation of individuals and groups in altering and shaping the socio-environmental context” (Paul, W. Seep et.al., 2001: 716).

Empowerment theory may, in addition, be complemented by the capability approach proposed by Amartya Sen. Sen (2001) refers to the capacities that people have, in order to do and to be, what they want. For the purpose of this research, empowerment has been measured against these characteristics: meaning, impact, user autonomy, self-efficacy, self-determination and competence. These are characteristics derived from the work of Rashi Sehgal and Gleen Stewart (2007). This approach is relevant because it has informed the study on the capacities which enable people in mining communities to maintain themselves so that they are not totally dependent on mining operations for their livelihood. They are, therefore, appropriate indicators of self-reliance and sustainability independent of mining activities.

University of Cape Town

CHAPTER 3: METHODOLOGY

This chapter presents the methodology used in order to investigate the issues of social dimensions of mining activities and analyze the data collected. It constitutes by the research design, study site, Data management and Analysis, Data collection, Population and Sampling, Data verification, Ethical considerations, and Limitations. Some of these elements have sub headings which helped in-depth analyses.

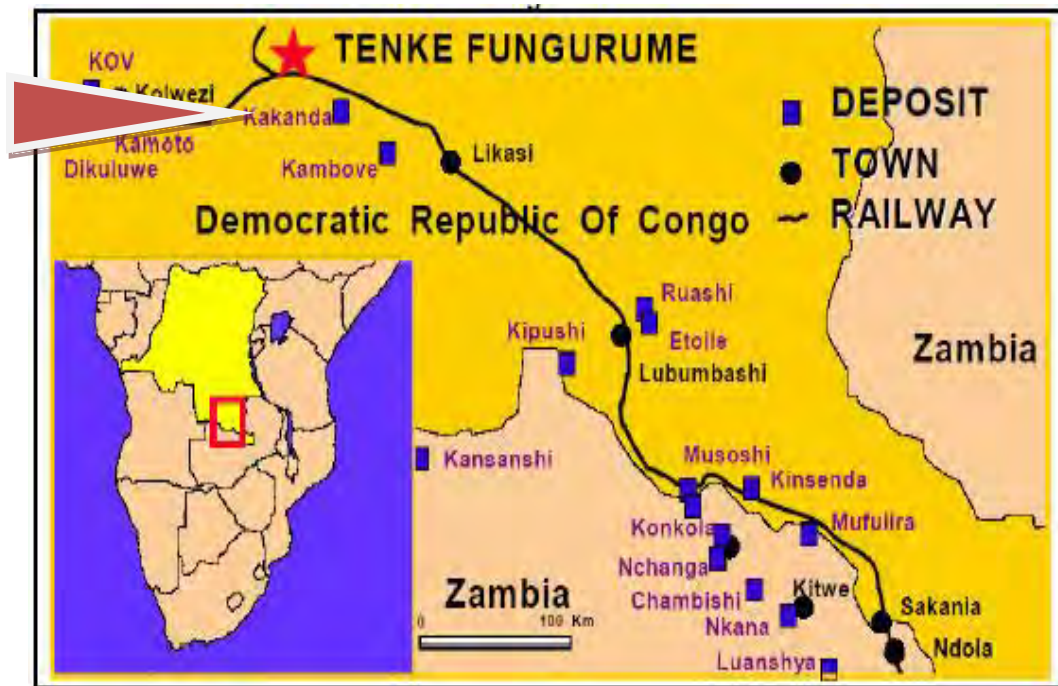
3.0. Research Design

This research utilised a qualitative research design to investigate the social dimensions of mining in Kakanda city in the Democratic Republic of Congo. Qualitative research design is appropriate to this research project because of its “emphasis on studying human action in its natural setting and through the eyes of the actors themselves, together with an emphasis on detailed description and understanding phenomena within the appropriate context” (Babbie & Mouton, 2001:278). Furthermore, the importance of qualitative design is the fact that research is done in the habitat of the actors (De Vos, 1998), and focuses on the realities of everyday life. The advantage of research design is that it allows the researcher to document “the ways in which meanings are constructed, negotiated within particular social contexts” (Burton, 2000), which Babbie and Mouton (2001) consider is essential when doing ethnographic studies. Qualitative research design enabled the researcher to record community members’ views about the operation of mining activities and its effect on their lives.

3.1. Study site

The geographic area where the study was conducted is the city of Kakanda, which is situated about 190 km from Lubumbashi, the provincial capital of the province of Katanga in the Democratic Republic of Congo as shown in Figure 1.

Figure 1: Geographic location of Kakanda



Source: Adapted from Tenke Mining Corp, 2007.

This area is known primarily for its mineral resources, more particularly copper. 95% of the city's business is mining oriented, and up to 4500 workers are employed by two main mining companies in the city. Fungurume, Tenke and Likasi are other mining oriented cities in the region. The intensity of mining in this part of the province attracts migrant labourers from other provinces and countries. The mix of cultures and life styles as a result of the demographic explosion and fast economic growth of Kakanda makes this a site to research. The biggest

mining company in Kakanda has a considerable financial investment in large scale mining operations, which make use of up-to-date information technology. French and Swahili are the most commonly spoken languages in the city. Sanga, a local language, is also spoken widely.

3.2. Population and Sampling

The population of the study include residents of Kakanda. This was the unit of analysis because the aim was to explore the social dimensions of mining activities in the city of Kakanda. Babbie and Mouton (2001: 164) define sampling as “the process of selecting observations”. A purposive sampling was used to identify the research participants. Probability sampling, where one chooses a random sample from a list containing everyone in the population being sampled (Babbie, 2001) was both impossible and inappropriate. Some of the reasons for this method being inappropriate was that it was unlikely that participants selected through a random sample would be willing to answer sensitive questions regarding mining activities and the other reason is that the selected participants could follow in the criteria of those who have lived in the city of Kakanda for a minimum of sixth months.

3.2.1. Participants - number and criteria for selection

All research participants, had been living in the city for a minimum of six months. The sample consisted of 21 participants, which generated rich enough data to make comparisons and draw conclusions. Among the participants three were interviewed as Key informant and the rest were divided into three groups which served as groups for focus discussion. The age varied from 18 to 60 years, except for two participants, who were 17, a male and female. They were selected based on their responsibility as the female participant was already married and therefore considered to be mature. As for the male participant his involvement in community activities and several

responsibilities hold have made him a suitable candidate worthy to create an exception in age requirement.

The participants were selected according to the following criteria:

- Being 18 years old and above, and have stayed in Kakanda for more six months and having the knowledge and understanding of the socio-economic situation of Kakanda. All participants satisfied the criteria except two has explained above.
- Male and female: As men and women often have different perspectives on social and economic issues, both were approached. One third of the sample consisted of women and the rest of men. In addition, the sample was composed with employed and unemployed participants. This was in order to get different perspectives on same issues from mineworkers and the other participants.

3.2.2. Participants - selection procedure

In order to access reliable and in-depth information about the research topic, a purposive sampling was chosen (Babbie, 2001). The majority of the participants were identified through the researcher's personal network in Kakanda: three residents, who were identified as contact people in Kakanda, and were asked to assist the researcher to access participants. Two of them were male and one female. The female was a mine worker as well as one male. The other male was unemployed. All of them agreed to participate in the study and assist in finding other participants. Through the three contact people 18 of the research participants were contacted. For the three remaining participants who were the key informants, the researcher used his personal

network to contact them. This network was built years ago when the researcher was working in the city.

3.3. Data Collection

3.3.1. The Interview process

The sample population was composed of key informants, who were a union representative, local government and mining officials; other participants included adult women and men who were active in the community, and mine workers. Three key informants were selected. This group was chosen in order to gain insight into local decision makers' perspectives. Three discussions were also held with three focus groups.

The first focus group was composed of six adult male workers; the second of six unemployed male, and the third group was composed of six adult female, some of whom were workers, and some were unemployed. Because the number of women in employment is small, this helped to balance different points of view within one focus group. All respondents, either as members in focus groups or key informant, answered to one standardised questionnaire. The questions were the same for all participants. This size of the groups was very important as it allowed avoiding unimportant category which could not be relevant to the research. In addition to the focus group discussions, in-depth interviews were organised with the key informants. This arrangement enabled the researcher to include participants representing different interest groups within the community.

Interaction with participants. Participants were in most cases contacted first by the above mentioned contact people. Secondly, the researcher was introduced to the participants. During

this introduction the researcher explained the aim of the research, and what was expected from the participants. Participants were informed that they were among the twenty one people participating and that their contribution to the research was confidential. It was explained that their names would not be used. They were also informed of the use of the audio recorder, that only the researcher and his supervisor would listen to the recorded material, and that the sound files would be destroyed after the study is completed. The participants were introduced to the themes of the interview at this stage.

The researcher emphasized that the interview was voluntary and participants had to choose whether or not they wanted to answer the different questions. The participants were advised to rather not answer a question in case they feel uncomfortable with it. It was also explained that the aim of the study and the interview was not to collect information in order to bring change in community. This element was very important because it helped to avoid raising wrong expectation in people.

Against the background of this information, the participants would decide whether or not to participate in the research. This process ensured that the ethical consideration of informed consent was fulfilled. The participants who had to take part in focus groups were also informed that they were going to be back of focus groups with other participations. And on a day of the interview and/or focus discussions, the researcher explained the above elements again to the participants and gave them the right to choose either to participate or not.

Venue for interviews. The interviews with key informant were conducted in their offices. Except the one with the union representative which was conducted at his house. For the focus discussions all of them were conducted at private house which was made available for the

research. This was important because each participant had to feel secured in a safe and neutral area. All the focus discussions were conducted in the afternoon after 4.30PM. This was in order to allow those who are employed to come out of their respective jobs. And for the unemployed during the day most of them had to look for something to bring bread on the table. Therefore, the time was suitable for all of them. As for key informant, the interview with the local government authority happened during the working hours. With mining representative, the interview was conducted in his office after from 4.30PM when he completed his administrative work. The same applied for the union representative.

3.4. Data Analysis and Management

There are many approaches to data analysis. Huberman and Miles (1994)' approach, which is described by De Vos (2001) was used to analyse the data. This approach has three steps.

The first step was data reduction. With the data reduction, all the interviews and recorded data were pulled together, and afterwards put into one conceptual framework divided composed of a number of topics and themes. The second step was data display. The data was summarised under a number of themes. This gave a clear flow and understanding of the field work and helped identify unnecessary information which does not appear in the final report. The third step of the analysis was the stage of drawing conclusions and verification of data. This third stage required the use of a triangulation method, which helped the researcher to avoid ethnocentric bias when categorising participants' views under relevant themes. The different points of view enabled the researcher to identify the different perspectives surrounding the issues of social dimensions of mining activities.

Data management is an integral part of data analysis (De Vos, 2002). Data management refers to the systematic organisation of data. Firstly, a master file was established by the researcher. This file contained the raw data, namely, the questionnaire responses and the data collected by means of a PC based recording system. Secondly, the researcher set up background files of data collected in the field, which would be helpful in understanding the community dynamics, in particular, the factors which were likely to influence participants' perceptions of community affairs, but did not form part of the main focus of the research. Thirdly, analytic file was created to hold the analysed data.

3.4.1. Data Verification

Qualitative research approach requires a vigorous verification of the data collected which must conform to the principle of reliability and validity (Morse, M.J et.al, 2002). The validity of data question the trustworthiness of the study and research. This study employed Yardley (2008) validity toolbox for qualitative research to verify the data.

According to Yardley (2008), the first step in data verification is the coding stage. This stage is mostly related to the selection of emerging themes while using a second researcher to verify if these themes are correct and limit research bias. This process goes throughout the all research. In order to make this stage successful, the researcher worked closely with the supervisor to minimise any potential research errors.

The second stage looks on the level of comprehension of the situation under investigation. This is evaluated by the consideration of similar studies done by other researchers. In the context of this study, evidence is on the literature review chapter. Thirdly is reflexivity. This explained in

detail in the next section under ethical consideration. Fourthly, the study should be rigorous at the extent that all transcripts were analysed with same attention. This was done as each transcript was considered as unique and included different approaches and voices to the same issues. The fifth step refers to the consistency of the analysis. On this note, the researcher had regular sessions with the supervisor to discuss and ensure consistency in the study. The sixth step on validity aims to measure or evaluate the impact of the study. This consider if the study is making any particular contribution with regard to the situation investigated. In context of this study, the impacts and significance of the study is explained and discuss in the fourth and fifth chapter of this study. In addition, it is also important to notice that during the all process of data analysis and interpretation, the researcher used also the triangulation methods to ensure validity of data based on different opinions and statements from the participants.

3.5. Ethical Considerations

It is crucial that at every stage, that the researcher adheres to the appropriate ethical standards. Research ethics are very complex in the Social Sciences, especially when research involves human participants (De Vos et.al., 2011).Consequently, this research project was managed with ethical sensitivity, as will emerge in the following paragraphs.

3.5.1. Human subjects' protection

In order to conform to research ethics, especially qualitative research which involves human participations, prior to this study; a research proposal for this study was submitted to; an approved by the University of Cape Town- Department of Social Development- Ethics Review Board. Authorisation was also obtained from the local government in Kakanda in the DRC (see appendix C &D).

View that this study involves human subjects, this has required rigorous ethical consideration prior to; during ; and after the research (Brinkmann & Kvale,2008).With regard to participants' protection, given that many people do not want to talk about the implications of mining activities in Kakanda, participants were ensured confidentiality. Numbers were used to identify participants to ensure that all information remained anonymous. This applied that all information provided could not be traced back to participants. It is also to be noted that the local authorities were not informed of the identity of participants given that the participation aimed to be voluntary and people's right to privacy were ensured.

3.5.2. Informed consent

The research was undertaken with the participants' informed consent. Participants were made aware of the research purpose, the research objectives and the academic institution involved through an initial one and one face to face contact. Those participants that agreed to participate in the study during the contact were then invited to attend the focus discussion for those selected for the focus groups and key interviews for the key informants. Then again before the discussion or interviews the research objectives, research purpose and the academic institution involved were stated again. This informed consent was verbal as participants did not feel safe to be addressed with a written note.

3.5.3. Confidentiality and anonymity

The researcher guaranteed confidentiality of all information provided by the participants. The identities of the participants were kept confidential. The recordings of the interviews and discussions were kept in a secure place, and only the researcher and his supervisor have access to them. After an appropriate period the recordings will be deleted. Confidentiality was based on a

verbal agreement of privacy and anonymity, between the researcher and the participants. No information disclosed during the interviews was and may be disseminated by any party, except as part of this study. In addition, a statement assuring confidentiality was read in the presence of all participants (see appendix A & B). This is how confidentiality was assured.

3.5.4. Voluntary participation

It was of importance that the research participants participated on a voluntary basis. The researcher was in no position to pressurise people to participate. There were no obvious benefits from participating, or consequences of declining the request to participate. The participants were informed of the nature of the participation which was based on one's free will. This has made the principle of voluntary participation considered ensured.

3.5.5. Competence of the researcher

The researcher had to demonstrate appropriate skills of social sciences research. This was successfully demonstrated due to long period of academic preparation through modules such as research methodology and many other research seminar and workshops organised by the University as well as other agencies. In addition, the researcher had practical academic and professional skills related to the field work. This skills were made possible based on the researcher work experience with many non-government organisations either as researcher, fieldworker or administrative. All these put together gave the researcher the capabilities to conduct this research in the natural sitting. The researcher has done his best to avoid all kinds of external influences which could affect the credibility and veracity of the data he collected.

3.5.6. Avoidance of harm and deception of participants

The researcher made no promises, nor raised false expectations amongst the community or participants. Therefore, all the components of the research, including its aims and objectives were clearly explained by the researcher to everyone who participated. This approach helped to avoid emotional harm, and prevent false expectations or wrongdoing from affecting the researcher and participants.

3.5.7. Reflexivity

The researcher was born and grew up in a mining town, and had a personal interest in understanding and investigating life in mining communities. This investigation needed to go beyond the common conceptions that people have of mining communities. Over the past few years, the researcher's interest has grown stronger, because of increased social inequality and poverty in many mining cities, and their surrounding communities, in Africa, over the past two years there has also been greater social instability in some mining communities in Africa. The Marikana tragedy in South Africa is an example of this instability.

3.6. Limitations of the Study

Research is often constrained by limitations such as time, resources, assumptions, and the chosen methodology and tools. Additionally, some aspects which are relevant to the study may have been omitted or not being fully covered. This section aims to account for the main limitations to this study.

The first limitation was the issue of trust between participants and researcher. In fact, some participants though participating in the discussions took considerably time to try to find out the researcher's true agenda and motivation. This could have been minimised and avoided, if the trusted relation was built through long interaction between the researcher and the participants. Another limitation was the close link between mining activities and a certain political agenda. In fact, it has been discovered that some government officials have shares and interest in the way the mining industry is run in the city of Kakanda. Therefore, participants could have felt unsafe to speak openly some truth which may be contrary to the interest of government's officials. Other limitations are a consequence of the criteria used to select participants; selection was done purposively. Some interesting potential participants were excluded because the size of the sample was restricted.

CHAPTER 4: RESULTS

This chapter reports on the findings related to the social dimensions of mining activities in the city of Kakanda in the province of Katanga in the Democratic Republic of Congo. The chapter is divided into the following sub-sections. Firstly, the chapter describes the participants who have been involved in the research. Secondly, it analyses the social and economic dimensions of mining activities. Thirdly, the success, or otherwise, of the efforts to alleviate poverty in Kakanda are assessed. Fourthly, the findings related to the barriers and challenges to gaining access to health services, education, and job opportunities are presented. Fifthly, the effects that mining has had on social cohesion are outlined; this is followed by a summary of the findings about investment in education and job creation in the city. Lastly, the chapter deals with the findings related to the social and economic sustainability in Kakanda. It is to be noted that, the mining companies operating in Kakanda will be identified by the name of “Lubudi Mining” and “Swahili Mining”

4.0. Socio-Demographic Background of Participants

As mentioned, the participants were selected from people living in the city of Kakanda. Based on purposive sampling and the required number of participants in each focus group, it was important to have a diversified range of participants involve in the study. Therefore, the study had twenty-one participants. Among them six were women and the rest men. Among the women three were married, two were single mother and one was single. Three of the women were employed in the mines and among the three one was a senior staff in one of the departments. The rest of the participants among women were unemployed. It is to be noted that, the

composition of the female focus group is justified by the fact that the number of women in employment is very small, compared to that of men, and the researcher wished to cater for differing views.

As for the men, among the fifteen participants which include key informants, eight were employed in the mines, one in the local government and six were unemployed. Among the workers six were married and three single. As for the group of the unemployed two were married and four single. The age minimum age of the participants was eighteen. The average age for all participants in the study was twenty eight.

4.1. Social and Economic Dimensions of Mining Activities

In many African countries mining activities, whether artisanal or not, are generally viewed in a negative light. In many of the mining communities the issues of access to clean water, proper sanitation, protection of women and children, poverty alleviation and local economic development have not been addressed. The local communities have not been able to benefit, socially and/or economically, from the exploitation of mineral resources in their area. However, it is important to note that there has been economic growth and business development on a large scale, yet the local communities have been excluded from the benefits of this growth. Mining industries were set up in Kakanda during the colonial period. The community members' version of the history of mining in their city tells of times of poverty and of employment, of happiness and of dropping out of school, of hunger and of abundance, etc. The researcher's findings related the effects of mining activities on the economic and social life in Kakanda follow.

4.1.1. The Economic dimensions of mining activities

The participants presented different points of view regarding the economic dimensions of mining activities in Kakanda; The first category of participants argued that mining activities have contributed significantly to improving the livelihoods and living condition in the city of Kakanda and the surrounding communities.

Between 2000 and 2004 the transport situation in the city was very difficult, but, since the end of 2004, the transport system has been improved considerably due to increase of investment in the mining sector in Kakanda. A mine official said that, up to 120 buses had been bought, and are available to transport workers every day. The public transport system has also been improved. Apart from transport, other activities, such as the creation of small businesses owned by community members, as well as the establishment of financial institutions, such as banks, are indicators of economic development which has resulted from the presence of mining industry.

The large number of jobs provided by the mines has had an economic impact on households. Up to 4500 people have been employed since 2006, and these people have a regular income on which to support their families. A union representative said:

Being formally employed has [an] impact on [the] family livelihood and standard due to the fact that, families have [a] regular income. *(Key Informant, Union representative)*

Economic development is guaranteed because of the number of workers in permanent jobs who are employed in the industry.

A mines representative argued that:

In the beginning Lubudi Mining had only plus minus 400 workers. But now it has up to 4000 workers, this excludes workers who are employed by partners' companies operating in Lubudi mining plants. Among these partners is Swahili Mining which has employed plus minus 2000 permanent workers (*Key Informant, Mines Representative*)

This economic contribution is recognised by a male FGD participant, who claimed that economically, *now illiterate and educated, all can at least have access to a formal or informal loan system*. Besides the mines as a source of income, another unemployed male FGD participant mentioned the improvement of the food supply, as result of economic development. However, this informant emphasises that only those in regular employment can easily afford to buy food.

In addition to the private business initiatives which have improved food security, local mining companies have invested in the agricultural, farming and fishing sectors to improve food security, said a mine representative. Community members have received support from the mining companies in the form of seed and securing their market by buying their products. Some people thought that the companies were helping to create an additional market; other participants argued that the companies were trying to extend their economic control over the local communities. This would let it dictate the price of products if an alternative market was not developed. The agricultural projects in Nguba, Luita, Kambove, Kasonga and Kakanda provide food, and the villages of Kikaka and Kando have fish farming projects. In *each village up to 2000 fish are farmed* said a mine representative.

A potential indicator of local economic development deriving from mining is the influx of migrant workers. This is used by local authorities. This indicator can only be justified if an assessment shows that the money that migrant workers earn is spent in Kakanda; otherwise one cannot assume that the presence of migrant workers is equal to local economic development unless the ratio of local community members, who are in full-time employment, should be greater than that of migrant labourers, and the total income of these locals should also be far higher than that of migrant workers. Unfortunately this statistic could not be verified due to the lack of data; neither the government, nor the mining companies could supply the necessary data. Some participants said that mining activities did not bring economic benefit to all households in Kakanda. In fact, one unemployed female participant argued that *economically, only employed people can survive based on the regular salaries they receive, for non-mine workers and other unemployed people, there is no economic benefit that these activities have brought in.*

An unemployed male FGD participant added that mining activities have *destroyed Kakanda due to the new culture of loan among the unemployed.* Both statements reflect the fact that the economic benefits from mining do not include everyone, and are not distributed equally amongst community members. There are no mechanisms that can improve the living conditions of the unemployed. In order to survive, the unemployed are forced to borrow money, no matter how high the interest rate. As a consequence, the indebtedness to money lenders creates economic dependency instead of developing people's capabilities for self-development.

Another economic effect of mining activities, over which women are divided, is the place of agriculture in the economy of Kakanda. In fact, a female FGD participant argued that one of the positive contributions that mining has brought is that *currently few people are doing agricultural*

work and cutting firewood. Many are focusing on the mining sector which gives much income to sustain their livelihood. This statement is supported by the fact those who used to do agricultural work had limited resources on which to live until their crops were harvested. Their limited financial and technical resources did not allow them to expand their activities, so their income was very small. In turning to mining they receive a regular income, and there is no long wait for wages.

An opposite opinion was voiced by a local government official; the neglect of agriculture and farming, compared to the situation in the past, constituted a particularly negative economic consequence of the mining industry for Kakanda and its surrounding communities. Families depend totally on the mines as they have no other way of earning money to support themselves. Although the mines supply their workers' food, for example, maize meal, this is not enough for the all communities because they do not feed everyone, example the unemployed. The community cannot survive on the monthly food ration supplied by the mining companies, therefore, an alternative should be considered, otherwise, the community may face food crises in the long term. The mining industry has improved the standard of living of community members in Kakanda, either by employing them in the mines, or as a result of the economic opportunities in the trade and transport sectors, which support mining activities. However, it is also important to mention that, there are concerns about agricultural work, which has been negatively affected.

4.1.2. Social dimensions of mining activities

The mining activities affect both the economy and the social life of Kakanda. Most of the time, the economic effect of mining is considered as the only indicator of the success or failure of the mining industry. The social dimensions are often neglected or overlooked, whether things have

to be improved for families and communities. This improvement would manifest as access to water and electricity, education and health services, for example.

In Kakanda the provision of public services, such as electricity and water, has been severely compromised by an influx of migrants over the last six years. A mine representative commented, that in less than ten years, the population of Kakanda has gone from 3000, to approximately 50 000 people, and this *has had consequences on factors such as accessibility to water and electricity*. The city has a limited electricity and water infrastructure, many community members, especially those in the new houses; make use of illegal connections to the power grid. Illegal connections frequently overload the electricity system, which often results in regular interruptions to the electricity supply to homes. Those who are connected to the power grid, legally and illegally, do not pay for electricity. Electricity costs are paid by the mining companies. The mining companies also provide water to the communities and to every family, either via taps or wells. The infrastructure is maintained by the mining companies. Regarding the water supply to the surrounding villages, a mine representative said *Lubudi Mining is doing its best to improve access to clean water. In fact the company has established so far, two water tanks each with a capacity of 5000 litres, in one of the surrounding villages. The plan to implement ... [similar] projects in other villages is being analyzed.*

A union representative stated that some community members make illegal connections to the water system which often damages the pipes so that the company has to spend a lot of money on repairs. All participants agreed that the distribution of water and electricity is a positive consequence of mining in Kakanda. Another important finding relates to the provision of health services. The mining companies have set up a health infrastructure for mine workers, their

families and other community members. The access is free of charge for mine workers and their families, and other people are able to use the health facilities at a relatively low. The investment in health provision accords with the companies' social responsibility for improving people's living condition.

The mining companies have rehabilitated the former *General de Carriere et de Mine (GCM)* hospital in Kakanda in order to improve health services. In addition, the companies have built a day hospital in Luita (Luita is about 18KM from the Kakanda and has a Lubudi Mining plant); a dispensary (day hospital), called Central Unity, and a surgery in Kakanda; and day hospitals in Likasi (40KM from Kakanda), Kambove (35 KM from Kakanda) and Lubumbashi (160km from Kakanda). The day hospitals outside Kakanda serve the office workers in the other cities. They also serve the families of workers who do not stay in Kakanda, they are mostly families of migrant workers.

Regarding the companies' contribution to improving health provision, some participants mentioned the expanded health infrastructure and the enlargement of the local hospital as a major development. The companies have extended health provision, free of charge, to many workers who are not employed in the mines, but who are based in Kakanda and the surrounding communities. Amongst the beneficiaries are local government officials and traditional leaders and their families, as well as the police and the military and their families. Other people living in Kakanda pay a small admission fee for hospital treatment. People living in surrounding villages, especially those close to Kikaka village, where a day hospital has been established, receive medical services and medication free of charge.

A mine representative expressed appreciation for the day hospital services in Kikaka saying

It has been shown in the medical statistics that, up to 500 patients are seen per month in this day hospital. In cases of emergency, or any other sickness, that this day hospital cannot take care of, patients are referred to the main hospital in Kakanda for appropriate follow up. *(Key Informant, mine representative)*

In general, the participants expressed positive feelings about the health services. However, in communities members also meet difficulties when trying to access and utilise these services. These challenges and difficulties will be explored later in the appropriate section. The social impact of mining activities on people's livelihood is also reflected by education and skill training.

Lubudi Mining has done ... amazing work in Kakanda and life has been improved compared to [the] previous situation ...in the city. In fact, the city has grown, people have built houses, and many have relocated to Kakanda. In addition, the education of children in the communities has been improved. Before Lubudi Mining, many kids were just ...sitting around without any education, and playing almost the whole day on the streets. This could have created several social ... [problems] such as crime and girls' pregnancies *(Unemployed male FGD participant)*

In addition, another participant, an employed female FGD participant, emphasised that *since Lubudi Mining arrived, many kids have been sent back to school, and young men have been employed. This has helped their families to develop and improve.*

This finding shows how much education has been valued as part of the social investment of the mining companies. This is very different from the situation in many mining cities, and from the general assumption that in many mining communities the school dropout rate is always higher than in other communities where mining activities are not conducted. A mine representative

argued that his/her company *has managed to establish a complete curriculum, which actually has up to 8098 learners and 157 workers including full time and part time workers. In the surrounding areas, Lubudi Mining has built a total of 10 classrooms two places; at the Kikaka village and Kambove.*

All the participants agreed that the companies have invested in education; young people can attend primary and secondary schools. However the quality of the teachers and what is taught has been criticised. It was also said that the education system is not suited to the needs of community members, who have to face a job market that wants workers who have up-to-date skills in mechanics, electrical knowledge, Information Technology and many other. Other threats to social relations which participants see as a consequence of mining operations in Kakanda are the increased number of bars and hotels. These are places where prostitution, violence and alcohol abuse flourish, and such conditions undermine public health (HIV, tuberculosis) and security.

Another consequence of mining activities is the creation of employment in the city of Kakanda. Job creation is driven by the national mining policy which promotes employment equity in the recruitment process so that local community members benefit from the job opportunities in mining. The mining companies wanted to get the local government authority and traditional leaders involved in the recruitment process so as to make sure that members of the local community are employed. Communities' members said that this mechanism did not benefit poor people as it should. One unemployed male FGD participant argued that:

The local government authorities do not speak on behalf of local people. They have also been receiving bribes in order to give employers names of people to be recruited. People had to pay US \$ 100 in order to be registered on the list of potential employed people. *(Unemployed male FGD participant)*

Although local families have had an opportunity to see their living conditions improve, corruption has often prevented this from happening. The mining companies have invested in the promotion of sport, for example, volley ball, athletics, and basketball, as well as soccer, for both men and women. They have also rehabilitated some sport facilities. Their investment in sport is aimed at building social cohesion amongst workers and community members. In conclusion, the finding discussed above can be summarised as follows;

it is very important to acknowledge that the presence of Lubudi Mining has facilitated many social benefits for people in the local community and surrounding communities. Among these benefits are health facilities and education (schools), employment.... (*Key Informant Union Representative*)

Based on this, one can argue that the presence of the mining industry in Kakanda has improved the living conditions of households, but poverty alleviation still requires the continuing involvement of all stakeholders.

4.2. Towards poverty alleviation

Alleviating poverty in every country in the world is one of the United Nations Millennium Development Goals. In fact, nations and communities are continually developing strategies to end, or at least alleviate poverty. The city of Kakanda is part of the global battle against poverty, and the presence of mining operations seems to be an advantage, because the city can benefit from the social and economic investments from the mining companies and other private investors. This section reflects the Kakanda community's perception of the role that the mining companies have played, or can play in the alleviation of poverty in the city Kakanda and its surrounding communities. This section is divided in two parts: first, there is a discussion of

structural mechanisms that have been put in place by mining companies to alleviate poverty. The second part reflects the communities' responsibility for poverty alleviation.

The structural approach to ending poverty, taken by the city, shows that Kakanda has moved from artisanal mining activities to the formal and highly structured exploitation of minerals. Formal employment has seen the creation of many employment opportunities in the mining sector for educated and uneducated people. The following statement supports this finding;

In fact, at the beginning Lubudi Mining had only plus minus (+/-) 400 workers, but now it has plus minus (+/-) 4000 workers, this excludes workers who are employed by partner companies operating at Lubudi Mining's plants. Among these partners companies we have Swahili Mining, which employs plus minus (+/-) 2000."(*Key Informant, Mine representative*)

In fact, formal employment allows people to earn regular salaries, and enables them to reduce the level of poverty. In fact, in the city of Kakanda, this employment mechanism (formal employment) also helps some unemployed people, who have family members working in the mines. This is supported by these two statements:

Lubudi Mining has contributed to the alleviation of poverty through regular wages, salaries and social support. (*Employed female FGD Participant*)

if you have a family member, who works for Lubudi Mining and who receives maize meal, for instance, he can help you to stop your hunger. This is an indirect way that Lubudi Mining helps people. (*Unemployed female FGD participant*)

Formal employment helps to alleviate poverty through community social capital. However, many people in the city, including some participants, take the opposite view. They have argued that, only people who are employed benefit from mining activities, and the unemployed are

excluded from the economic benefits, and remain poor. In addition, they are badly treated by the police when they turn to artisanal mining. As the words of an unemployed female FGD participant demonstrate that *it is a fact that Lubudi Mining has shut down all the sites where people were doing artisanal mining. This is very bad, because, at present, artisanal miners who risk going to those areas are afraid for their lives if they are caught.*

The same participant further argued that: *Lubudi Mining should re-open artisanal mining activities. If this is not done, the only people employed formally by Lubudi Mining, or other companies in the area, will improve their standard of life, and the masses will perish.* One can see that, not only does formal employment bring change to the city, but it can also increase inequality in it, especially between those who are in employment and the unemployed. Another big difference between artisanal workers and other mine workers is the level of security at the work place. Those employed formally have occupational safety in the workplace, which is not the case for artisanal miners whose work is very dangerous. Based on this, one can conclude that formal employment appears to be the best mechanism to alleviate mass unemployment.

The existence of privately own small businesses in Kakanda was also identified as a structural mechanism for alleviating poverty. In fact, since the two major mining companies began operating, many business people have relocated to the city, and local entrepreneurs have opened small businesses. These small businesses employ community members, which has decreased unemployment, promoted local economic development, in other words has helped to alleviate poverty. While many people see this development as positive, one unemployed male FGD participant argued that small businesses in Kakanda are not helping to alleviate poverty; on the contrary, they reinforce social class divisions and inequality due to the fact that the prices of their

goods are based on the average income of those working in the mines, and the unemployed cannot pay these prices. But for small businesses owners, the presence of the mining companies is seen as an opportunity to help other family members who are poor. They can also take advantage of the provision of free water and electricity. The mine official felt that the situation was not free from abuse. The local official was of the opinion that if small businesses owners did not take advantage of the free electricity and water, they would face obstacles or even be prevented from investing in the city.

Lubudi Mining, which monopolises the economy in the city of Kakanda is also contributing to alleviating poverty by giving free access to electricity and water to all community members. Though this social assistance appears to help Kakanda community members, it constitutes a limitation for other investors. In fact, no other investors have access to the city of Kakanda in order to develop any economic activities which go against the interest of Lubudi Mining. Hence, this practice constitutes a negative aspect of the role that mining plays because it creates a dependency on one economic activity. (*Key Informant, local authority*)

In fact, the issue pointed out by the local government official gives one grounds for arguing that, from point of view of local economic development, the mining companies have created a very rigid and well controlled protectionist mechanism toward local economy development. Despite the mining industry being accused of protectionism, and of using this practice as a political and economic weapon, some participants and the mine official challenged that idea, and spoke about the development of infrastructure and the transport system as proof of the openness of the economy. The development of various types of infrastructure by the mining companies forms a systemic mechanism for alleviating poverty. The union representative argued that *since the establishment of Lubudi Mining in Kakanda, there has been an accelerated infrastructure*

development, such as housing and shops. This development is led by the private entrepreneurs and mine workers.

In support to this idea, the mine representative argued that:

Lubudi Mining has also been rehabilitating the infrastructure, such as the roads. The main roads that have been rehabilitated are: Kakanda-Kabolela, Kambove-Kakanda, and Kakanda-Luita. The company has also asphalted the road between Likasi-Kambove (especially the Kampumpi side)". (*Key Informant, Mine representative*)

In addition, the road to Kakanda-Kolwezi and Likasi has been rehabilitated. Kolwezi and Likasi are the major towns in the province, which are located close to Kakanda. The rehabilitation of the roads has been a great improvement, which now allows people to travel considerable distances without much difficulty, and transport costs less, compared to the fares when the roads were bad. One has to acknowledge that, transport development constitutes a major contribution toward poverty alleviation in the city. In addition to infrastructure development, the establishment of financial institutions such as banks is a major systemic contribution to poverty alleviation that is linked to mining. These institutions facilitate the payment of workers' wages for both mining companies. In addition, they also allow community members and mineworkers to take out loans. The union representative praised the positive contribution made by these financial institutions:

For the very first time in history a bank has been established in the city. This is a clear indicator of economic development. But in addition, the bank gives loans to workers and individuals in order for them to develop their own sustainable businesses (*Key Informant, Union representative*)

An opposing statement came from an unemployed male FGD participant stating that:

In the process of poverty alleviation, the establishment of the bank in Kakanda is increasing the level of poverty. In fact, when people were receiving their wages in cash, we could see money in circulation and many people could benefit from it. But since they have established the banks and people are being paid via banks, this is very bad because some workers draw money from banks in other cities and use it there. I think that in order to alleviate poverty people should be receiving money in cash here in Kakanda. In addition, while other people think that the loans they receive from the banks or companies alleviate poverty; I think that this is not true. In fact, the high interest on the repayment of these loans puts people in a very difficult situation and increases poverty because no one is able to break the debt cycle. (*Unemployed male FGD participant*)

From this statement, it is clear that the use of a systemic approach to improve the living conditions of people through finance regulation has shaped the economy and conditioned all economic activities in Kakanda. The company and some workers have benefitted from the banking system, but it is clear that decision-makers have failed to explain to ordinary people how financial institutions work, and how they co-operate with the mining companies. The financial structures put in place by the mines, has provided some alleviation of poverty. Unfortunately within the community of Kakanda there has been very limited progress and many people cannot break out of the cycle of poverty. One of the reasons is the lack of financial management skills among community members.

Poverty remains because people are not helped with financial management skills. How could someone who is earning US \$ 4000-6000, spend all the money buying luxurious things such as big cars , 4x4 etc.? In fact, if those people can invest in activities such as farming, the investment will help to reduce poverty. Otherwise the cycle of poverty will continue (*Unemployed male FGD Participant*)

There are many opportunities to earn a living, and these could help to alleviate poverty, if proper financial guidance is available. Unfortunately the lack of financial guidance and alternative economic activities keep people in a state of poverty. It is also important to emphasise that the battle to alleviate poverty must be an inclusive, the mines, the Government and the various communities must work together. It is not the exclusive responsibility of mining companies, it is crucial that community members also play a role.

On the matter of community responsibility and engagement, several authors have argued that social and economic development in developing countries is likely to happen when it is community driven. Although many participants mentioned positive things that were happening in their communities, none of them recalled any totally community driven leadership initiatives which addressed issues related to poverty. People have the financial means to create change and address poverty, but once again the lack, of community social capital stops this from happening. For some participants, for example, the union representative, see that poverty within the community is being addressed. He argued that *now almost each family has DSTV in their house one of the indicators that poverty is been alleviated.*

I do not share the opinion that having DSTV channels in people's houses is an indicator of poverty alleviation. This could to some extent be seen as a lack of financial management skills, especially if people still do have not enough food, or their basic needs are not being met. Participants said that the mining companies have drawn community members into the process of alleviating poverty. The company supplies workers, and people from the communities surrounding Kakanda with seed, in order to promote agriculture as an additional economic activity.

The mine official said that:

Lubudi Mining company helps local farmers with seeds in order to increase their farming and agriculture capacity, and, therefore, reduces the production cost which would be unaffordable for rural people, without external support (*Key Informant, Mine representative*)

An employed female FGD participant agreed: *Lubudi mining is making sure that the farmers have enough seeds and other agricultural products in order to maintain and improve the level of food security.* The same participant added

We must acknowledge that not much has been done for non-workers. Therefore, Lubudi Mining can improve their living conditions by creating a co-operative for farmers and agriculturalists. This initiative will help employ as many people as possible, and will facilitate the use of the land in community of Kakanda and surrounding communities (*Employed female FGD participant*)

Although almost all the participants support the idea of mining companies providing assistance, there was also concern that the initiative is led by the mining companies and not the community members. The social and economic sustainability of the city is only possible if poverty alleviation initiatives are owned, and led by the community members. The lack of community leadership made some participants doubt of success of such initiative. Despite all the efforts to alleviate poverty, people's attitudes are one of the biggest challenges. Many community members think that life in the city is totally dependent on the continuing presence of the mining industry. This attitude discourages people from becoming involved in other initiatives.

4.3. Barriers and Challenges to Accessing, Health, Social and Education Services

4.3.1. Barriers and challenges to accessing health services

The mortality rate in Africa is often reported to be the highest in the world. This is due to many countries experiencing years of conflict and political instability, and the lack of decent health services. The recent report released by Save the Children, which listed the Democratic Republic of Congo as the worst place to be a mother, raises concern about health services in the country. While we cannot spend time arguing the details of such report, we can, however, assess and analyse the participants' views about access to and utilisation of health services. In fact, the participants saw the issue of access and utilisation of health services in Kakanda as a very complex matter. For mine workers and their families, the benefit of having access to health services is guaranteed by the mining companies. At first glance, there are no barriers to accessing and utilising these services. The union representative argued that:

For mine workers health services are free of charge. In fact, the company has specialist services, such as a laboratory, an X-Ray unit, facilities for minor surgery, nursing; for all these services, workers are served free of charge. However, for other specialties that the company doesn't offer, it collaborates with other hospitals outside ... the city. Still, when these workers attend other hospitals, this remains the responsibility of the company. At this stage we cannot see any barrier. (*Key Informant, Union Representative*)

It was acknowledged by every one of the participants that workers and their families have access to health services; however, the quality of the service is of concern. Many participants said that the quality is very poor, and this affects people's willingness to attend these facilities. This perception constitutes a psychological barrier which prevents people from going to hospital for treatment:

In terms of barriers or challenges to accessing health services, I can testify that in Kakanda, especially with Lubudi mining health services, in order to be assisted s/he needs to have a connection with someone who works there. Otherwise you can't receive quality attention and services. This happens not only to the non-workers; even people who are working in the mines face [the] same problem. (*Employed male FGD participant*)

Another participant added

... It happens that sometimes people arrive at the hospital at 4 am ... only to be ... attended to at 4 pm. Even if it is an emergency case, no one cares... Another point is that people are being attended based on personal affinities such as being a family member or a member of the neighborhood. There are no professional ethics and respect for patients. (*Unemployed female FGD participant*)

Some health workers reveal people's health status to their close friends, an employed female revealed. The lack of professionalism and privacy may lead some patients to go and seek health services outside the city. In addition to this, it also appears that medical doctors do not follow up on patients anymore. Another female participant reported that some of them repeatedly give the same medication without checking a patient's progress. This practice, among many others, leaves community members wondering about the medical qualifications of some doctors and other health practitioners.

These criticisms have highlighted reasons for the lack of trust and confidence in the health services. In addition, there are other factors affecting the quality of the service: the influx of migrants to Kakanda, the low wages of hospital staff and a lack of professionalism among some of those working in the hospitals. Sometimes, so many people crowd into a hospital that the quality of treatment is compromised as the nurses and doctors try to see as many patients as possible. The mine representative commented on this situation that *many people are moving to Kakanda in order to look for a job in one of the companies operating here. This demographic*

growth is impacting on the infrastructure of the city which does not have the capacity to accommodate everyone.

An employed female participant emphasised the limited capacity of health infrastructure saying that *there are not enough beds in hospital to accommodate everyone. In addition, some people do not have money to pay for health services or to buy their medication. Another element to consider is that in Kakanda families are composed of many children.* An unemployed male participant also mentioned that the low wages were also a factor influencing the quality of the health services. *Nurses are not taking care of patients because sometimes they are frustrated by mediocre salaries.* Motivation is a factor which may influences performance at work. Motivation can be improved if salaries are increased. Its absence can seriously compromise performance. Participants argued that the mining companies do not take the issue of nurses' wages seriously. In fact, one said that, considering the amount of work they do, their salaries are not a commensurate reward, consequently people do not receive quality health services and community trust in the services is decreasing. Some people choose to go to private hospitals instead.

In addition to the above, the unemployed have additional challenges, for example, the lack of money. The National Mining Policy demand the mining companies to take some responsibility for the social conditions of people living in the areas where they operate, including the surrounding communities. According to the union representative, the unemployed have no difficulty in gaining access to health services. The mining companies have accommodated these people: they pay less, or nothing at all. The health services provide free medication. The

unemployed also make the same complaints, as the mine workers and their families, about the lack of professional conduct and ethics on the part of some health workers.

4.3.2. Barriers and Challenges to accessing education

Like the health services, education is also free to the children of mine workers who wish to attend schools managed by the mines. Formally, there are no barriers to accessing education. However, the limited school infrastructure, teachers' poor qualifications and a lack of investment in education, constitute the major challenges. The issue is not only about access to education, the quality of education also poses a problem. This is negatively affected by the inadequate infrastructure. The mine representative revealed that in some classrooms there are a hundred pupils. This overcrowding makes teaching and learning very difficult. Many participants suggested that the government and mining companies need to find a solution quickly.

In the past, teachers did a follow up on each pupil whom they were teaching how to write, read and speak. But now, this is impossible. With too many kids in a classroom you cannot focus your attention on everybody in the same way. This has consequences for education delivery and long term community sustainability.
(Unemployed female FGD participant)

In addition to the overcrowded classrooms and the poor quality of education, the limited fields of study pose a problem.

the mining company doesn't offer many fields of study in its schools. Hence, people who don't find what they are interested in often end-up not studying, or looking for alternative schools. For instance, there is a school which offers mechanical training in the city. Many of us have gone there. But if the mining company could also incorporate many other fields of study, which would be perfect.” *(Unemployed male FGD participant)*

This last statement reflects the fact that practical skill training is not available in company schools. The curriculum is not really relevant to the economic and social conditions which face the community of Kakanda. In fact, going to school and studying seem to be a waste of time as they do not equip people with the skills and knowledge that will get them jobs. The local government official said that local culture and traditional values are barriers to education.

Many community members in Kakanda and surrounding villages would prefer to send their kids to farm, rather than to attend school. For many people, school takes second place. The priority is growing vegetables and farming. This shows that even when facilities are available people's culture and mindset constitute a major barrier. This is a psychological barrier. *(Key Informant, Local government authority)*

Another participant argued that parents who do not send their children to school because this conflicts with their cultural values are a barrier to their children's progress.

Parents constitute the main barrier to their children's education. They don't send their kids to school. They have to be forced to do so. But from mining company's side, the company has created all the facilities necessary for the community to have access to education. *(Unemployed male FGD participant)*

Not only do local culture and traditional values constitute barriers to education, one participant considered globalisation to be at the centre of the school dropout problem, and it also prevents people from accessing education. This operates at an unconsciousness level.

Actually the most challenging barrier to education is the rapid development and connection between cities. In fact, young boys are now much more involved in music, such as RNB, RAP, and many more. They do not value education anymore. This development appears to me as a challenge or barrier to education. Because young people now want to be music stars, and are neglecting their education" *(Unemployed male FGD participant)*

We can never emphasise enough that education is the driving force behind development. Therefore, all stakeholders involved in the management of the city of Kakanda must invest in quality education which will empower young people. The union representative added that particular attention should also be paid to the process of recruiting teachers.

4.3.3. Barriers and challenges to job opportunities

The presence of mining industries in Kakanda has created thousands of jobs in and around the city, and these are open to local community members, as well as for migrant workers. Uneducated and educated, males and females are employed in the mines. This boom in the mining sector has made Kakanda into an Eldorado where everyone wants to be. In terms of jobs opportunities, there are no formal barriers to working in the mines, according to some participants, including the local government official. However, in practice, there are barriers because people lack the necessary skills, because of corruption, because of investors' recruitment policies relating to certain posts, and because of local traditions and values.

people in many communities are mainly agrarian. So for them to leave their communities and start working in the mines constitutes a major shift which people do not easily adapt to (*Key informant, local government authority*)

Based on this, it is clear that mining activities and work related to it cannot be considered as a priority by the local community. This cultural predisposition cannot be completely excluded from the analysis, even if many participants have argued that community members consistently show their intention to work in the mines. As for corruption, participants have argued that in many cases recruiters ask for bribes and conduct pre-recruitment process

Challenges are often linked to the fact that some recruiters are not serious and objective in the employment process. In fact, some of them have already taken money from people in different cities, and have promised to employ them once there is an opening. Now, when there is a vacancy, they go and look for those people outside Kakanda, and autochthones are left unemployed. *(Unemployed male FGD participant)*

This constitutes an informal structural barrier that people face when they seek work. Tribalism and ethnicity are also barriers to getting a job. Many participants have reported instances of bribery and ethnic preference; it is important to note that this cannot be generalised across all recruitment processes. Because many community members believe that the system is corrupt, many participants reported that they did not apply for a position because they thought that they had no chance of being employed.

Corruption takes place. Corruption discourages applicants from applying for a job because, either they have no money for a bribe or were not interested in the mining. *(Unemployed female FGD participant)*

This has become a psychological barrier; the companies are not to blame. In addition to corruption, the lack of skills is one of the barriers that community members have to deal with. In fact, work in the mine often requires some expertise and skill. There is always a need for highly skilled people. If there are no people with the necessary skills in the city, the companies are obliged to go elsewhere. The mine representative pointed out that

sometimes the company might be in a need of a qualified worker for a specific job, if there is no person with that skill available in the community, then Lubudi Mining is obliged to outsource that is, look outside the community. At this point the challenge for the local community becomes the lack of exceptional skills, which can also be considered as a barrier *(Key informant, mine representative)*

Only having the skill set to perform one job is also considered as barrier by many people. In fact, many people who were employed in the mines were recruited to do a specific job, which required a single skill set, and they have been in that job for years. When they retire from or are retrenched by that particular company, they cannot get a job which requires a different skill set. For graduate candidates, the major challenge is that they are either under evaluated, there are not employed based on their level of education are disqualified because personal connections or tribal origin are more important than a qualification. Once again, this situation is not applicable generally some graduates are employed on the strength of their qualifications, because these qualifications are in demand. In addition, there is an external barrier which is based on investors' policies and financial regulations.

I can say that barriers sometimes come from investors, not from community members, and not from the local mining company. So, it is the investors that determine the number of people who should be employed. Therefore, Lubudi Mining is just following the investors' policy. *(Key Informant, Union representative)*

4.4. Implication of Mining Activities on Social Cohesion

All around the world the economic boom has created shifts in family patterns. In the case of mining communities, the influx of migrant workers and other people is very common. This movement of population does not come without issues. One of the issues is the impact on social cohesion in the economically developing community. Social cohesion here refers to the level of interaction and peaceful coexistence between people in a community despite their differing places of origin, tribal affiliations, languages etc. Social cohesion in the city has been affected by the mining activities. Mining operations have facilitated a social environment where people from different regions meet and live together. Therefore, it does make sense to understand the means

by which they coexist. The research finding has shown that in Kakanda social cohesion is very fragile. The local government official and some other participants remarked on this. However, most of the participants felt that there was no social cohesion at all in the city. When examining social cohesion in such environment, the researcher must take into account the presence of migrant workers. In fact, their presence has had positive and negative consequences. Although the participants argued that these migrant workers had brought development to the city, for instance, by exposing people to a new culture and new ideas, as well as to a certain living standard, they also mentioned that cohesion is lacking.

This city is divided by tribe, and by ethnic group. The autochthones feel that they are economically excluded, and, therefore, their anger is directed at the migrant labourers. Tribalism has not only divided the city of Kakanda, the whole country suffers from it. The union representative stated that there is no social cohesion among people, even in the workplace, workers are not united. The youth are the only hope of seeing this change, because they have adapted or are adapting to the new culture, especially through the friends they make at school or in the city. Another difficulty, which prevents the building social cohesion in Kakanda, is the fact that many workers are not permanently resident in the city, nor do their families live there. For many of them, Kakanda is just the place where they work, it is not home. Because they are not really part of the city, they do not have an interest in developing ties to the local community.

The influx of people to Kakanda has come with different implications. People have different objectives, and although we can talk about cohesion, life in Kakanda remains very private
(Employed female FGD participant)

4.5. Mining Operation's Investment in Education and Job Creation in Kakanda

According to the DRC's mining policies, mining companies are required to make social investments in the communities where they operate. However, these companies are not the primary social investors; this is the responsibility of the government of a country. In Kakanda, there has been investment has been in: financial, economic and technical institutions, and in human capital, to name a few areas. These types of investment seem to be directed solely by the interests of the companies, and are not aimed at empowering people so that they can improve their lives. This section deals with education and job creation as two crucial areas where investment should benefit the community.

The city of Kakanda has only one school which is directly connected to the administration of the main mining companies. This school is a legacy of the Generale de Carriere et de Mine (GCM), the state owned mining company. This school was built in order to accommodate children of the then approximately 400 workers. The influx of migrant workers and the resulting demographic explosion in the city requires that the government and the mining companies rethink education, especially with regard to the infrastructure, its capacity and the quality of teaching. As mentioned earlier, the mining companies have facilitated access to education for everyone. This has been a big investment. The union representative argued that:

Lubudi mining is making a serious contribution to education, and everyone sees it, unless one is ungrateful and does not appreciate what the company is doing. Then one can say the opposite.”(*Key Informant, Union Representative*)

On the infrastructure side, an unemployed male felt that *nothing sustainable in terms of building has been invested. However, we can acknowledge that good and huge investment is only made for white kids whose parents work in the city.*

However one has to point out that many whites in Kakanda are expatriates and their children follow the education system of their home country, not that designed by the DRC government. Their school follows the system of education in their home country. They do not attend the same schools as the children of the other the community members. In addition, their classes are small. The privileged position of the white children is an issue for the rest of community because the white children have a great advantage over the children who attend the overcrowded schools run by the mining companies, and is a manifestation of the economic disparity and social inequality between the local people and the expatriate community. However, another approach needs to be considered in order to understand this dynamic.

In order to address this relative inequality in Kakanda, the mining companies have to build new schools in Kakanda. The mine representative stated that some schools had been built in surrounding villages, such as Kikaka and Kambove. This must also happen in Kakanda, where there are up to 100 pupils in one classroom. Overcrowding makes it difficult to learn. In addition to the overcrowded classrooms, the quality of education in these schools is very poor. One of the Millennium Development Goals (MDG) is to give all children the chance to go to school. In Kakanda every child has the chance to attend school, but the quality of education is poor. The poor quality of education is due to the dilemma which arises from giving access to education to everyone, but not having the resources to provide quality education. It is not enough to provide schooling, the quality of education is also very important. For the quality of people's lives to

improve, there must be better education. Participants agreed that state owned schools and private schools also needed to be improved.

States owned schools and private schools in Kakanda are very devastated. The company should assist in improving these schools even if this is just the rehabilitation of infrastructure.” (*Employed female FGD participant*)

This finding shows that the investment in education is not yet sufficient, as it does not allow communities to develop. Much more needs to be done. It is important to note that the investment in education cannot be evaluated solely on students’ performance and schools infrastructure. One of the indicators used to investigate investment in education is the quality of the teachers. Well qualified teachers guarantee that education has a positive outcome; unfortunately, the schools in Kakanda are far from realising this. An unemployed male commented that

Nothing is done in education. In fact, the reality on the ground is that only the girls in schools perform well, the boys not at all. This is not to say that boys are not intelligent, but it’s just the fact that some teachers are not serious and run after girls. There is no discipline and seriousness in the education sector. Therefore, this shows that not much investment has been directed at the quality of teachers, and education in general (*Unemployed male FGD Participant*)

This statement cannot be ignored. Although teachers could be sent to goal for seducing school girls, the lack of professional ethics in the education sector is equally troublesome. In order to address this issue a systemic change is required. The change has to start with the recruitment of teachers, which has been shown to be open to bribery and corruption; in addition, there must be ongoing professional training for teachers, if the level of education is to improve. Parents also need to keep a watch on what is happening in the schools, if the educational goal of the MDG programme is to be achieved. In addition, the Ministry of Education has to be managed

efficiently as it is responsible for seeing that all schools reach the objectives of the national curriculum.

On the job creation side, job creation is one of the main concerns common to everyone in the city. In fact, no matter how well or badly the mining sector is organised, investors and community members need each other in order to reach their respective objectives. Investors need community members, who make up their workforce; and community members need the investors to finance the mining operations on which they rely for their income and to provide the means of developing themselves, both of which contribute to the alleviation of poverty. This is a win-win situation, economically. The role of the government in creating jobs is very limited. In fact, the government has done virtually nothing. It is hoped that a new political system will be set up soon.

We hope that the process of political and administrative decentralization will have a positive impact on the local community, especially regarding job creation. *(Key Informant, Local government authority)*

The current system has prevented the local government authority from doing anything about creating jobs because the macro-economic policy of the city is dictated by the central government. Investment by the mining companies can be viewed from two perspectives. The first perspective refers to mining companies' direct investment in job creation; and the second refers to indirect investment.

Everyone in the city acknowledges that the operation of mining companies in Kakanda has resulted in a considerable number of people, from the community and from outside, finding employment. This opportunity has been created by the mining companies and their partners. In

addition to their direct investment, the mining companies have also supported the local community's initiatives to develop farming and agriculture. These initiatives give those who cannot be employed in the mining industry the chance to find jobs elsewhere. Indirect investment can also be classified as the consequence of mining operations. Jobs have been created as a result of small businesses owners coming to Kakanda because of the stability of the mining industry. Although this cannot be directly credited to the mining companies, community members acknowledge that this would not be possible if there were no mining companies in the city. Among these businesses are the banks, private security agencies, small traders and informal money traders. An employed male FGD participant saw the mining companies' investment in skills training as a means of empowerment and independent job creation which will last longer than just working in the mines. There is a need to empower people with entrepreneurial skills in order to create and sustain jobs in community, jobs that are not part of the mining operations.

4.6. Issues of social and economic sustainability in Kakanda

4.6.1. Social and economic situation of community members

The economic policies of the city of Kakanda are designed with regard to mining activities. This is because the city is primarily mining oriented, and is the site of one of the biggest copper deposits in the world. The abundance of mineral resources in the city and in surrounding areas leads all stakeholders, government and mining companies to concentrate on developing the mining sector more than any other sector of the economy. As a result other sectors, such as agriculture, farming, fishing and many more, have been neglected.

Many activities are happening around the mines and one has to question the sustainability of the city beyond the mines. In fact, here are some questions we need to ask: Are these banks, the health infrastructure, the educational institutions, etc. going to survive? This question points to the future of the community (*Key informant, mine representative*)

On this note, the mine official and the union representative agreed that the company is working hard to establish permanent economic and financial structures which will help community members in Kakanda become self-sustaining. These structures include the banks and institutions offering loans. The structures seem to be helpful in the community, but the only challenge is that loans can only be given to people who have good financial record. In practice, this means the mine workers. Unemployed people are unlikely to be eligible for a loan. As a consequence, loans are linked to the mines, and nothing is being done to provide financial services to the unemployed. In reality, it appears that the current financial structures do not guarantee local economic development from the bottom up. Almost all the participants see investment in agriculture and farming as the best way to diversify economic activities which will enlarge the opportunities for many more people and so ensure that the community can be self-sustaining after the mining industry in Kakanda has closed down. On this, the mine representative argued that *the Kakanda community is required to invest in green exploitation agriculture for its sustainability.*

However, the main challenges to promoting large scale agriculture and farming are that people lack the finances, and the fact that the mining companies own the land concessions. Some participants also felt that allowing artisanal mining, in addition to the industrial mining operations, could help to alleviate poverty and promote long-term economic development, though not all the participants agreed with this proposal. A female FGD participant argued that

Authorities should allow artisanal miners to operate in the community. This is the only way to sustain the community after the company is gone, or shut down. Another participant disagreed very strongly. He argued that

Once Lubudi Mining and Swahili Mining close, many people will die. How? In fact, the only alternative people will think of will be artisanal mining. This will be without knowing of risks that come with artisanal mining activities. As a consequence because of a lack of security and safety measures, many people will die and suffer a lot. *(Employed male FGD participant)*

This statement highlights the dangers associated with artisanal mining. This is another dilemma that the city finds itself facing. One of the main questions is: Which economic activity could sustain Kakanda in the long term? It is an important finding that none of the participants see mining as the economic activity that will sustain the city's economy far into the future.

4.7. Expected role of key stakeholders in the development of Kakanda city

The government, the mining companies and civil society organisations have the responsibility to intervene and help people build better life and ensure the economic viability of Kakanda and communities surrounding it. These stakeholders perform separate but complementary tasks.

4.7.1. The role of the national government

The government is responsible for the social and economic security of all its citizens by means of activities and programmes which promote social and economic improvements to the conditions in which people live and work. Kakanda requires the same sort of involvement on the part of the government. Most people in Kakanda agree that the government is not working, and that it is not present in the city. The mining representative said that the government should act as the *first*

social investor in a community and, therefore, they expect the government to be more active and productive in the day to day life of the city. The government should invest directly in building and maintaining public schools and health facilities. In addition to this, the government should also promote the national mining policy and social initiatives in the city.

In fact, the big issue is that the government was supposed to have mechanisms of control in order to make sure that the mining policy is respected. Does the government do that? I can't say a word about the behaviour of the government. But my view is that the government is not doing it. (*Key Informant, Union representative*)

This statement clearly shows that the government is seen as ineffective. The government should increase its control of mining policy in order to promote, at the local and national levels, people's development based on mining activities:

The government should apply a mechanism of control based on the mining policy. This will help to set clear indicators reflecting the performance of the State. But you know in the DRC sometimes the State is powerless in the presence of the multinationals (*Key Informant, mines representative*)

In addition, the government should also take care of the government workers and their families who are located in Kakanda. This finding has shown that government officials based in the city receive fewer benefits from the government, than from the mining companies. Therefore, it is important for the government to support the mining industry in carrying out its social responsibility programmes and to get involved with civil society organisations which work for community development.

4.7.2. The role of civil society organisations

Non-government organisations, churches and youth organisations are vital to engaging the local community in the development process. There is a need for the local community to be well-organised. It is unfortunate that there are few civil society organisations in Kakanda. The mine representative's remarks;

In Kakanda there is no civil society. We don't feel it at all. However, there is only one NGO that operates in Kakanda, helping women and children suffering from malnutrition (*Key informant, Union representative*)

This shows that community participation is very limited, and the city needs empowerment mechanisms to promote development. Civil society organisations in Kakanda can help educate community members about their role in developing the city. The desired social and economic development will never happen unless it is based on a community centered approach. Civil society organisations cannot perform well unless they have harnessed the political will of affected communities. They must have free and safe spaces to where they can meet and organise. The local authorities must provide these. To date, the role of civil society has been limited, and has been constrained by local political interests, but this is no reason for community members to give up on grassroots activism.

4.7.3. The role of the mining companies

Firstly, the involvement of the mining companies in communities should be based on the mining policy of the country.

This policy says, for instance, that once a company is established in a specific community, it must take care of, or respect the environment, avoid pollution in view of the fact that these enterprises use acid, etc. (*Key Informant, Union Representative*)

Mining companies are, therefore, expected to make sure that the economic and social development of Kakanda continues, and the city and its environs are not subjected to environmental, economic or social harm. In addition, they have to guarantee access to education, jobs and health services. Many participants have argued that the mining companies have to do more for the city's various communities. An employed participant suggested that a much needed improvement was a big and modern market, because the present market is too small and overcrowded, which often results in insalubrious and unhygienic conditions. A bigger market will not only facilitate the economic activity, but will be a long-term investment in ensuring the cleanliness of the public spaces within the city.

An employed female participant added that the mining companies should *help churches and private organizations to develop the community*. It is crucial to involve community members because this will empower local organisations to work for the necessary community transformations, which will enable the city and its communities to flourish when mining activities stop. Additionally, the mining companies should supply farmers with seed and expertise so that farming can produce good, high quality crops; this will also support food security. Community expectations aside, it is important to remember that all the mining companies which operate in the province or country cannot do anything without the government approval. Therefore, *it is sometimes difficult to invest seriously in community beyond the policy line designed by the government* said the mines representative. Once again, this shows the regulatory role of the government in the promotion of development and social responsibility in

the mining industry. To end this section, this quote from a participant neatly sums up the situation

an isolated approach will never work for this issue. In fact, government and mining management, including the community, should sit together and develop a single vision for the community. Otherwise, everyone will be working and defining his priority, and, as a consequence, and nothing will ever reach people who are waiting desperately to see change in community (*Employed male FGD participant*)

To conclude, the role of mining activities in the social and economic dimensions of the city's life is crucial. Many children have been sent back to school; community members and migrants have got jobs, and been given a chance to improve the circumstances and opportunities of themselves and their families, and the city is being regenerated economically and socially. Yet, the journey is still a long one: the quality of education must be improved, more schools must be built and health services improved. In addition, the city needs long-term investment so that Kakanda and its surrounding communities can flourish when mining activities cease. Agriculture is a promising alternative economic activity in which everyone, government, civil society organisations and mining companies, should invest. The local community also needs to be empowered so it can take the lead in alleviating poverty and restoring human dignity through forms of social and economic development that are sustainable because of buy-in from the city's communities.

CHAPTER 5: DISCUSSION AND CONCLUSION

The site of this study is the city of Kakanda in the Katanga Province of the Democratic Republic of the Congo. The study has sought to investigate: how mining activities have affected the livelihoods of those living in and around Kakanda; whether the mining industry has played or still plays, a role in alleviating poverty; if there are barriers which prevent access to, and utilisation of, health services, education and jobs; how has the mining industry affected social cohesion; and how investment in education and job creation may have done anything to ensure the economic sustainability of the city.

The social and economic dimensions of mining activities were of great concern to many of the participants. Mining activities have created permanent and temporary jobs. These jobs were created by Lubudi Mining, which is the main mining company that operates in the city, or by its partners, or by private businesses. These jobs have provided families with a regular income. Besides the economic benefits derived from mining activities, there have been social benefits - education, health and sports facilities, water and electric power, are all supplied free of charge. However many challenges remain, especially for those who are not employed by the mining companies. The government and all other economic and social investors must address the situation of those who are not employed in the mines, so that they also have access to the same economic and social benefits, for they are part of the community, too.

Regarding poverty alleviation, there is a general perception among community members that mining activities do not contribute to alleviating poverty in the communities where big mines operate, because, to some extent, mining industries are politically influenced by decision makers by the fact of having their shares or that of their family members and/friends in the companies, and the local communities are not involved in making decisions related to mining activities. In Kakanda, efforts to alleviate poverty have taken a structural or community based approach by decision makers. Employment has been successful in providing poverty relief, and a loans system and financial institutions have been established. These are structural innovations. With regard to community engagement, many people in Kakanda do not identify with the autochthonous (local) community, so there is no motivation to work for the community, or to raise the general standard of living in Kakanda. Many of those who feel marginalised are migrant workers. This attitude hinders poverty alleviation. It is recommended that a sense of belonging, coupled with a vision of community development that is shared by; civil society organisations, mine officials, local government authorities and private businesses.

On barriers and challenges, there are barriers which hinder access to health services, education and job opportunities. In the case of health and education, there are no formal barriers for mining community members. They can use these services free of charge. However, there are barriers which prevent workers, who are not employed by the mines, from using these services, as their income is not sufficient that they can pay for these services. There are no barriers preventing anyone from attending educational institutions. The children of mineworkers pay nothing, and the children of other community members pay a small fee. This has resulted in overcrowded classrooms. This has had a negative effect on the quality of teaching. The qualification of teachers is also of a very low standard, and the education system seems to be unsuited to the

needs of Kakanda. Corruption affects people's job opportunities, as people are supposed to bribe official in order to get employed. In addition, there are a large number of unskilled people in community. Their lack of suitable training and/or experience prevents them from getting decent jobs.

The investors' recruitment policies constitute a major obstacle due to the fact that it dictates the qualification, experience, and skill, as well as the number of people to be employed. In addition, there are cultural and traditional practices which constitute barriers to education and health. Some community members would prefer sending their children to farm rather than sending them to school. To regard to health, some would prefer to see traditional healers than to attend the modern hospital. Many people would rather go to traditional healers than attend modern health facilities.

As for social cohesion, the influx of migrant workers in Kakanda has created a new life style in the city, which has affected social cohesion. The many migrant workers have no interest in socialising with, or integrating into the established community. These migrants wish to retain and maintain an identity rooted in tribal affiliations. This lack commitment to the community weakens social cohesion within Kakanda. At present, social cohesion in the city is very fragile, and if not almost absent. The mining activities have not been able to facilitate cohesion because the divisions within the DRC are rooted in history and geopolitics.

In terms of investment it is noted that; the primary objective of the mining companies and the mining related industries in Kakanda and its surrounding areas is to make a profit from the exploitation of minerals. The Government is seen as the primary social investor in the Democratic Republic of the Congo. However, the mining policies of the DRC require that the

mining industries demonstrate social responsibility in the communities where they operate, but not as a substitute for, or to replace government. The mining industries in Kakanda have invested in education. Many children can go to school, but investment in the necessary infrastructure, such as buildings and equipment, has not kept pace with the rapidly increasing demand. As a consequence, classrooms are overcrowded and education is of a poor quality. The research has found that unemployment has decreased, and many community members are guaranteed work in the mining sector or in private businesses.

With regards to issues of social and economic sustainability it is to be noted that; because of the rich mineral deposits in and surrounding Kakanda, the city is economically dependent by on mining operations. Government, civil society organisations and mining companies all play a role. These same actors also seek to promote the social and economic sustainability of the city. The long term sustainability of the socio-economic development of Kakanda is uncertain because more money and effort has been put into mineral exploitation than in investing in agriculture, fishing and farming, which are viable alternative livelihoods.

The findings have shown that mining companies have invested in the economy of the city, and this investment has allowed people to find employment and earn a regular salary. In addition, those who had been unemployed found a new source of income, and consequently, have been able to support their families and improve their standard of living. Access to education and health services has been guaranteed to mine workers and their families, and other community members have had opportunities to get an education and use the health services. The influx of migrant workers, and of people from elsewhere in Africa and the rest of the globe, has also

created challenges which disrupt social cohesion because there is a lack of trust between the diverse groups of people.

Mining activities have affected community health. The mining companies have provided health services. This finding contradicts Pegg (2006)'s study, which argued that the health of mining communities has been neglected. However, it is important to note that, although there is a health infrastructure, people do not trust many of the practitioners in the health sector because of the latter lack professionalism and are casual about following the prescriptions of medical ethics. It is recommended that the mining companies invest in further professional training for health practitioners in an effort to build the communities' trust in the health services. The overcrowding in hospitals and other health facilities can be remedied if the limited capacity of the health services is expanded to accommodate everyone seeking treatment. The mining industry and government will have to co-operate to do this. The findings about the health facilities support what Hilson and Padrie (2006) have written about the health infrastructure in mining communities.

The education services suffer from ills similar to those plaguing the health sector. The quality of education is rather low because many teachers are not properly qualified, and overcrowding is a serious problem. This is the reason that teachers find it difficult to follow up on how each pupil is progressing. It is recommended that the recruitment process become more objective so that ethnic, regional and language loyalties cannot skew appointments, and new schools have to be built.

The findings about poverty show that the mining companies do aim to alleviate poverty by providing employment. The researcher acknowledges that the job opportunities in the mines

have helped many people to improve the quality of their lives. However, there are still challenges, for example, the disparity in salaries. This finding reinforces what was said in the report of the African Labour Research Network (2007). Another challenge is the fact that many community members do not have financial management or entrepreneurship skills. Despite this challenge many small businesses have been created. These businesses have provided job opportunities for those who have not found employment in the mining industry. Efforts to alleviate poverty have been made at a structural level, now community members need to take ownership of the process and initiatives to end poverty. Another finding related to poverty shows that not much has been done to develop alternative economic activities which could sustain the city's economy if the mining industry shuts down. Therefore, there is the need to invest in agriculture and farming, as the Kakanda region is surrounded by productive agricultural lands.

The historical ethnic division in the Democratic Republic of Congo has made social cohesion difficult. Kakanda is not exempt from this problem, as the study findings show. Ethnic loyalties are a serious challenge to the promotion of social cohesion. Many of the mine workers are migrants from elsewhere in the province of Katanga and the Democratic Republic of the Congo. They do not see Kakanda as their home. Consequently, they do not invest much in the development of the city, they remain outsiders. Their behaviour makes the autochthonous population distrustful of the migrant worker community. Sustainable development requires that as many of those resident in and around the city, place their many capabilities at the service of the city, as Sen (2009) recommends.

In conclusion, the findings of this investigation have raised important concerns, which have, in part, been answered; additional answers will need to be pursued by other researchers. In fact, in

practice, mining industries (activities) have made a contribution to poverty alleviation by creating social and economic structures which are of benefit to the mining community. However, this gain has been challenged, on the one hand, by a large influx of migrant workers and jobs seekers, and on the other, inadequate or inappropriate intervention by the government in its efforts to create alternative economic opportunities in the communities which surround the mines. Therefore, it is advised that the government, the mining companies and local communities all participate in the formulation and implementation of strategies which promote the economic development of the city. The long term development of Kakanda and surrounding communities requires government involvement, firstly as the primary social and economic investor in diversifying economic activities. In addition to the responsibilities of government, civil society organisations and mining companies also need to contribute significantly to socially responsible and long term investment that will benefit the Kakanda community. In summary, this study shows that the development of the city of Kakanda and other mining communities requires multi-stakeholder involvement; government, civil society organisations and the mining industry need to work together to define, strategise and implement a developmental plan and programmes.

References

- African Labour Research Network (ALNR). 2007. *Gold mining companies in Africa: workers' Experience*. Johannesburg: ALRN.
- African Union. 2009. *Africa Mining Vision*. Addis Ababa, Ethiopia: February.
- African Union. 2011. *Minerals and Africa's Development: The international study group report on Africa's mineral regimes*. Addis Ababa, Ethiopia: United Nations Economic Commission for Africa.
- Alnasrawi, A. 1994. *The economy of Iraq: oil, wars, destruction of development and prospects, 1950-2010*. USA: Greenwood Press.
- Amartya, S. 2001. *Development as freedom*. Oxford, Oxford University Press, 2001.
- Anna Marriot. 2008. *Extending health and safety protection to informal workers: an analysis of small scale mining in Kwazulu-Natal*. (Research report No.76, January 2008). School of Development Studies, University of Kwazulu Natal.
- Barbie, E. & Mouton, J. 2001. *The practice of social research*. New York: Oxford University Press.

Battaini-Dragoni, G. & Dominioni, S. 2003. *The Council of Europe's Strategy for Social Cohesion*. Hon Kong: Conference on social cohesion, 28-29 November, the University of Hong Kong.

Benatars, S. & Brock, G. 2011. *Global health and Global Health ethics*. New York: Cambridge University press.

Brinkmann, S., & Kvale, S. (2008). Ethics in qualitative psychological research. In C. Willig & W. Stainton-Rogers (Eds.), *The SAGE handbook of qualitative research in psychology* (pp. 263-279). London: Sage.

David, W.M. & Scott, G. 1969. *The concept of community; Reading with Interpretations*. Chicago: Adline Pub Company.

Dawn, B. 2000. *Research training for social scientists: a handbook for postgraduate Researchers*. London: Thousand Oaks, Calif. SAGE Publications.

Delanty, G. 2010. *Community*. 2ed. USA and Canada: Routledge.

Democratic Republic of Congo, *Law No. 007/2002 of July 11, 2002 Relating to the Mining Code*.

De Vos. 1998. *Research at Grass Roots; a primer for the caring professions*. 1st ed. Pretoria, J.L. van Schaik Academic Edition.

De Vos. 2002. *Research at Grass Roots; a primer for the caring professions*. 2nd ed. Pretoria, J.L. van Schaik Academic Edition.

Durlauf, N.S. & Young, H.P. 2001. *Social dynamics*. Washington, D.C.: Brookings institution Press.

Freek, C. & Charity, C. et.al. 2007. *HIV/AIDS, Illness, and African well-being*. USA: University of Rochester Press.

Friedkin. 2004. *Social Cohesion*. Annual Reviews, First published online as a Review in Advance on March 30, 2004 Downloaded from: www.arjournals.annualreviews.org

Gitman, J.L. & Oehnk, D.M. 2003. *Fundamentals of Investing*. Schweser Study program.

Gordon, D. 2005. *Indicators of poverty & Hunger*. Expert Group Meeting on Youth Development Indicators, United Nations Headquarters, New York, 12th -14th December.

Gqada, I. 2011. Setting the boundaries of a social licence to mine in South Africa: The Xolobeni Mineral Sands Project. Cape Town: *SAIIA Occasional Paper No.99, November 2011*.

Hagenaars, A. & De Vos, K. 1988. The Definition and Measurement of Poverty. *Journal of Human Resources, Volume 23, Number 2* (spring), University of Wisconsin Press.

Hilson, M.G. 2006. *Small-scale mining, rural subsistence and poverty in West Africa*. UK: Intermediate technology publications ltd.

Hilson, M.G. 2007. What is wrong with the Global Support Facility for small-scale Mining? *Progress in Development Studies 2007, Vol 3*.

Hinde, C. 2010. The Democratic Republic of Congo. UK: *A supplement to Mining journal*, Aspermont. March 2010.

International Business Publications. 2009. Congo Democratic Republic minerals and mining industry, investment and Business Guide: strategies information and Basic laws. USA: *Business & Economics, Vol 1*. 20 March.

International Monetary Fund. 2003. Staff country reports; Democratic Republic of the Congo: interim poverty reduction strategy paper preparation status report. August 2003, IMF country report No.03/269.

Irwin, T.S. 1975. *The community*. 3rd ed. New York: The Ronald Press Company.

Jenson, J. 2010. Defining and measuring social cohesion. *Social Policies in Small States Series*, United Nations Research Institute for Social Development, Commonwealth Secretariat.

Kapelus, P. 2002. Mining, corporate social responsibility and the “community”: the case of Rio Tinto, Richards Bay Minerals and the Mbonanbi. *Journal of Business Ethics* 39.

Lin, N., Cook, K. & Burt, R.S. 2008. *Social Capital: Theory and Research*. New Brunswick, New Jersey: Transaction Pub.

Longo, B. & Ilunga, Y.Y. 2013. trust. New Jersey: *TEDxNJIT*, 04th April 2013.

Lukes, S. 1974. *Power: A Radical View*. New York and London: The MacMillan Press, Ltd.

Maganu, E.T. 1988. The health of mine workers in Botswana: a study of the effects of mining and migration. Geneva: International Labour Office. *Working paper, International Migration for Employment* 38.

Moody, R. 2001. Sleepwalking with the Enemy - or Waking to the Truth? *London Mining Seminar*. Communities Confronting Mining Corporations.

Morse, M.J. & Field, A.P. 1995. *Research Methods, Health professionals*. 2nd ed. USA: SAGE Pub.

Morse, M.J. Barrett, M. Mayan, M. Olson, K. & Spiers, J. 2002. Verification strategies for establishing reliability and validity in Qualitative Research. *International Journal of qualitative Methods*, University of Alberta.

Morris, J. 2002. *Sustainable development: promoting progress or perpetuating poverty?* London: Profile Books.

Njenga, S. & Smit, A. 2007. *Leading the way through CSI: A guidebook for corporate social investment practitioners*. Randburg: Knowres Publishing.

Paul, D.L. 1997. *Practical research: planning and design*. New Jersey: Upper Saddle River, Merrill.

Paul, W.S., Courtney, B.J. & Peterson, N.A. 2001. The Relationship between Social Cohesion and Empowerment: support and New Implications for Theory. *In Health Education & Behaviour*, SAGE Pub.

Pedro Antonio, M.A. 2004. Mainstreaming Mineral Wealth in Growth and Poverty Reduction Strategies. *Sustainable Development*, Economic Commission for Africa, *Policy Paper No. 1*.

Pegg, S. 2006. *Mining and poverty reduction: Transforming rhetoric into reality*. Journal of Cleaner Production 14 (2006) 376-387, Elsevier Journal,
http://www.rosiamontana.ro/img_upload/472936e3bca2bc61045730fbb1869240/Mining_and_Poverty.pdf. [Accessed in June, 2012]

Billon, P.L. 2007. *The Geopolitics of resources wars: Resource dependency, Governance and violence*. Ed Routledge.

Pigg, E.K. 2002. Three Faces of Empowerment: Expanding the Theory of empowerment in Community Development. *Community Development Society, Journal, Volume 33, Issue 1*.

Sandbrook, R. 1985. *The politics of Africa's economic stagnation: African society today*. Australia: Cambridge University Press.

Santosh, M. & Mario, B. 2007. *Asian informal workers: global risks, local Protection*. London; New York: Routledge.

Sehgal, R. & Stewart, G. 2006. *Using Qualitative Analysis for Deriving Evidence Based Construct Definition: A Case Narrative of 'User Empowerment', in Quality and Impact of Qualitative Research*. In Ruth, A. (Ed). *Quality and Impact of Qualitative Research*. 3rd annual, QualIT Conference, Brisbane: Institute for Integrated and Intelligent Systems, Griffith University.

Southalan, J. 2012. *Mining law and Policy: International perspectives*. Australia: The Federation Press.

Government of South Africa. 1996. *South Africa and the Mine Health and Safety Acts of 1996*. Pretoria: National Gazette

Government of South Africa. 2004. *South African Notice 1639 of 2004 released by the department of scorecard for the broad based socio-economic empowerment charter for South African*. Pretoria: National Gazette

Stephen, A.S. 2006. *Social support and social cohesion*. In *Social Determinants of Health*. Marmot, M. & Wilkinson, R.G. 2006. OUP Oxford.

Taylor, V. 2012. *Social and Economic development*. [Lecture notes]. Department of Social Development, University of Cape Town.

Tenke Mining Corporation. 2007. Tenke Fungurume Feasibility study Feb 2007. Technical report. Katanga, DRC. Available online:

<http://www.sec.gov/Archives/edgar/data/1377085/000120445908000516/lundinexh991.htm>

[Accessed in June 2013]

Veiga, M.M., Scoble, M. & McAllister, M.L. 2001. Mining with communities. *Natural Resources Forum*, Vol 25, issue 3. August 2001.

<http://onlinelibrary.wiley.com/doi/10.1111/j.1477-8947.2001.tb00761.x/references>. [Accessed in June 2012].

Wallerstein, I. 1979. *The capitalist World – Economy*. Maison des sciences de l'Homme and Cambridge University Press.

Warhusrt, A. 1994. *Environmental degradation from mining and mineral processing in developing countries: corporate responses and national policies*. Paris: Organisation for economic co-operation and development.

World Bank. 2000/2001. *Attacking Poverty. World Development Report*.
<http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/EXTWDRS/0,,contentMDK:20227703~pagePK:478093~piPK:477627~theSitePK:477624,00.html>. [Accessed in June 2012]

Yardley, L. (2008). Demonstrating validity in qualitative psychology. In J. A. Smith (Ed.), *Qualitative psychology. A practical guide to research methods* (2nd ed., pp. 235-251). London: Sage.

Yukiko, A., Ata, C. & Magdjiguene, S. 2010. Promoting job creation for young people in multinational enterprises and their supply chains: Liberia. *Employment sector-Employment report No.7*. International Labour office-Geneva: ILO.

Appendix A : KEY INFORMANT INTERVIEW SCHEDULE(ENGLISH VERSION)

DRC/Kakanda Research 2012-2013

Key Informant Interview Schedule

(All participants)

Region/Location: _____ Job title/Occupation: _____

Site: _____ Address: _____

Interviewer: _____ Appointment/Time: _____

Focus / notes:

INTRODUCTION (Please go through this introduction even if you are repeating what was said during recruitment)

a) Thank you for agreeing to have this interview.

b) I am.....from _____. We are conducting research to understand the social dimension of mining activities in Sub-Sahara Africa, with a specific case study in Kakanda.

c) Please feel free to talk openly. If you feel uncomfortable talking about something, or would rather not answer a question, please tell me. You do not have to answer questions if you do not want to.

d) Time: The interview will take up to an hour and half... If you are tired, or need to stop and do something else, please tell me and we can take a break.

e) Confidentiality: Everything said in this interview will be treated as confidential as possible by the researchers. When we report on the findings, we make sure that everybody remains anonymous.

f) Recording: Do you mind if I record this interview? It's only for research purposes. That way I don't have to write down lots of notes while we talk. Nobody except the researchers will listen to the recording. [Wait for the participant's response.] Please speak clearly so that we can hear what was said on the tape.

g) **Test recording:** Before we start, I would like to make sure that the tape recorder is working properly. (Interviewer: start recording: say your name and the date, and say something light-hearted – like an observation about the weather today. Ask the respondent an innocuous question to get their voice –or ask about their age and occupation sitting in their natural position where they will sit for the interview. Stop the recording and play back to make sure it is working and that we can hear both your voices.)

Start recording: Remember to press record again before you start the interview. Once again, state the date and place, your name and the respondent's occupation

Make sure that you position the tape recorder so that your voices are still audible, even if you are looking down at the paper. Write down as much of the answers as possible in the spaces provided

5. What investment do you think has been put into education?

7. What job creation opportunities do you think the mining has created for the long term sustainability of Kakanda?

8. Do you know what could be done by the government, civil society, mining to improve the living condition in Kakanda and surrounding communities?

CONCLUSION

We have come to the end of the particular things I wanted to ask you about. But before we close: are there any other issues or problems which are related to mining community/Kakanda?

(a) For each “problem”: why does this problem exist? Has it always been like this, or is the situation changing? What causes the problem?

(b) What should the government be doing about it or what is the mining management doing about it?

(c) Is it okay to contact you again for further information and/or clarifications on the issue of social dimension of mining in Kakanda?

YES _____ NO _____

PLEASE THANK THE PARTICIPANT AND END THE INTERVIEW
OBSERVATIONS

After the interview, write up your notes and observations:

Interview process

- What was the dynamics of this interview? Was it an easy or a difficult interview? Why?

- Who else was present during the interview? If others were present, were they onlookers or did they participate? What effect do you feel their presence might have had on the information the respondent gave?

- Was there anything else that should be taken into account in the analysis?

- Thinking about the focus of the research, what were the main themes/ issues that emerged for you during the interview?

- Was there any other information volunteered by the respondent which tells us something about the mining activity and/or government intervention?

Name of Interviewer:Signature:Date:

Appendix B : INDEPTH INTERVIEW SCHEDULE (VERSION FRANCAISE)

DRC/Kakanda Research 2012-2013

In-Depth Interview Schedule

(Tout participant)

Region/Location: _____ Titre d'emploi/Occupation:

Lieu: _____ Adresse: _____

Investigateur _____ Rendez- vous/Temps:

Focus / notes:

INTRODUCTION

(Veillez redire cette introduction une fois de plus, même si vous répétez les mêmes choses dites lors du recrutement)

a) Merci d'avoir accepté de prendre part à cette interview

b) Je réponds au nom devenant de.....Nous conduisons cette recherche afin de comprendre la dimension sociale des activités minières en Afrique Sub-Saharienne, avec comme cas d'étude la cite de Kakanda.

c) S'il vous plait sentez-vous allaise lors de vos interventions. Si vous vous sentez mal alaise sur une question et/ou pensez ne pas vouloir répondre a une d'entre elle, veuillez bien me le dire; en outre vous n'êtes pas obligé à répondre à toute les questions

d) Durée: la durée de cette session est d'une heure et demi. Si vous êtes fatigué et/ou voulez que l'on prenne une pause lors de la session, veuillez bien le manifester au moment au portain

e) Confidentialité: toute information donnée pendant cette interview sera scellée confidentielle. En plus, aucun nom des participants ne sera divulgué lors du rapport final

f) Enregistrement: Es ce que cela vous arrange si j'enregistrais cette interview? Ceci est pour des raisons de recherche seulement. L'enregistrement nous permettra de ne pas tout écrire pendant que nous discutons et aussi de ne pas permettre les elements importants lors de l'analyse des données. Cet enregistrement sera suivi seulement par ceux ayant compétences de chercheurs dans cette investigation. (Attend que les participants répondent).En testant l'enregistreur, s'il vous plait veuillez parler clairement afin que l'on entende ce qui se dit.

g) Tester l'enregistreur: Avant de commencer, j'aimerais bien être sur que l'enregistreur fonctionne sans problem. (Investigateur: commence l'enregistrement: Donne ton nom et la date du jour et bien d'autres paroles. Aussi, posez la question aux participants sur leur âges par exemple, occupation afin d'entendre la tonalité de leurs voix avec l'enregistreur. Après ceci, arrête l'enregistreur et playback cela afin d'entendre toutes les voix des participants.

Commencez à enregistrer: rappelez-vous d'appuyer sur enregistrer avant de commencer interview. Une fois de plus dites la date et le lieu, votre nom et l'occupation des participants.

Positionnez l'enregistreur de telle sorte que toutes les voix soient audible; quel que soit la position du participant. Prenez également note si possible dans les espaces disponibles.

GUIDE DE L'INTERVIEW

1. Que pensez-vous que soient l'impacts des activités minières dans les familles dans la cité de kakanda?

2. Quel rôle les entreprises minières ont jouaient ou doivent jouer afin de réduire la pauvreté dans la cité de kakanda?

3. Vous basant sur votre expérience, y'a-t-il des barrières ou difficultés qui empêchent la population à avoir accès et utiliser les services médicaux, l'éducation et l'emploi?

4. Quel rôle pensez-vous que les activités minières jouent sur la cohésion sociale dans la cité de kakanda?

5. Quel investissement pensez-vous qui ai était mis dans l'éducation?

7. Quelles sont les opportunités d'emplois qui ont été créées par les entreprises minières afin de rassurer le développement durable de la cité minière de kakanda?

8. Que pensez-vous que le gouvernement, la société civile et les entreprises minières devraient faire afin d'améliorer les conditions de vie dans la cité de kakanda, ainsi que dans les communautés environnantes?

CONCLUSION

On est arrivé vers la fin des questions que nous voudrions poser. Mais avant bien de finir, y'a-t-il d'autres problèmes que l'on n'a pas touchés, qui sont en même ordre d'idée que ceux relevés dans la cité de kakanda?

(a) Pour chaque problème, pourquoi ceci existe? Es ce sa toujours était ainsi ou bien la situation change souvent ? Et si possible, pouvez-vous aussi donner les causes de ces problèmes.

(b) Selon vous; que ce que le gouvernement et l'administration de l'entreprise minière devraient faire à propos de ces problèmes?

(c) Es ce que cela vous arrange d'être contacter une prochaine fois pour une clarification si le besoin se présentait?

Oui _____ Non _____

Veillez remercier les participants et conclure interview.

OBSERVATIONS

Après l'interview, écrivez vos notes et les observations sur:

La procedure de l'interview

•Quels étaient les dynamiques de cette interview? Etait-ce l'interview simple ou difficile? Pourquoi?

• Qui d'autre était présent dans cette session d'interview? Si quelqu'un d'autre était présent; était-il observateur ou participant? En quoi penses-tu que cette présence pouvait-elle avoir comme répercussion sur les informations que les participants donnaient?

• Y'a t'il quelque chose d'autre qui puisse être prise en considération lors de l'analyse?

•Pensant à l'orientation de la recherche, quels étaient les thèmes principaux, et problèmes qui ont été soulevés lors de l'interview?

• Y'avait il autre information donnée par les participants qui renseigne sur les activités minières et/ou interventions gouvernementale?

Nom de l'investigateur.....Signature.....Date.....

Appendix C: ETHICAL APPROVAL (ENGLISH VERSION)

UNIVERSITY OF CAPE TOWN
FACULTY OF HUMANITIES
DEPARTMENT OF SOCIAL DEVELOPMENT

Object: Data Collection

Dear Head of Poste (*Chef de Poste*),

I hereby, *Yvan Yenda Ilunga* solicit your accord and participation in order to conduct a research based on social dimension of mining activities in Kakanda. This research is a credited research listed among the academic requirement to be fulfilled for a completion of a Masters Degree of Social Development at the University of Cape Town.

It is to be noted that, the process of data collection will be conducted by the researcher himself in respect of rules and regulation of the Government of the Republic Democratic of the Congo as well as the ethics' code regulating research at the University of Cape Town.

Hence, the research will be conducted through key informant interviews and focus group discussion. The following people will constitute the participant; the key informant interview will be conducted with mining authorities; health and social service providers; mine union authorities, community leader and labour and local government authorities. The focus group discussion will be conducted with community members and mine workers in disaggregated ways between male and female.

In addition, the following are the principal research' questions;

- What is the impact of mining activities on livelihoods in Kakanda City?
- How has mining activities contributed to poverty alleviation in Kakanda City?
- What are the barriers/challenges to accessing and utilizing health services, education and jobs?
- What are the impacts of mining on social cohesion in Kakanda City?
- What are the contributions of mining companies to education and job creation opportunities in Kakanda City?

Looking forward to your approval,

Kind Regards,

Yvan Yenda Ilunga

Student No: ILNYVA001



Appendix D: ETHICAL APPROVAL (FRENCH VERSION)

UNIVERSITY OF CAPE TOWN
FACULTY OF HUMANITIES
DEPARTMENT OF SOCIAL DEVELOPMENT

Object: Collection de données de Recherche

Cher Monsieur le Chef de Poste,

Moi le nommé, *Ilunga Yenda Yvan* viens la présente solliciter votre accord et participation afin de conduire une recherche basée sur l'analyse de la dimension social des activités minières dans la cite de Kakanda. Cette recherche est parmi les éléments/module crédités obligatoire a accomplir en vus de l'obtention du diplôme de Maîtrise en Développement Social à l'Université de Cape Town.

En effet, le processus de récolte de données sera conduit par le chercheur lui même dans le respect strict de loi et régulation du Gouvernement de la République Démocratique du Congo, ainsi que celui du code d'éthique qui régle la recherche a l'Université de Cape Town.

En effet, cette recherche sera conduite auprès des éléments clés de la communauté d'une manière individuelle ainsi que par le biais de groupe de discussion. L'interview auprès des éléments clés de la communauté inclura ; les responsables travaillant dans la santé et le social, syndicats des travailleurs et les autorités de l'entreprise minière, ainsi que les autorités gouvernementale au niveau local.

Les groupes de discussions seront composés de membres de la communauté ainsi que les travailleurs. Il importe de noter par ailleurs que ces groupes de discussions seront formés séparément par les femmes et les hommes et que toute information récolté sera utiliser exclusivement pour des raisons académiques.

Pour rendre la recherche complète et effective, voici les principales questions;

- Quel est l'impact des activités minières sur la vie dans la cite de Kakanda ?
- Comment les activités minières ont elles contribuer a la réduction de la pauvreté dans la cite de Kakanda?
- Quelles sont les barrières/Challenges a l'accès et utilisations des services de santés, éducation et l'emploi?
- Quels sont les impacts des activités minières sur la cohésion social dans la cite de Kakanda?
- Quelles sont les contributions des compagnies minières sur l'éducation et les opportunités d'emploi dans la cite de Kakanda?

Toute en espérant une suite favorable, veuillez recevoir Monsieur le Chef de Poste mes considérations les plus distingués.

Kind Regards,

Yvan Yenda Ilunga

Student No: ILNYVA001

