

**SOCIO-ECONOMIC IMPACTS OF MINING ON LOCAL COMMUNITIES - THE
CASE OF THE KANSANSHI MINE IN ZAMBIA**

BY

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**A dissertation submitted to the University of Zambia in partial fulfillment of the
requirements of the degree of Master of Science in Sustainable Mineral Resources
Development.**

THE UNIVERSITY OF ZAMBIA

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DECLARATION

The dissertation represents my own work, and it has not previously been submitted for a degree, diploma or other qualification at this or any other University.

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APPROVAL

‘This dissertation of **Peter Mhone** has been approved as fulfilling the partial requirements for the award of *Master of Science in Sustainable Mineral Resources Development* by the University of Zambia.’

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ABSTRACT

Mining comes with a lot of impacts. Some of the negative impacts of mining on host communities are water pollution (surface and underground), land degradation, air pollution and displacement of people. Despite all this, mining activities do also have positive impacts. Mining activities may bring about technology which promotes rural-urban connections, employment opportunities for the host community and improvements in education facilities, among others. The aim of the study was to assess the socio-economic impacts of mining on people's livelihoods in communities surrounding the Kansanshi mine and the role of CSR in mitigating the effects. The objectives were to establish how mining activities impact (socially and economically) on people's livelihoods, examine the Corporate Social Responsibility (CSR) strategies used by the mining firm to improve local people's welfare and to establish the prominent needs of the communities surrounding the Kansanshi mine. The study utilized semi-structured questionnaires. A total of 196 questionnaires were administered with a response rate of 81%. The respondents were as follows: host community, mine workers, mine personnel in charge of CSR, Non-Governmental Organisations (NGOs) and district local government authorities. The results of the study (socio-economic impacts) revealed that Kansanshi mine, through its CSR initiatives, has built and renovated some schools, clinics, part of the Solwezi General Hospital and some township roads. Despite this, health and educational facilities are far away from most settlements resulting in pregnant women and school going children walking long distances to access health and educational services, respectively. Some roads are in very bad condition rendering them impassable during the rainy season. As a result of this, the communities surrounding the mine feel neglected by both the mine and the government.

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LIST OF ABBREVIATIONS AND ACRONYMS

CBD	Central Business District
CEO	Chief Executive Officer
CSO	Central Statistical Office
CSR	Corporate Social Responsibility
EIA	Environmental Impact Assessment
FDI	Foreign Direct Investment
FIFO	Fly-in Fly-out
FQML	First Quantum Minerals Limited
GDP	Gross Domestic Product
IIED	International Institute for Environment and Development
JCTR	Jesuit Centre for Theological Reflections
LBDP	Local Business Development Plan
LDC	Long Distance Commute
NGO	Non-Governmental Organisation
NWCC	North Western Chamber of Commerce
RAP	Resettlement Action Plan
RTI	Respiratory Tract Infection
SIA	Social Impact Assessment
SOTTI	Solwezi Trades Training Institute
ZCCM	Zambia Consolidated Copper Mines

CHAPTER ONE

INTRODUCTION

1.1 Background

Since the early years of the 20th century, Zambia's economy has been dominated by the core industrial and mining zone of the Copperbelt (Smart et al., 2015). With time, mining has spread to the North-Western Province of the country. The mining sector has undergone three main phases of ownership: first, private ownership under a colonial administration, then national ownership post-independence and finally reprivatization from the late 1990s (Sikamo, Mwanza and Mweemba, 2015). The above-mentioned changes have had important consequences for investment in the mining sector as well as the provision of public goods and social services to communities surrounding the mines.

During the time when the mines were run by the government through the Zambia Consolidated Copper Mines (ZCCM), the government took upon itself the responsibility for non-core business services to the people. The government provided social services such as water, recreational facilities, health and educational facilities to communities which surrounded the mines they were operating. After privatization (mostly on the Copperbelt), the new owners of the mines took over the provision of social services to the host communities as part of corporate social responsibility (CSR). Corporate Social Responsibility is a concept where companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis (EU, 2002). CSR leads to a positive impact on the lives of people living in local mining communities (Andrews, 2016).

Apart from the Copperbelt, there are also mining activities taking place in the North-Western part of the country. The mines in the North-Western province are relatively new compared to those found on the Copperbelt. Some of the mines in the province are the Kalumbila mine, Lumwana mine and Kansanshi mine which are located 150km west, 65km west and 10km north respectively, of Solwezi town. The Kansanshi mine is jointly owned by First Quantum Minerals Limited (FQML) (80%) and the government of the Republic of Zambia through the Zambia Consolidated Copper Mines – Investment Holdings (20%). The mine was commissioned on November 11th 2004 and commenced commercial production in April 2005 (FQML, 2005).

World over, whenever there is a new project in a location, a number of changes are experienced especially by the local inhabitants. Some of the changes are influx of people seeking employment opportunities, goods and other services. Additionally, there could also be infrastructure developments such as roads, recreational facilities, health and education facilities coming into such a location which could probably be a rural area. On the other hand, urban areas could also experience their own changes which would either be positive or negative (Bixler *et al.*, 2015). In the case of the Northwestern region, what was not certain was the extent to which the new mines were inducing changes within the areas in which they are operating. In this regard, this study examined the socio-economic impacts of mining on host communities and the role of CSR.

1.2 Problem Statement

Mining comes with a lot of negative impacts to a particular area (host community) where operations are taking place. Most often, mines are located in rural areas – locations where such operations would be taking place for the very first time. Some of the negative impacts of mining in host communities are water pollution (surface and underground), land degradation, air pollution and displacement of people. Despite the above stated negative impacts, mining activities are critical in linking rural and urban areas. Mining activities may bring about technology which promotes rural-urban connections, employment opportunities for the host community and improvements in education facilities, among others. It has been observed that there are very few studies done on these impacts. In the case of Northwestern province, for example, there have been few studies done on the extent to which the new mines are impacting on host communities. For example, it was not clear how Kansanshi mine, through its' Corporate Social Responsibility (CSR) initiatives had contributed to the socio-economic wellbeing of their host communities. This study sought to examine the socio-economic impacts of mining on host communities and the role of CSR.

1.3 Aim of the study

The aim of the study was to examine the socio-economic impacts of mining on rural communities and the role of Corporate Social Responsibility in improving livelihoods.

1.4 Study objectives

- i. To establish how mining activities were impacting (socially and economically) on people's livelihoods.
- ii. To examine the Corporate Social Responsibility (CSR) strategies which were being used by the Kansanshi mine to improve local people's welfare.
- iii. To establish the prominent needs of the communities surrounding the Kansanshi mine.

1.5 Research questions

In relation to the Kansanshi mine;

- i. How were mining activities impacting (socially and economically) on people's livelihoods?
- ii. What CSR strategies was the Kansanshi mine using to improve the local people's welfare?
- iii. What are some of the prominent needs of the communities surrounding the Kansanshi mine?

1.6 Significance of the study

This study may contribute towards the coming up of laws which can see to it that communities which host mines benefit socially and economically during and after the lifespan of a mine. Further, the study can assist policy makers to review some of the agreements which governments enter into with mining companies so that at the end of the day benefits can trickle down to communities which host mines. Additionally, the findings of the study sought to strength further the need for a widely accepted definition of CSR. A CSR definition which can distinctively stipulate the role of governments and those of investors in community project implementations in order to have a win – win situation for all stakeholders (host communities, governments and mining companies).

1.7 Scope of the study

The study mainly considered the Kansanshi mine's contribution towards the improvement of the local people's livelihoods through the mines' CSR strategies.

1.8 Ethical considerations

The University of Zambia requires everyone undertaking research with human subjects to seek and obtain ethical clearance before commencing any fieldwork. The School of Humanities and social sciences does the ethics approval which is supposed to be followed strictly. Ethical clearance was granted prior to going in the field. During the interviews with the research participants, the approval from the ethics committee was explained to them. Further, consent from each of the research participants was also obtained.

All the information collected from the field was treated with strict confidence and kept in a secure place. The interviews were recorded on a voice recorder which was also kept securely until data was removed from it upon production of the final document. The interview transcripts were not exposed to anyone else other than the researcher, his assistant, the interviewees and the dissertation supervisors.

1.9 Organization of the dissertation

Following the introduction in this chapter, a review of relevant literature is presented in Chapter 2. This includes a review of aspects such as relocation of communities and its effects on the people's social wellbeing, Corporate Social Responsibility (CSR), income generation and/ or employment opportunities and infrastructure development. The research methodology used in the study is outlined in Chapter 3. Chapter 4 presents the research findings and discussion of the same in relation to the objectives of the dissertation which is followed by chapter 5 where the conclusion and recommendations are outlined.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents a review of literature pertaining to mining and its socio-economic impacts.

2.2 How mining influences the development of mine towns

When mining activities begin to take place in a locality, building, business services, public and personal services sectors also grow, with particularly noticeable employment gains in the public and personal services sector (Mcfarlane *et al.*, 2016). An investment in a key sector such as mining tends to enhance a country's economic development because such a sector causes an expansion of other sectors due to it being a user of inputs from other sectors and as a supplier of inputs to other sectors (Ivanova, 2014). Mining districts have larger average consumption per capita and lower poverty rates than otherwise similar districts (Loayza and Rigolini, 2016). These positive impacts, however, decrease drastically with administrative and geographic distance from mining centers.

The province of Tete in Mozambique was once a remote "rural" area but now a hub of power generation for the southern African region and an emerging centre of global investment in coal extraction (Kirshner and Power, 2015). The development of an entirely new town by the Lumwana company in what was until very recently "bush" has led to new "expectations of modernity" in the region, now commonly referred to as the "New Copperbelt (Fraser, 2010). Another example is Kalumbila town where FQM built around 3000 houses for rent and purchase, with all the modern amenities to 'stabilize' its workers and families in this remote area of Zambia which was initially a "bush" (Rubbers, 2019).

2.2.1 Mining and sustainable development

Our Common Future report (also known as the Brundtland Report) holds the key statement of sustainable development, which defined it as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Mebratu, 1998).

The fact that mineral resources are non-renewable has rendered the concept of sustainable development to be debatable within the mining sector (Ololade and Annegarn, 2013). Despite this, be it in the mining sector or any other sector, according to Parkin et al., (2003), there are common grounds on which development can be practiced as shown in Figure 2.1 below. As the extraction of the natural resources takes place in order to improve the livelihoods of people in a certain locality, there is need to conserve the natural environment. A situation can be said to be sustainable if the next generation inherits from us at least as much capital as we have inherited ourselves. Among many other things to be sustained are natural resources and human life. Additionally, mining companies have also stated that sustainable development principles are taken into consideration in their operations.

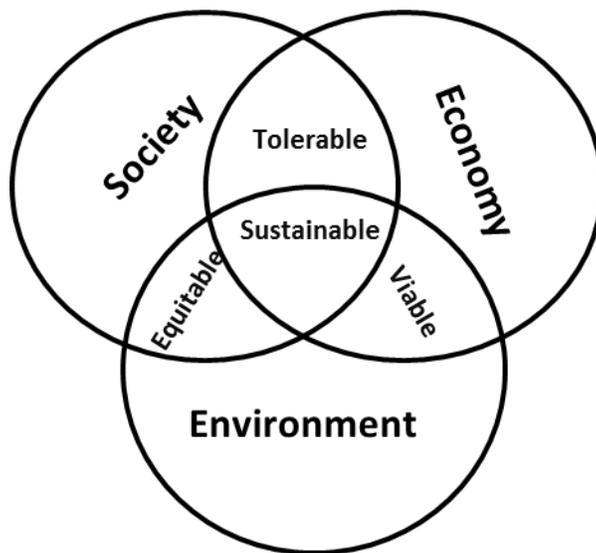


Figure 2.1: The concept of sustainable development (Parkin et al., 2003)

In light of this, as a contribution to sustainable development, it has been suggested that a state's resource endowments should provide a solid platform for economic and industry growth for many years to come (Black and Mckinnish, 2004).

Strong sustainability maintains that natural capital cannot be substituted for manufactured capital and that environmental, economic and human capital must be sustained independently of each other across generations (Essah and Andrews, 2016). On the other hand, weak sustainability is inherent in the view that manufactured capital can replace natural capital and that transfers of capital will lead to the maintenance of intergenerational equity.

There is now a burgeoning literature that examines sustainable development in the context of minerals and mining, most of which is concerned with sustainability at global and national scales (Hilson and Murck, 2001). What is often challenging to ascertain, however, from these numerous perspectives on sustainable mineral extraction, minerals and metals recycling, environmental management, and social performance, is how sustainable development applies to mining companies themselves, and what steps a mine must take in order to improve the sustainability of operations (Yirenkyi, 2008). Since mining processes have the potential to impact a diverse group of environmental entities, and are of interest to a wide range of stakeholder groups, there is ample opportunity for the industry to operate more sustainably (Shields, 2004; Maf *et al.*, 2014). Specifically, with improved planning, implementation of sound environmental management tools and cleaner technologies, extended social responsibility to stakeholder groups, the formation of sustainability partnerships (Bond, 2014; Caron, Durand and Asselin, 2016) and improved training, a mine can improve performance in both the environmental and socioeconomic arenas, and thus contribute enormously to sustainable development at the local level (Giurco and Cooper, 2012; Yakovleva *et al.*, 2017).

2.3 The boom and bust effects of mining

2.3.1 Effects of mining booms

The effects of mining in literature are often characterized in terms of a boom and a bust. A boom refers to a period of time when mining operations are initiated through a period of time where production and jobs are stable while a bust refers to a period of time marked by less production and or mine closures (Shandro *et al.*, 2011). When the world market prices for minerals increase dramatically, large investments are usually made in mining all around the world (Sikamo *et al.*, 2015). These investments are in increased mineral exploration activities, the opening of new mines and large investment schemes in already operating mines and related physical infrastructure (Pettersson and Stjernström, 2016). The building industry exhibits modest increases in employment during such periods, most likely related to the increased local mining activities (Fleming and Measham, 2014; Econ *et al.*, 2017).

Australia has played a leading role in world mining history, with famous episodes such as the gold rushes of the 19th century, the discovery of iron ore deposits in the Pilbara region in 1952

and the consolidation of some of the largest mining companies in the world (Australian Bureau of Statistics, 2013). During the 1980s and 1990s, there were large discoveries of gas, including the Gorgon field, while in the early to mid-2000s, there were further significant discoveries off Western Australia, with known gas reserves growing by around 40 per cent (Connolly and Orsmond, 2005). Following this tradition, in recent years Australia has faced a considerable mining boom, during which its value of mining exports and employment more than tripled and doubled, respectively, between 2001 and 2011 (Department of Foreign Affairs and Trade, 2012).

One of the recent mining booms began in the mid-2000s which led to sharp increases in prices for mining-related commodities. The boom has, to date, delivered mixed impacts across Australian states and territories, and across industries (TRA, 2013)¹. This is sometimes referred to as the ‘Dutch Disease’, whereby a boom in an exporting industry, in this case mining, raises the terms of trade and the value of a currency (Koitsiwe and Adachi, 2015). Sometimes, such happenings can deliver negative impacts for some other industries involved in export or import substitution. The resources sector’s growth has been accompanied by strong employment growth in mining. The recent boom has been to a great extent fuelled by demand for resources by emerging developing economies such as China and India (Union, 2009²; Koitsiwe and Adachi, 2015).

The recent mining boom in Australia (as well as in other countries) has been characterized by high use of long distance commuter workers (Fleming and Measham, 2014), which has brought economic effects into regions not necessarily hosting a mine or fossil fuel fields (Haslam and Hoath, 2014). Black and Mckinnish (2004) state that in 2011, Western Australia benefited from the mining boom with the resources sector contributing around 30% in revenue. They further add that in 2010/2011, the sector generated \$4.9 billion in royalties paid to the Western Australian Government Consolidated Revenue Fund³ which represents a 375% increase from \$1.03 billion in 2001–02.

In Sweden, it has been observed that the major impact on incomes are usually in sectors closely related to mining, i.e. manufacturing and extraction and Construction, whereas income growth is

¹ Tourism Research Australia

² African Mining Vision, 2009

³ Department of Mines and Petroleum. (2011). West Australian Mineral and Petroleum Statistics Digest 2010-11. Perth: DMP.

lower or even in-significant in other sectors (Pettersson and Stjernström, 2016). Substantial mining investment took place, and the number of employees in the sector increased by over 30%⁴ between the years 2003 and 2013 (Econ *et al.*, 2017).

According to Minifie (2013), during a mining boom, wages, incomes and employment grow strongly. When a particular commodity is on demand and more people are employed in the mining sector, there is also a spillover effect in other sectors which also causes an increase in the workforce (Black and Mckinnish, 2004). An increase in workforce causes housing shortages which influences high rentals by those who own accommodation facilities (Rolfe and Miles, 2007). These larger scale impacts are, for example, linked to major infrastructure developments (roads, ports), the expansion of human settlements as well as fly-in/fly-out (FIFO) work patterns, which are all products of a rapidly growing resource extraction sector (Black and Mckinnish, 2004).

Booms can also generate social problems in some cases because of a sudden rise in disposable income (Middeldorp *et al.*, 2016). Examples include higher rates of alcohol and drug addiction, prostitution and distrust among community members (Muchadenyika, 2015). An example of a place where such occurrences have been observed is the Iskut community⁵ where “drug problems and associated social problems started about the time Golden Bear [a gold and silver mine] began operations (Pembina, 2008).

2.3.2 Effects of mining busts

According to Koitsiwe (2018), recurrent boom and bust cycles are accountable for increase in exchange rate volatility, thus hurting investment in non-boom tradable sectors. Burkhardt and Special (2013) further state that a ‘bust’ can happen gradually, or it can happen over the course of a few years, leaving many host communities with social, economic, and environmental challenges including high unemployment, youth and labour pool out-migration, and environmental damage left behind by many mines.

Many resource exporters in Sub-Saharan Africa (SSA) experienced strong boom-bust episodes associated with fluctuations in resource prices. Mulenga and Silavwe (2005), state that in the

⁴ Sweden statistics 2015

⁵ Located in Ontario, USA

1950s, Zambia experienced rapid economic growth in mining and related industries due to the rising demand for copper yet encouraged labor migration to urban settlements. When the mines were nationalized in 1973, the industry experienced a serious decline in production levels (Sikamo et al., 2015), reaching the lowest level at the dawn of the 21st century in the year 2000 when production was 250 000 tons. In terms of jobs, an average of just under 2000 jobs were lost every year in the 24-year period, reaching just over 22 000 direct jobs in 2000.

During bust times, it has been observed that mining employment declines while non-mining employment grows (Black and Mckinnish, 2004). At times, mine closures may stimulate an increase of business activity in the agricultural, construction and the services sectors (Kuentzel, 2002).

When mine closures result in sudden unemployment and loss of income, social problems often follow (Studhalter, 2014). After a series of mine closures in Elliot Lake, Ontario, domestic disturbances tripled, weapons use and demand for social services increased, and student enrolment dropped (Pembina, 2008). Mental health issues such as depression and anxiety can be experienced (Shandro *et al.*, 2011). Overarching community health issues prominent during both boom and bust periods include burdens to health and social services, family stress, violence towards women, and drug addiction issues (Kotsadam and Tolonen, 2016). In short, a community's overall well-being could be "seriously and negatively affected".

2.4 Socio-Economic Dimensions of Mining

2.4.1 Effects of Mining

Although there is notable growth of scholarly literature on mining impacts on communities in Africa and beyond, there is limited focus on the micro-level social dynamics that arise when mining expands into rural communities (Mnwana, 2015). The environmental impacts of natural resource exploitation such as loss of biodiversity, water shortage and pollution and the production of large quantities of waste have been discussed extensively (Kitula, 2006; Yeboah, 2008; Case *et al.*, 2010; Mensah *et al.*, 2015; Damigos *et al.*, 2016; Northey *et al.*, 2016; Schoenberger, 2016; Chimonyo and Mupfumi, 2017). Al, Campbell and Titi (2016) argue that air emissions, discharges of liquid effluents and large volumes of solid waste are responsible for the most important negative environmental impacts of the mining and minerals industry.

However, the discussion on the sector's environmental performance should not only pay attention to direct, site-specific impacts but also take into account cumulative impacts and indirect effects that pose environmental and social challenges in the state and beyond (Black and Mckinnish, 2004).

Mining projects related impacts can include the displacement of a whole community to a new location, posing high risks for the livelihoods, health and social ties of its members (Yirenkyi, 2008; Owen and Kemp, 2015; Owen and Kemp, 2016). It also generates stress, insecurity and feelings of inequality both within the most directly affected community and others in the broader area, notably as a result of resettlement and uneven compensation (Conde and Le, 2017). As a result of this, some analysis have observed that despite the discourse around social sustainability, mining policy and governance prioritize economic aspects, giving environmental and social considerations a lower priority (Tiainen, 2016).

2.4.2 Measures taken to mitigate effects of mining on people's welfare

A key strategy adopted by mining companies to manage social impacts are programs to support community development (Franks, 2010). Social impacts refer to a multifaceted group of matters, influencing the everyday lives of people (Tiainen, 2012). This may include health and education programs, or support of organizations such as schools, clubs, and societies. Moomen et al., (2016) state that as relocations of communities are carried out, there is need to have a foresight of mine expansion hence communities need to be beyond a 2km buffer. The mining industry tend to follow the World Bank Group's social safeguards for involuntary resettlement, which emphasize that resettled communities should at least be as well off as before in terms of local production systems and income opportunities (Conde and Le, 2017).

Some towns which had a 'boom' of mining activities on the Copperbelt in the past have practically little to point at in terms of the benefits the host communities have been left with after mining activities ceased. For example, subsistence farmers displaced by mining activities became particularly economically vulnerable since their land – their only source of financial capital and income generation – is no longer accessible to them and they have no welfare safety net to draw on (Mwitwa et al., 2012; Mususa, 2012; Horsley *et al.*, 2015).

In Zambia, the principal legislation governing environmental management is the Environmental Management Act. The Act is an umbrella law which stands over all other environmental legislation in Zambia (Lindahl, 2014). Through the Act, the Environmental Council of Zambia was renamed to ZEMA which now is mandated to ensure the sustainable management of natural resources and protection of the environment. Projects such as the Copperbelt Environment Project (CEP) (Lindahl, 2014) and the Zambia Mining and Environmental and Remediation Project (ZMERIP)⁶ which were⁷ and are⁸ respectively, aimed firstly at addressing the environmental liabilities associated with the mining industry, and secondly to improve future compliance of the mining sector in environmental and social regulations.

2.5 Corporate Social Responsibility (CSR)

2.5.1 Evolution of the CSR Concept

The social impacts of mining activities and projects have received increasing attention over the years (Case *et al.*, 2010). In order to address the social impacts, companies have embraced the concept of Corporate Social Responsibility (CSR). Corporate Social Responsibility is a concept where companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis (European Union, 2002). Recently, CSR has gained an increasing attention all over the world (Zhu and Zhang, 2015). Companies have adopted CSR practices to help increase both shareholder and social values by integrating stakeholder and shareholder interests into company decision making (Mzembe and Downs, 2014). Today, companies do not only answer to their “owners” but also to other stakeholders (governments, civil society organizations, environmental activists, and many others) found in the host communities (Garvin *et al.*, 2009; McAllister, Fitzpatrick and Fonseca, 2014). The main role of CSR for mining companies is to ensure a responsible business venture, to reduce potential risks arising from safety issues and a potential negative environmental footprint and to attract better employees and gain acceptance among local society (Wirth *et al.*, 2016). With reforms and the growth of multinational mining investment in developing countries, corporate social responsibility (CSR) has become notable (and debatable) for its potential to fill a social and

⁶ www.mmmd.gov.zm/?page_id=52

⁷ CEP ended in 2011

⁸ ZMERIP is a 5 year program which is still running since 2015

environmental governance gap (Haalboom, 2012). As such, the character of CSR, explains Hamann (2004), traditionally manifested itself as philanthropic initiatives premised on competitive efforts at gaining improved image and reputation. Moreover, continues Hamann (2004):

Not only did this manifestation of CSR prevent a sincere, proactive engagement with the underlying causes of social problems in the area but the competitive element also helped to obstruct the establishment of improved collaboration between local actors.

The influence that has been wielded by stakeholders to drive mining companies to act more responsibly is founded in five principal mechanisms: demands, communication, counselling, control and engagement (Viveros, 2017). The manner in which stakeholders use these mechanisms varies across stakeholder groups (Owen and Kemp, 2014; Mzembe and Downs, 2014)

2.5.2 How CSR has attempted to address effects of mining

Corporate-community relations are concerned with the policies and processes of participation and engagement with local communities and with practices aimed at maximizing local economic development (Raufflet, Cruz and Bres 2014; Lin, Li and Bu, 2015; Litmanen, Jartti and Rantala 2016). The results for the CSR practices related to community relations are rather mixed (Hilson, 2012). According to Owen and Kemp (2014) and Govindan, Kannan and Shankar (2014), five drivers of CSR which are considered by most companies in the mining sector are: 1) the participation or involvement of communities; 2) access to information; 3) the protection of cultural heritage; 4) economic development assistance; and 5) the health and quality of community life. Another aspect is environmental management which relates to policies, commitments, and mechanisms for following up on greenhouse gas (GHG) emissions, water use, the protection of the environment, and biodiversity (Garvin *et al.*, 2009; Liew, Adhitya and Srinivasan, 2014; Burchart-Korol *et al.*, 2016). The large majority of companies integrate environmental management practices and activity impact reductions as part of their CSR initiatives (Tan *et al.*, 2017). Wilson (2015) notes that with the exceptions of establishments such

as Kimbadu⁹, implementation of CSR initiatives facilitate minimal, and at times, unsustainable, community development. It has been argued that such ‘developmental’ outcomes are primarily due to asymmetrical power relations between (Transnational Mining Companies) TNMCs (i.e. Ocea Mining and Sierra Rutile Limited) and the mining communities in which these companies engage in pre-defined development projects that are, in many instances, at variance with community needs.

The CSR practices of mining companies are relatively well developed in terms of social issues and the health and safety of operations and employees (Zhu and Zhang, 2015). Most companies have implemented preventative mechanisms with regard to health, safety, and accident prevention (Raufflet, Cruz and Bres, 2014). Mining companies are increasingly choosing to avoid negative publicity and protests by tolerating, and in some cases supporting and assisting in whatever way possible the host communities (Andrew, 2003). These firms realize that their long term sustainability and ability to continue to operate in certain areas depends on the health of the local environment (Velicu and Kaika, 2017), as well as the stability and safety of the area. These in turn depend largely on co-existing peacefully with the small-scale miners that preceded them (Bebbington, 2014).

Since the mid-1980s, countries around the world have adopted community development requirements into their mining laws to ensure that mining translates into real, positive social and economic gains for mining-affected communities, thereby redressing the inequitable distribution of mining’s costs and benefits (Imbun, 2013; Dupuy, 2014). Providing access to knowledge is another practice undertaken by the majority of the companies (Wirth *et al.*, 2016). Mining companies promote education and the dissemination of information to the general public and local government through their programs (Jenkins and Yakovleva, 2006) such as sustainability reports based on the Global Reporting Initiative (GRI) Framework (Fonseca, McAllister and Fitzpatrick, 2012). They often organize activities to raise awareness about aspects in the communication of companies’ CSR practices related to labor laws and employee relations (Viveros, 2017).

⁹Kimbadu: a resettled town in Sierra Leone

2.5.3 Laws on Corporate Social Responsibility

In 2009, the African Union came up with the Africa Mining Vision (AMV) whose main goal was to create a “transparent, equitable and optimal exploitation of mineral resources to underpin broad-based sustainable growth and socio-economic development” (Akong, 2015; Pedro, 2016). It essentially sought to use Africa's natural resources sector to transform the continent's social and economic development path (African Union, 2009). Five years later, in 2014, the African Minerals Development Centre (AMDC) – which was established in 2013 as an agency of the African Union Commission, co-sponsored by the African Development Bank and the United Nations Economic Commission for Africa – published a Country Mining Vision (CMV) guidebook. Freehills (2017) notes that this was done to promote domestication of the AMV having realized that “there is no one size that will fit all countries. The purpose of a CMV guidebook was to “provide decision makers and stakeholders with clear and simple guidelines and options for aligning their mining policies” to the AMV (Pedro, 2016b). A CMV was intended to be a collective agenda, broadly shared by the government, labour, business, communities and civil society (AMDC, 2014). The key focus areas of a Country Mining Vision (CMV) were: fiscal regime and revenue management, geological and mineral information systems, building human and institutional capacity, artisanal and small-scale mining, mineral sector governance, linkages, investment and diversification, environmental and social issues. As of 2017, twenty-five countries had begun domesticating the AMV by developing their own CMVs. Some of the countries which had begun doing so are Tanzania, Ghana, Kenya, Sierra Leone, Malawi, Eritrea, Congo and Niger.

According to Pedro (2016b), the extractive industry is at the centre of the CMV as a key catalyst for broad-based development. However, to maximize impact and trigger productive linkages, the CMV requires the formulation of interconnected plans and programmes from other sectors of the economy. This is clearly illustrated in the process followed to formulate Chile’s mining vision: *‘A virtuous, sustainable and inclusive mining industry to improve the quality of life of current and future generations’*. As reflected in the report—‘Mining: A Platform for Chile’s Future’¹⁰ — to the President of the Republic of Chile Michelle Bachelet, the vision, spearheaded by the Commission for Mining and Development of Chile and the National Council of Innovation and

¹⁰ <http://www.cnrc.cl/index.php/informe-mineria-plataforma-de-futuro-para-chile.html> (last accessed: 18 September 2019)

Competitiveness, benefited from inputs of a large group of multi-stakeholders representing the government, international mining companies, municipalities, NGOs, CSOs, think tanks, state-owned companies, universities and other bodies. The fact that there is reference to the current and future generations, there is an aspect of sustainable development which can be practiced through CSR.

The Nigerian Minerals and Mining Act of 2007 mandates mining companies to sign Community Development Agreements (CDAs) with their prospective host community for the provision of social and economic benefits which would enhance the sustainability of the host community.¹¹ This provision was absent in the previous mining Acts¹² (Akinsulore, 2016). While the NMMA 2007 did not explicitly define the term Community Development Agreement (CDA), what could be interpreted from the Act was that it entailed the transfer of “social” and “economic” benefits from the lessee mineral title holder to the host community. With governments, companies, and communities seeking to develop a sustainable and mutually beneficial relationship, CDAs can provide a means of strengthening and advancing the relationship between the mining houses and the host community.¹³ CDA serves as a tool for building trust, community relations and social economic development within the host community where mining takes place. The concept of “social licence” to operate is a blend of several sociologically based features. It finds expression in the fact that social licence could not be paid for but could only be earned or built over a period of social relation.

The Zambian Mines and Minerals Development Act number 11 of 2015, Part 1, section 4 subsections (b), (e) and (f) state that:

- (b) “mineral resources shall be explored and developed in a manner that promotes and contributes to socio-economic development and in accordance with international conventions to which Zambia is a party;”
- (e) “citizens shall have equitable access to mineral resources and benefit from mineral resources development; and

¹¹ Ruth Tene Natsa, “Enforcing CDA Will Enhance Development in Host Mining Communities” The Leadership Newspapers (20 November 2014).

¹² Minerals and Mining Act, Cap M12 L.F.N 2004.

¹³ Ghulam Dastgir Khan, “Community Development Agreement” (2014) National and Regional Resource Corridors Program Secretariat, Ministry of Mines Afghanistan < mom.gov.af/content/files/cda_pres> accessed 18 September 2019.

(f) “development of local communities in areas surrounding the mining area based on prioritisation of community needs, health and safety.”

These provisions of the law seek that “host communities” benefit from the mineral resources Zambia has (MMDA, 2015). This could be either through the central government using revenue collected from the mining companies or the mining companies themselves by way of implementing Corporate Social Responsibility (CSR) initiatives in the localities where they operate. Unlike the Nigerian Minerals and Mining Act of 2007, the Zambian Mining and Minerals Development Act number 11 of 2015 made no mention of the signing of Community Development Agreements (CDAs) between mining companies and host communities.

2.6 Conclusion

This chapter looked at socio-economic impacts of mining which are displacement of people, demographic changes, employment and income generation. Additionally, stakeholder partnerships have been highlighted as an important aspect in the reduction of poverty in communities where there are mining activities. The chapter has also considered the evolution of CSR and how the strategy has helped in addressing the socio-economic impacts of mining. CSR legislation has been considered too in addition to the African Mining Vision and the Country Mining Vision. Although CSR is not well defined, there are services which a mining firm needs to provide to the host community. Lastly but not the least, sustainable development has also been considered. Having stated this, the study’s aim was to bring to the fore the current happenings in the “new Copperbelt,” a relatively new mining area, and contribute towards initiatives which can see to it that the host communities benefit socially and economically during and after the lifespan of mining activities. The next chapter will consider the methodology which was used in the gathering of information for the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter looks at the research approach which was used, how the data was collected and analysed.

3.2 Qualitative approach

The research employed a qualitative approach. The qualitative approach enabled the researcher to conduct observations, semi-structured interviews, reviewed public documents and carried out audio-visual recordings.

3.3 Data Collection

The following are the methods which were used in the process of data collection:

3.3.1 Field observations

The researcher went into the research site, interacted with the participants, took field notes on the behaviour and activities of individuals at the research site. In these field notes, the researcher recorded, in an unstructured and semi-structured way, the behaviour and activities of individuals at the research site.

3.3.2 Interviews

The researcher conducted face-to-face interviews with participants and interviewed participants by telephone. These interviews involved semi-structured questions which were intended to elicit views and opinions from the participants. This method enabled the researcher have control over the line of questioning and the participants provided historical information which enabled the researcher to probe further.

3.3.3 Documents

During the process of research, the researcher collected documents. These were public documents (newspapers, official reports). The relevant documents which addressed the

objectives of the study were thoroughly read through and notes were taken. These documents helped the researcher to make a comparison with what was on the ground, and they were useful in the sense that the “participants” had given attention to compile them and they were useful resources for reference purposes during the time of data analysis.

3.3.4 Audio-visual materials

Photographs, audio recordings and short video clips were done. This method provided an opportunity for participants to directly share the reality because it captured the ‘situations’ as they were on the ground at the time when the research was conducted.

3.4 Sample size, sampling frame and administering of semi-structured questionnaires

3.4.1 Sample size

From the information which was obtained before going into the field, there were two wards in the vicinity of Kansanshi mine namely; Kapijimpanga and Kamalamba whose total number of households per ward was 3353 and 3877 respectively (Central Statistical Office Zambia, 2013).

For the two wards, the samples were calculated firstly by finding the percentage for each ward using the total number of households for the two wards. The percentages were 46.38% for Kapijimpanga ward and 53.62% for Kamalamba ward. Using these percentages, the sample sizes for each ward were 175 and 203 for Kapijimpanga and Kamalamba respectively.

The total number of samples which were done was 196. This was as a result of reaching a point of saturation, that is, the repetition of information which had already been obtained. Of the 196 samples, 93 were from Kapijimpanga ward while 103 from Kamalamba ward. This was arrived at after considering the initial total number of households in each ward.

3.4.2 Sampling frame

Sampling frame is simply the set of source ‘materials’ from which the sample is selected (Turner, 2003). Bearing in mind the kind of information which was being sort after, all respondents were above the age of 18. This was to ensure that relevant information was obtained taking into consideration objectives (1) and (3) in section 1.4.

The respondents were as follows: community leaders, ordinary community members, mine workers, mine personnel in charge of (CSR), Non-Governmental Organisations (NGOs) and district local government authorities.

3.4.3 Administration of semi-structured questionnaires

Having employed the qualitative research method, interviews were one on one, that is, face to face. Semi-structured questionnaires were used.

3.5 Data Analysis

The filled in semi-structured questionnaires were all read through taking note of the words and phrases which were frequently used. Likewise, the recorded audio-visual was transcribed taking note of the frequently used words and phrases. The documents were consulted to verify and compare what came out of the semi-structured questionnaires, recorded audio-visuals and the photographs.

The data was then grouped into themes which enabled the researcher to elaborate what was on the ground under each theme. Thereafter, a comparison was made with what was stated in the literature from other similar studies. Most of the studies confirmed what came out in this study.

Pie charts, bar graphs, tables and images were used to display data. Pie charts were used to display the community's source of livelihoods while bar graphs show the needs of the communities at the time. Additionally, tables were used to display some of the direct responses from the respondents. Images were another method which was used to show some of the projects the Kansanshi mine has done in the host communities.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the findings of the research. It focuses on displacements of people, demographic changes, employment and income generation, property values, Corporate Social Responsibility (CSR), infrastructure development (health, education, roads and water facilities) and sustainable development.

4.2 Socio-economic effects of mining in host communities

The results of the study showed that there were several ways in which mining in the study area had affected the socio-economic lives of the host communities. Among the effects identified by the study included displacements of people and income generation.

4.2.1 Displacements of people

Kabwela, Muzabula and New Israel communities were ‘created’ as a result of displacements. According to views from the affected communities, those who reside in these three communities were staying right in the “heart” of the mine. In 2005, 42 households were displaced from the Kansanshi mine site to New Israel and most (not all) households were persuaded to move and were compensated between K700 and K1,500 (rebased). From community views, it was stated that mining development and exploration has had some costs and benefits, but the costs outweighed the benefits in that what was given to them after relocations was little compared to what they had before relocations. Before relocations, the people in these communities were able to plough their fertile fields, sell their merchandise and take their children to school. At the time these communities were relocated, a number of promises were made to them concerning compensation and what the mine was going to do for them in their ‘new’ communities but to a large extent, those promises were not met. One community member in Kabwela stated:

“They promised to build houses for us, connect electricity and give us some money, but to this day, nothing has been done.”

During the construction of the tailings dam in the eastern part of the mine for example, some families were compensated, while others were given fields in other locations. Unfortunately, they were given fields where the soils were unfertile. Field observations revealed that most crops – especially maize – were not growing to maturity anymore if fertilizers were not applied. During the first two to three years, farmers were assisted with farming inputs (seed and fertilizers) and the assistance did not continue beyond that. The displaced communities expected perpetual assistance from the mine in terms of farming inputs. Further, some of these fields were a distance (about 5kms) from where the owners resided, making it difficult for them to access them. Additionally, they were also promised boreholes in their ‘new’ fields but the promise did not come to fruition as one respondent noted:

“Those given fields were promised boreholes but to this day, nothing has been done.”

A Kansanshi member of staff who participated in this study noted that the assistance with farming inputs was to help the people who were relocated to settle down. He further added that the assistance was not for as long as the mine operated centrally to the communities’ expectations. The mine envisaged that during those three years, the people were going to use the resources given to them and grow their businesses and no longer depend upon the mine to provide them with farming inputs – self-sufficient. The member of staff pointed out that:

“Communities need to reach a sustainable level. We couldn’t continue ‘breastfeeding’ them beyond that time.”

This view by the Kansanshi member of staff contradicts with Cernea (2003) who states that once inhabitants of a certain locality have been moved for the reason of setting up a public-sector project, there is need for continual help and empowering them. They need to be assisted with aspects such as farming inputs until they were deemed to have fully settled and become self-reliant. After being relocated, a community might take a longer period of time to reach a “self – sustainable level” than what would have been focused by those who displaced them, he further adds.

In the South-West part of the mine (Muzabula), twenty-three families were asked to choose where they wanted to go and they chose chief Mulonga’s area. Upon relocation, they were

supported with bricks for their houses, roofing sheets, five protected wells, two boreholes, a school, staff house, clinic and a bicycle for each household.

In New Israel, complaints were mainly on scarce and costly public transportation, following the relocation of the community 40 km north of its previous location. Residents in particular were critical of the fact that since moving to the new site, the high bus transport cost to the Solwezi Central Business District (CBD) had consumed a substantial share of the resettlement allowance provided by Kansanshi. The road leading to the Solwezi CBD was in a bad state. Despite this, the mine had built a school, a house for the school headmaster, a clinic and another house for the clinical personnel. These are some of the Kansanshi mine's CSR initiatives which had helped to improve the community's quality of life in New Israel. Children had access to education within their community, the headmaster was motivated to live within the vicinity of the school, healthcare was within reach and the medical personnel also lived in the community unlike a situation where due to lack or poor accommodation, he or she would be living a distance from the health facility.

4.2.2 Employment and income generation

Respondents from Kimasala, Mushitala and Kabwela communities (5%) noted that they work or knew of colleagues and/relatives who work at the mine as field officers (under conservation farming), miners, environmentalists and drivers. The Kansanshi staff stated that they did not have any casual workers apart from those they had engaged at construction stage. This sentiment was also acknowledged by some of the members in the communities of interest. Some of those who no longer worked for the mine were into farming activities and charcoal production and selling of the same. Charcoal production had contributed to deforestation in the area.

In Kabwela, Mushitala, Kimasala and Muzabula communities, 40% of the respondents were involved in farming in addition to other economic activities they did, like charcoal production and selling of the same, gardening, among others. Of those interviewed, Figure 4.1, shows that 40% were involved in farming, 12% in charcoal production, 8% as part time workers (maids, gardeners, security guards), while another 8% ran their own small businesses. Further, 5% worked for Kansanshi mine and 27% were involved in other income generating activities such as welding, maids, cleaners in the shopping malls (due to opening of malls), among others. It needs

to be noted that farming was done by most of the interviewees despite them being involved in other income generating activities.

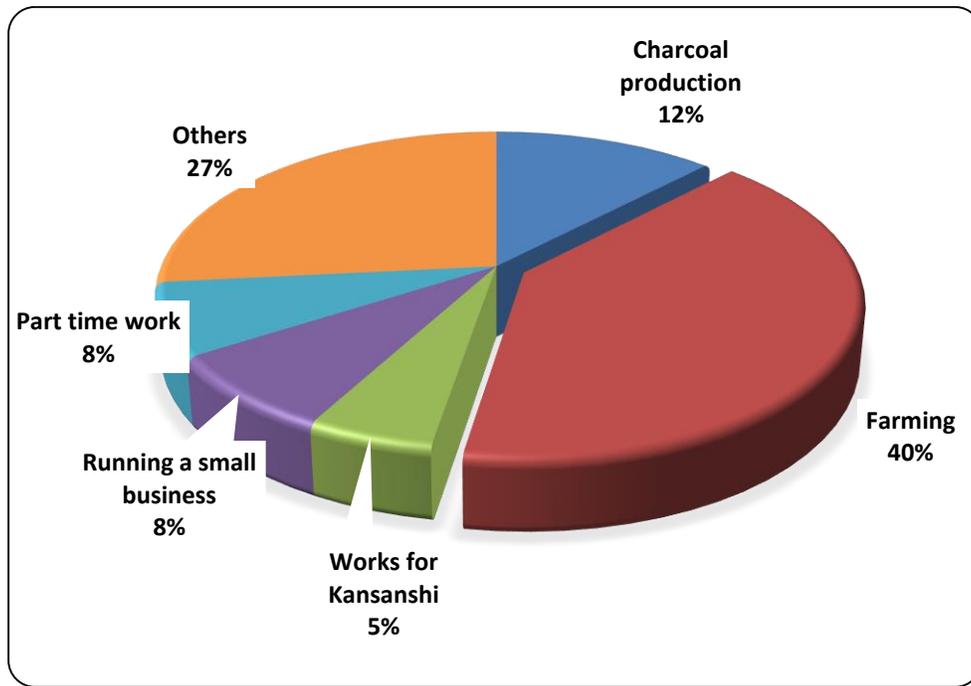


Figure 4.1: Respondents' sources of livelihoods (field data)

Asked what they did for a living, most respondents stated as indicated in Table 4.1.

Table 4.1: Respondents with a negative outlook of Kansanshi mine (field data)

Respondents	What respondents did for a living
A	“Farming only. Not enough revenue to take children to school.”
B	“Only four people work for the mine. The rest, it is farming in Katandano which is a distance from here.”
C	“No one works at the mine. Outsiders are working there, not locals. As a result, we are suffering because we don’t have any source of livelihood.”

Mixed responses were expressed in the communities with regard to employment. Positive impacts in the form of some new job opportunities such as in the construction sector were identified, but community representatives felt these were largely limited. In all the communities,

employment was highlighted as the main concern, with corruption, in-migration and lack of necessary skills to gain employment at the mine being noted as major barriers. It was stated that the vast majority of skilled labour was sourced from outside the province – mostly the Copperbelt Province and if locals succeeded in getting low-skilled jobs such as cleaners, and manual laborers, they were often paid low salaries through contractors. Their wages ranged between K1,500 to K3,000. It was also noted that there were remuneration disparities among workers despite them doing the same work. One would be remunerated K2,500 while another would be remunerated K4,500 despite both doing the same work and even working together in the same section. This was as a result of people being engaged by different contractors. The unions stated that there was need for a policy which would address ‘equal pay for equal work at the mine.’

Those who had a member of their household working at Kansanshi mine had something positive to say about the firm. Some noted that they were managing to take their children to school and helping their relatives to start businesses from their incomes. A mine employee and a business lady stated as shown in Table 4.2.

Table 4.2: Respondents with a positive outlook of the Kansanshi mine (field data)

Respondents	What respondents did for a living
A	“I work for the mine through a contractor. My children are able to go to school.”
B	“My husband has been working for the mine through a contractor for 5 years now, and we are able to take our children to school.”

Respondents from New Israel, Kyafukuma and Mulenga communities, neither stated to be working nor knowing anyone who worked for Kansanshi mine. These people were into farming and charcoal production. It needs to be noted that this could have been attributed to the distance from the mine (on average 25km) to the stated communities. In Kabwela charcoal traders coming from New Israel and Kabwela itself were seen ferrying the commodity to the market – mostly the Solwezi Central Business District (CBD). A similar observation was made in Muzabula where

charcoal was being transport from Mulenga and Kyafukuma to the market. Figure 4.2 shows a community resident ferrying charcoal to the "market" passing through Muzabula.



Figure 4.2: A community resident ferrying charcoal to the "market" passing through Muzabula community (field photo)

4.2.3 Kansanshi mine's workforce

Results of the study showed that there were 3,250 people working at the mine as of November 2017. Of these, more than 2,000 (61.5%) were youths. The women were 300 (9.2%). According to a respondent from the mine, not all of them were directly employed by the mine, but through contractors. This workforce was composed of both Zambian and foreign nationals. The 2010 First Quantum Minerals Limited's (FQML) corporate sustainability report stated that most of its employees (90-95 percent) were Zambian citizens (FQML, 2010). The number of each of the two categories was not given to the researchers although this information was gotten directly from the Kansanshi mine's human resource personnel.

Despite the fact that FQML corporate social responsibility reports showed that 90-95% of the workforce were local people, local residents interviewed in the study disagreed with such statistics. From the researcher's point of view, the majority of the workforce was not from the community, they were from out of town. This was arrived at after having had conversations with the workers themselves and looking at most of the housing units which were temporal. A Non-

Governmental Organisation (NGO) representative noted that contractors are mainly from outside Solwezi town and were therefore more prone to recruiting workers for the mine from their areas of residence. Additionally, a respondent working for Kansanshi noted that the mine encourages contractors to adhere to their labour/hiring policies, but were unable to enforce them.

4.2.4 Local economic spillovers

The study established that the Kansanshi mine, in addition to paying taxes, royalties and contributing to the Zambian economy, also developed a Local Business Development Plan (LBDP) in 2011. Under this programme, they contracted local suppliers, held workshops with the North West Chamber of Commerce (NWCC) to train NWCC members on the Zambian labor law and the mine's safety standards. A total number of 108 participants attended workshops as at the end of the year 2010 which had a view of assisting the attendees in meeting the mine's procurement and contract requirements. The company had also built capacity among the micro, small and medium enterprises in the province through local business development workshops which had about 1,797 participants. These were equipped with knowledge in areas such as writing of business plans, managing money, business choices, and customer relations. A number of those who had attended these workshops showed their appreciation as stated by one of them:

“The course taught me to set aside some of my profits and use the remaining money for my home needs. This has really helped me as I have been able to build up a small capital amount.”

With the coming of mining activities in Solwezi, there had been a number of other indirect benefits for the people such as installation of communication towers, makeshift grocery 'shops', shopping malls, among others. This has resulted into better communication signal within the Kabwela community and ready income for those who owned the makeshift shops because most of their customers had a link to the mine by either working there or having relatives who worked there hence the disposable income. This information is shown in Figure 4.3.



Figure 4.3: Some of the host community's indirect benefits of mining (field photos)

With the increase in the number of people who were coming to work in the mines, the demand for goods such as food and services (transport, accommodation), had also increased. As a result of this, those who were into agriculture had a “ready” market for their produce. There was a population to which they were able to sale their produce to. A Non-governmental Organization (NGO) representative stated:

“A marketeer knows that his or her merchandise are going to sale. Malls have also come into the district – Foreign Direct Investment (FDI). People now have disposable income, not like those days.”

In Kabwela, there was a network tower (MTN) which was not there before the mine was set up. The Kansanshi mine facilitated for its placement in the community. When asked concerning network connectivity, two respondents noted as indicated in Table 4.3.

Table 4.3: Kabwela residents' responses to mobile network connectivity (field data)

Respondents	Mobile network signal in Kabwela community
A	“Better than before, tower brought by MTN through the mine.”
B	“We now have network which was facilitated by the mine for use at their tailings dam.”

Apart from Mulenga community, the rest of the communities did not report having any serious problems as far as connectivity was concerned – they were within the vicinity of communication towers. They were able to easily communicate with their loved ones.

Additionally, there was also a demand for accommodation due to the influx of people. This had led to more accommodation facilities being built which had led to some people earning a source of living from the same.

Even though people were constructing houses and generating an income from the same, the influx of people had resulted in accommodation becoming quite expensive, plus it had increased pressure on infrastructure such as schools.

The local authority acknowledged the revenue it was receiving from the mine although they did not state the actual amount. Just like the host community, they also stated that the presence of the mine had a positive economic impact on the locals. Small and medium-sized business enterprises, as well as farmers were benefiting due to the population increase which had in turn broaden their market. Residents of Mushitala and Zambia compounds talked of mineworkers being able to acquire assets such as houses, vehicles and farm lands. Considering most of the miners' low wages, those acquiring such assets are those with qualifications such as Bachelor's degrees and were involved in skilled labour like accounts, geologists, and metallurgists, among others. A grocery store owner (a respondent) noted:

“The majority of our customers work for the mine.”

It could be noted from views expressed by the host community, Kansanshi staff, NGOs and the local government authorities that despite there being negative effects of mining, there had also been some benefits for the local people.

4.3 Corporate Social Responsibility (CSR)

First Quantum Minerals Limited (FQML) had a globalized CSR agenda. A respondent working for Kansanshi mine noted that even though the company had a global CSR agenda, they endeavored to localize it in the areas where they operate. This reflected the company's direct impacts in addition to considerable indirect impacts through downstream enterprise developments and procurement. The CSR team was composed of the manager, who was assisted by the CSR superintendent in addition to several field officers. The immediate beneficiaries were communities which were within the vicinity of the mine (10 km) although there were usually other considerations made when need arose. Kansanshi considered community's situations in terms of danger they could be exposed to as a result of mining activities and their economy in addition to safeguarding the environment.

It was established that in implementing CSR initiatives, the mine worked with the community development committees and social welfare to identify what the communities needed apart from directly engaging with the community. Cultural considerations were also looked into as they implemented community projects.

4.3.1 Conservation farming

One of the CSR strategies which was being implemented by the Kansanshi mine was conservation farming which they initiated in 2010. Funded by First Quantum through their non-profit Kansanshi Foundation and developed in partnership with Zambia's Ministry of Agriculture, the conservation farming program taught community members how to grow their crops sustainably, averaging four times the yield of traditional cultivation methods. Under this programme, Kansanshi was providing the local community farmers with fertilizers, village chickens, pigs and goats in addition to training them in better farming methods. The local people had appreciated this initiative evidenced by those who had been trained and employed as field officers and the improvements in yields for those who had embraced the initiative. The FQML 2012 CSR report affirmed that the initiative had contributed to an average fourfold increase in maize crop yields. A senior Kansanshi employee stated:

“We have trained more than 30,000 farmers in conservation farming.”

The aim of this initiative was to enable farmers be self-sufficient from their initial subsistence kind of farming which they were practicing. The company used simple farming methods which were easily being understood by the community members. According to a representative from the conservation farming team, this program was being seen as a model for sustainable agriculture in Zambia – and all of Africa. A respondent who worked for Kansanshi mine noted that:

“Participants have learned to apply the simple techniques of conservation farming as they feed their families, earn extra income and gain newfound pride.”

The study established that some of the target populace were those who grew up with limited education, coupled with few prospects for employment. Those who had benefited from this initiative had a positive view of it as noted by a respondent:

“For the first time, my daughter and son appreciated me as a providing father when the conservation farming initiative begun.”

This initiative was widely appreciated by the communities in that they felt considered and thought of by the mine. For those who were displaced from their initial locations, this initiative helped them to have improved harvests in that they were provided with fertilizers. The downside of it was that the programme ran for only three years to the disappointment of the communities especially those in Kabwela. They had expected it to be a continual assistance as long as the mine operated. One resident stated:

“We need fertilizer, our yields are very bad. Without fertilizer, our maize crops only reach one meter.”

The views of most Kabwela residents on their agricultural outputs were negative. To them, the mine had made them to be worse than they were before. These people’s predominant activity was agriculture in the fertile soils where they were before being relocated ‘upstream.’ To make matters worse, they had not benefited in terms of employment. This had greatly contributed to engaging themselves in charcoal production which in the long run may lead to deforestation. From field observations, almost every 20 – 30 minutes, someone would be seen ferrying charcoal for sale along the road which connects Kabwela and Mushitala leading to the Solwezi central business district. This was also noticed along the road from Muzabula to Kimasala.

4.3.2 Health and sanitation

The Kansanshi mine had undertaken a number of relevant initiatives and projects. The company had undertaken edutainment Health Road Shows since April 2009 with a view of sensitizing communities on HIV/AIDS and other ailments such as malaria, cholera and sexually transmitted diseases. Door to door health checks was another initiative which the company had carried out with a team which included peer educators, community nurses and nurse counsellors. These people who were carrying out this initiative had been trained by the Kansanshi mine. Some of the services under this initiative were voluntary counselling and testing, malaria tests and blood sugar tests. Those who needed further assistance were referred to the Solwezi General Hospital. The mine had also sponsored equipment for Mary Begg clinic to support the delivery of health related courses.

On the spot checks in the field revealed that the Kansanshi mine had drilled 6 water wells in order for communities to have access to clean water. Additionally, they had provided and facilitated the distribution of bed nets for every bed space especially for families who were relocated to pave way for mine construction, renovated the high cost section at the Solwezi General Hospital.

There were mixed community views regarding healthcare. In Kabwela and Mulenga communities for instance, the clinics were understaffed – each only had one health attendant and were not operating on a daily basis. For this reason, Kabwela community members had to walk a 5km distance to Mushitala to seek medical services. For Kimasala, according to a respondent who worked at the clinic, the clinic had 18 health personnel, who were overwhelmed because on daily basis, especially on busy days, they had to attend to more than 200 patients. Some of the most common illnesses which were being attended to in Kimasala are Respiratory Tract Infections (RTI), malaria and diarrhea. There was also a plea to expand the clinic block so that each department could have its own room and professional development of the health attendants in order to improve service delivery. Muzabula community had no clinic. The nearest health centers were Kimasala and Mashimpi which is between Muzabula and Mulenga communities.

Kansanshi mine conducted regular environmental monitoring to measure ambient air, dust and noise levels on the mine site and communities in close proximity to the mine. Additionally, the

company also gave high priority to water management issues given that the mine's location is upstream of Solwezi town.

4.3.3 Education

First Quantum's corporate social responsibility initiatives took many forms, but the vital thread connecting all of them was education. When sustainability efforts provide opportunities to acquire new knowledge and skills, people gain the power to shape their own futures. FQML had undertaken a number of initiatives in this sector. First Quantum's support for public education was particularly important in Zambia, where literacy rates were among the lowest in Africa. The aspect of having low literacy rates was also elaborated in a Central Statistical Office (CSO) 2013 report which stated that the North-Western Province had an overall literacy rate of 63%. The adult literacy rate (i.e., for ages 15+) was just over 50%, while the figure for Solwezi, the provincial capital and a hub for both the Kansanshi and Trident developments, was still lower at 43%. The company was operating a scholarship programme since 2006 to enable students to attend degree courses mainly in mining – related disciplines at Universities in Zambia, South Africa and Mauritania. A respondent who dealt with CSR matters stated that as of 2012, the company had spent about US\$ 319,950 in Zambia on the scholarship programme. A young metallurgist who was on the scholarship programme at the time noted:

“My experience here has expanded my outlook. I have learned about different cultures and ways of doing business. The First Quantum Way allows for a flexible approach to the complexity of the mining process and I have decided to adopt ‘Bolder, Smarter, Driven’ as my personal credo.”

FQML had also committed itself to a programme called Kwambula Leadership Programme. To drive this commitment to skills development, the Company entered into an agreement with the Solwezi Trades Training Institute (SOTTI) in 2011 with the intention of establishing a learnership programme which was aimed at providing people with the opportunity to get a valid craft qualification. A visit to SOTTI established that US\$1.4 million investment at the institution led to the upgrading of infrastructure which resulted into increased training resources and additional facilities to expand the institute. The programme was christened “Kwambula” which

means “igniting” in Kaonde, an apt name for an initiative that aimed to ignite hope in people and set the course in motion for a prosperous Zambia. The Kwambula programme provided practical and theoretical training in various mining trades including mining, electrical, metal fabrication, welding and machining, which was being conducted under the auspices of the Ministry of Higher Education at SOTTI. The qualifications received by course participants were being recognized across the country. Students were also undertaking work experience at Kansanshi and Sentinel mines. The creation of Kwambula was consistent with the First Quantum’s CSR philosophy, which was aimed at building sustainable communities which would be able to outlive mining activities, thus providing Zambia with the benefit of skilled people, who would grow the economy and promote sustainable living.

In addition to the Kwambula initiative, the company had also built a classroom block in Kabwela and helped complete a teacher’s house in Kyafukuma. The teacher’s house in Kyafukuma was started by the local community after they noticed that teachers lacked accommodation. It was during the building process that the community ran out of materials to complete the said house that the mine came in and assisted. This had contributed to having teachers stay within the community unlike in the past when they used to shun the area due to lack of accommodation.

The company had also conducted surveys on over 1,500 households on a range of topics including education. This had been done so that they could analyze the changes which had taken place over the period of time the mine had been operating so as to ensure that opportunities for contributing to economic and social development were well targeted and to account for local complexities relating to poverty and inequality.

4.3.4 Roads and connectivity

The company (FQML) had committed itself to maintaining key stretches of roads around the mine area and the main road from Solwezi to Chingola before it was eventually tarred. A respondent who worked in the roads department at Kansanshi mine noted that between 2011 and 2012, Kansanshi’s roads division constructed a new 2,700-metre-long runway at the Solwezi Airport to replace the old 1,300 metre runway which was in bad state. This came with other facilities such as the apron and taxi areas, storm water drains and the perimeter security fence. The total project cost was US\$9,863,781. After this was done, large aircrafts were able to land.

4.4 Community needs

Thus far, we have discussed at what the Kansanshi mine had done in the host communities. Despite them having built and renovated some schools, clinics, accommodation for teachers and health personnel, some communities noted that there was much which the mine needed to do for them. As pertaining to what the host community needs were, Figure 4.4 illustrates them. Educational, health and road infrastructures came out prominently from most of the respondents. This could be attributed to the fact that the few education and health facilities which were available were far apart from each other hence school going children and the sick had to walk long distances. This had resulted into poor output of students and caused the sick to be reluctant as far as seeking medical attention was concerned.

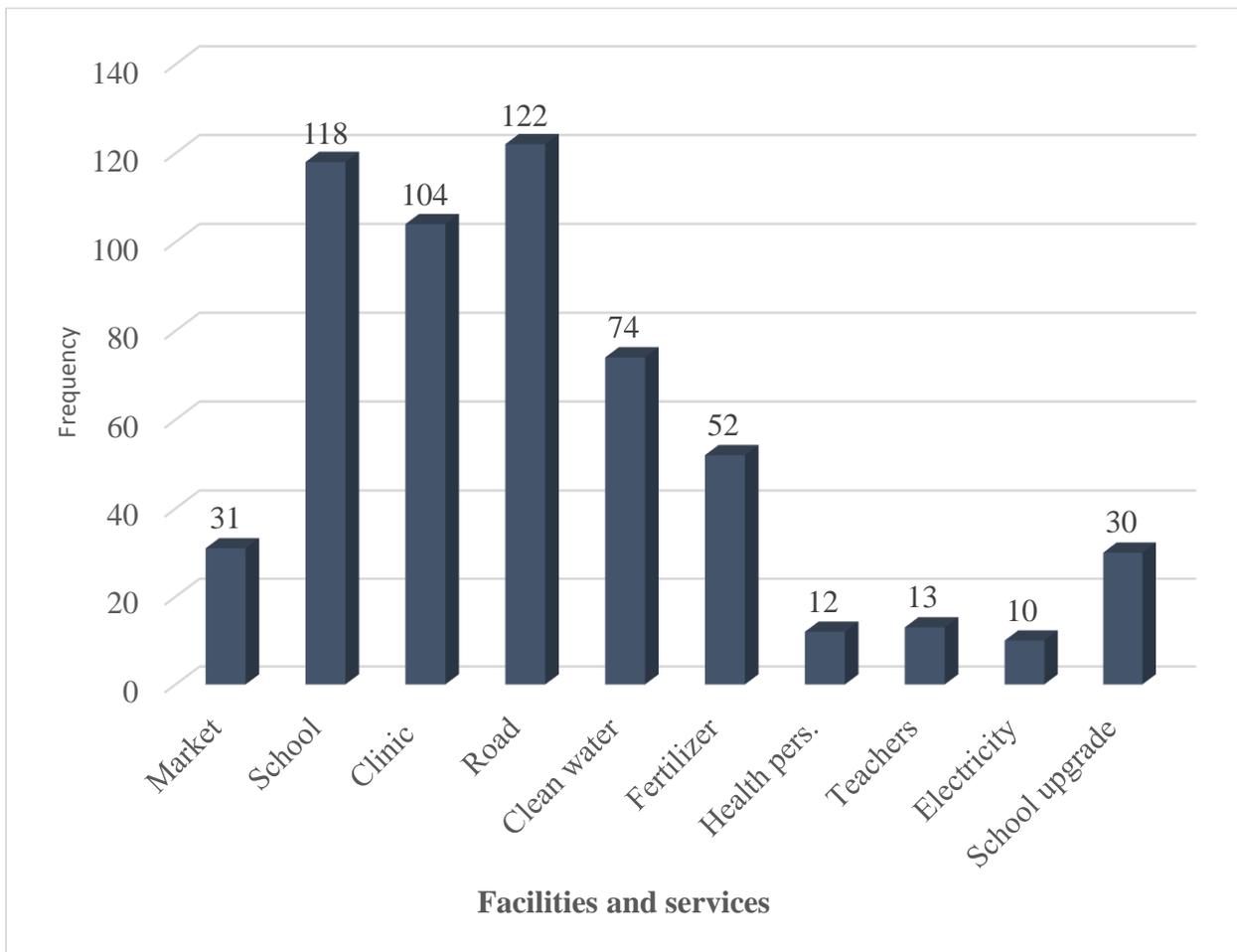


Figure 4.4: Host community needs at the time (field data)

The deplorable road network inhibited farmers from taking their produce to the nearby markets. Additionally, they were charged high fares by transporters. This study was conducted in the rainy season, hence the researchers can attest to the same. For example, the road which passed through Kimasala and Muzabula going to Mulenga village was impassable on one of the days after it had rained heavily during the study. Figure 4.5 shows an image which was captured during the field visit.



Figure 4.5: The deplorable road which connected Muzabula to the Central Business District (field photo)

It was also noted that among the community needs at the time, electricity featured as the least on respondents' minds (only 10 respondents mentioned it). This could be attributed to two aspects. In Kabwela community, there was no single house which had been connected to electricity while in Muzabula, a substantial number of households had been connected and the connections were still going on at the time. Kimasala and Mushitala communities, most, if not all households had access to electricity. It was noted that access to electricity was not being facilitated by Kansanshi

mine but by the Zambia Electricity Supply Cooperation (ZESCO). Respondents within the vicinity of the mine were of the view that the mine could have been of help if they assisted the communities connected to the national grid.

The Zambian Mines and Minerals Development Act number 11 of 2015, Part 1, section 4 subsections (b), (e) and (f) state that:

- (b) “mineral resources shall be explored and developed in a manner that promotes and contributes to socio-economic development and in accordance with international conventions to which Zambia is a party;”
- (e) “citizens shall have equitable access to mineral resources and benefit from mineral resources development; and
- (f) “development of local communities in areas surrounding the mining area based on prioritisation of community needs, health and safety.”

These provisions of the law seek that “host communities” benefit from the mineral resources Zambia has (MMDA, 2015). This could be either through the central government using revenue collected from the mining companies or the mining companies themselves by way of implementing Corporate Social Responsibility (CSR) initiatives in the localities where they operate. Unlike the Nigerian Minerals and Mining Act of 2007, the Zambian Mining and Minerals Development Act number 11 of 2015 made no mention of the signing of Community Development Agreements (CDAs) between mining companies and host communities. There is need therefore for the revision of the Act so that it can explicitly state the signing of CDAs so that host communities have the much needed social and economic development.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This study set out to examine the socio-economic impacts of mining on local communities and the role of Corporate Social Responsibility in improving livelihoods. In particular, it was concerned with how mining activities were impacting (socially and economically) on people's livelihoods, the Corporate Social Responsibility (CSR) strategies which were being used by the Kansanshi mine to improve local people's welfare, and the prominent needs of the communities surrounding the Kansanshi mine.

5.2 The impact of mining activities on people's livelihoods (socially and economically)

Mining activities had offered employment opportunities to the host communities and other economic "spillovers" for income generation. Some of the economic spillovers were the increase of small businesses such as makeshift groceries, the establishment of shopping malls which have offered employment to the local people in addition to bringing goods and services to the people, and the boom in the construction sector due to the high demand of accommodation facilities. The high demand of accommodation facilities is as a result of an influx of people into the area thereby having a strain on the available infrastructure. The study illustrated that the Kansanshi mine was engaging local suppliers of goods and services in addition to paying taxes to the government.

The study has highlighted the fact that locals, believing themselves to be the victims, had a natural tendency to expect tangible projects and services from mine developers. This feeling was particularly intense among host communities given what they had lost out such as farm lands during displacements could not be measured in monetary terms. Additionally, communities became dissatisfied when the mining company did not implement promises such as connecting them to the national grid within the specified timeline.

5.3 The Corporate Social Responsibility (CSR) strategies the Kansanshi mine was using to improve local people's welfare

The Kansanshi mine – through its CSR strategies such as conservation farming, building and renovation of educational and health facilities, provision of safe and clean water, educational sponsorships, promotion of village banking, maintenance and improvement of the road network – has had a direct socio-economic impact in the host communities. New Israel and Kabwela communities had been provided with a school and a clinic each. These initiatives resulted in the reduction of the distance community members were taking to access educational and health services. For New Israel, they also built for them a house for the headmaster – likewise in Kyafukuma – and another one for the clinical personnel. As a result of this, a headmaster and clinical personnel would live within the community, hence readily available to attend to the needs of the community. In Muzabula and Kabwela, Kansanshi mine drilled boreholes so as to provide clean water for the people. Before that, people – mostly women – would walk long distances in search of water leaving them with less time to attend to other tasks.

5.4 The prominent needs of the communities surrounding the Kansanshi mine at the time of the study

The Kansanshi mine, despite having done that which has been stated in 5.3, there were still prominent needs in the host communities. To start with, as evidenced by the respondents and observed by the researcher, the road network was in a deplorable state. This resulted in taking as much time on the road from places like New Israel, Kabwela, Muzabula, Mulenga and Kyafukuma communities to the Central Business District. Additionally, fares were higher than normal due to the wear and tire of vehicles. During the rainy season (when the study was carried out), transport providers even doubled the fares for some destinations like Kyafukuma and Mulenga. This impacted negatively on commuters as they ferried there agricultural produce like vegetables to the market and those who would commute on a daily basis for work.

After the road network, educational and health facilities came out prominently in second and third respectively. Despite having built and or renovated some facilities, there are some services which these facilities were not able to provide. For example, most educational facilities would only cater up to Grade seven hence when children reached Grade eight, they were moving long

distances to schools which would accommodate them. As a result of this, some pupils – especially the girls – would drop out of school. The long distance to school would, in some cases, contribute to teenage pregnancies and eventually cause a girl child to drop out of school. Similarly, most clinics would refer patients to the Solwezi General Hospital (SGH) for medical attention. Considering the distances from places such as New Israel, Kabwela, Mulenga and Kyafukuma to SGH, coupled with the deplorable road network, some patients would be reluctant to travel all the way.

5.5 Conclusion

The results of this study show that there is need for the government to involve host communities in mining areas at the time when they sign agreements with would be investors. By so doing, some of the tensions and the unmet promises which investors make to the host communities would be handled differently to the benefit of the host communities. Further, policy makers ought to reconsider the laws in the mining sector such as the minerals and mining act number 11 of 2015 in order to distinctively include a clause on what an investor ought to do for communities where they operate from.

5.6 Recommendations

Despite having done all that has been stated in the study, there were mixed views from most stakeholders – the government, the host communities, NGOs and the Kansanshi mine themselves – on what FQML ought to do for the host community. The fact that corporate social responsibility is not well defined, there is need for clearly stated legal frameworks which should give clear guidelines on what mining companies ought to do for host communities apart from job creation. Upon paying taxes, mining companies take it that the government needs to provide services such as health and educational facilities to communities. On the other hand, the government expects the mining companies to do the same. For this reason, there is need for a law which can distinctively stipulate the roles of the government and those of the investor in community project implementations. The government need not abandon the provision of social infrastructure to mining companies, but rather, as findings in this study indicate, they should pursue a programme of being a partner with the mining companies. This can be done by involving the mining companies and the host communities so as to establish responsibilities,

costs and benefits and also to sign tripartite community development agreements among the three parties – the government, the mining firms and the host communities.

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APPENDICES

Appendix A: Full Ethical Clearance



THE UNIVERSITY OF ZAMBIA
DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

Telephone: +260 -1- 290258/291777 Ext. 2208
Fax: +260-1-290258/253952
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P O Box 32379
Lusaka, Zambia

23rd January, 2017

Mr. Peter Mhone
C/o School of Mines
University of Zambia
P.O Box 32379
LUSAKA

Dear Ms. Chilonga,

RE: FULL ETHICAL CLEARANCE

With reference to your research proposal entitled: **"An Assessment of Socio-economic Effects of Mining in North Western Province, Zambia,"** you are hereby given full ethical clearance to proceed with your research.

ACTION:	APPROVED
DECISION:	23rd January, 2017
EXPIRATION DATE:	22nd January, 2018

However, it is recommended that all data to be collected should be kept confidential and that if there are plans for publication or dissemination of results, the names of the participants should not be linked with the research in order to ensure confidentiality.

Please note that you are expected to submit to the Secretariat a Progress Report and a copy of the full report on completion of the project.

Finally, and more importantly, take note that notwithstanding ethical clearance given by the HSSREC, you must also obtain authority from the Permanent Secretary of the appropriate Ministry before conducting your research.

Yours sincerely,

Dr. J. Simwinga, PhD
ASSISTANT DIRECTOR (RESEARCH)
DIRECTORATE OF RESEARCH AND GRADUATE STUDIES

cc: Director, Directorate of Research and Graduate Studies
Acting Chairperson, Humanities and Social Sciences Research Ethics Committee
Assistant Registrar (Research), Directorate of Research and Graduate Studies

Appendix B: Request and approval by the Solwezi Town Clerk

School of Mines,
University of Zambia,
Great East Road Campus,
Lusaka.

01st November, 2017.

The Town Clerk,
Solwezi Municipal Council,
Solwezi,
North Western Province.

Dear Sir,

RE: Request for data on the wards surrounding the Kansanshi mine.

I am a student pursuing the Master of Science in Sustainable Mineral Resource Development at the University of Zambia.

I am doing a research on "the role of mining in rural-urban linkages" with the main focus being the Kansanshi mine. May you kindly assist me with data on the wards surrounding the Kansanshi mine and the exact location of the above stated mine. The data needed is on the number of households, population and any other relevant information which could be of help.

Your assistance will be highly appreciated.

Sincerely yours,
~~Peter Mhone~~
Peter Mhone

DP
please assist
02
01/11/2017

Appendix C: Interview guide for host communities

1. How long have you stayed in this community?
.....
2. Kindly share with us on the kind of educational, health and road infrastructure you had in this community 5-10 years ago.
.....
.....
.....
3. What is the current situation regarding infrastructure stated in question two (2) above?
.....
.....
4. How would you describe your relationship with the Kansanshi Mine (KM) in terms of project implementation?
.....
.....
5. What has the KM done in the community in terms of educational, health and road infrastructure developments?
.....
.....
6. If they have done any projects in the community, were consultations conducted before doing so?
.....
7. If the KM was to come to you and asked you what you would like them to do for the community, what would you ask for?
.....
.....
.....
.....
8. Which of the two – boys/girls go to school most in the community? Give reasons.
.....
.....
9. Displacements:
.....
.....
10. What do you do for a living? Work for the K.M, farming, business, bricklaying, etc. Are you able to support your household to meet your daily needs and pay for children’s school fees?
.....
.....
.....
11. What is the state of the following in your community?
 - i) Land:
 - ii) Water:
 - iii) Air:

Thank you for participating in this interview. We highly appreciate your time.

Appendix D: Interview guide for NGOs, mineworkers unions, policy makers, local government authorities

1. What is the latest population for Solwezi district?
 - Of the population how many are youth?
 - Women?
 - Men?

2. What is the economic main stay of the people of Sowezi?
.....
.....
.....

3. What is the employment status of Solwezi/Kansanshi district?
.....
.....
.....

4. One of the mines Solwezi district is host to is the Kansanshi mine. Would you like to share with me how many people are employed by Kansanshi mine?
.....
.....
.....

5. Are the employment opportunities being offered by the mine sufficient to absorb the
 - i. Youths.....
 - ii. Women.....

6. When other youths and women are not taken on to work for the Kansanshi mine, where or what do they find themselves doing for their livelihood?

.....
.....
.....
.....

7. With examples, how would you rate the mine in terms of infrastructure development?

- i. Education sector.....
- ii. Health sector.....
- iii. Roads.....
- iv. Water and sanitation

8. What more in your opinion should they do to achieve maximum infrastructure development?

.....
.....

9. In achieving maximum results from the provision of social infrastructure, what in your view should be the role of :-

- i. Government
.....
.....
.....

ii. Community

- Youth.....
.....
.....

- Women.....
.....
.....

- Men.....
.....
.....

iii. Local authority

.....
.....
.....

iv. Kansanshi mine

.....
.....

v. Any other institution (specify)

.....
.....

10. In which way as a local authority would you want the provision of social infrastructure to benefit:-

i. Government

.....
.....

ii. Community

- Youth.....
.....
.....

- Women.....
.....
.....

iii. Local authority

.....
.....
.....

vi. Kansanshi mine

.....
.....
.....

iv. Any other institution (specify)

.....
.....
.....

11. How does the Kansanshi mine facilitate the flow of goods and services between Kansanshi rural and the rest of the country?

.....
.....
.....

12. What has Kansanshi mine done so far in terms of technology in order to enhance rural-urban connections?

.....
.....

Thank you for participating in this interview. We highly appreciate your time.