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Department of Chemical Engineering

An exploration of lived experiences of 11 resettled families in Mazabuka district, Zambia, by a Nickel mine project

By Lewis Tumbama

Supervisors:

- Professor Harro von Blottnitz
- Mrs Elspeth Donovan

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ABSTRACT

Mining-induced displacements and resettlements are a global phenomenon. However, how these are done and the implications that they have on the displaced and resettled are shaped by micro, local-level dynamics. These include existing regulations, socio-economic and cultural situations of communities involved, level and type of compensations offered to the communities, among others. These shape how communities live the experiences of being displaced and resettled, as more powerful companies with financial resources seek out mining opportunities. For communities that are displaced and resettled, this process becomes a socio-economic one as change of place has implications on people's ability to access resources on which they depend. This may lead to a transformation of their livelihood assets in the short and long term, which requires changing of their livelihood strategies.

Zambia is endowed with natural resources, and the mining sector is the mainstay of the country's economy. In particular, Zambia ranks among the top 15 producers of copper in the world. The government of Zambia (GRZ) gives mining licenses to companies that in return, pay royalties in form of taxes that support the government's development programs nation-wide. Therefore, mining is said to be in the broader interest of the nation (GRZ, 2006). This means that the rights to the access and use of land by a particular group of people, individuals or ethnic grouping will be superseded by an economic undertaking that is seen as having a broader development interest of the nation. This includes economic activities such as building bridges or hydro-electric plants, road construction, building economic zones and mining. In Zambia, below ground surface mineral rights belong to the state.

Given the global nature and scope of mining induced displacements and resettlements, micro-level dynamics easily remain invisible. In Zambia, research in lived experiences of displaced and resettled communities remain sparse and often unpublished. The aim of the research was to explore the psychological and socio-economic implications for the displaced and resettled households by a Nickel Mining Company in Mazabuka, southern Zambia.

Families were purposively sampled and interviewed. Positive and negative lived experiences emerged from the interviews and have been presented as themes. Improved access to services; increased employment opportunities; improved production and acquisition of productive assets; and guaranteed security of land tenure and improved quality of houses were the positive lived experiences of resettled families. Negative lived experiences were: poor quality of soils; loss of locational advantage; emotional depression; discontinuation of gardening activities; and inability to buy drugs for livestock. The findings revealed that despite the cultural homogeneity of the sampled families, lived experiences after resettlement were different based on socio-economic situation of households. This was determined by who the head of the household was, literacy levels and family labour availability, because agriculture is the main livelihood activity.

This research used a qualitative single case study approach to understand the 'how, what and why' of the lived experiences of the resettled families. It sought to respond to three related research questions: i) Did loss of access manifest in the studied case, and if so, how? What are the psycho-socio-economic implications of the Munali Nickel mining-induced displacement and resettlement; ii) What characterizes the livelihoods of resettled families following the establishment of the Munali Nickel Mine, which assets were positively or negatively affected by resettlement and compensation; and iii) What are the coping mechanisms of the displaced and resettled communities following the establishment of the Munali Nickel Mine?

The results of this research indicate that the level of compensation paid to resettled family cannot make up for what communities give up so that mining activities can start. Cultural values and the sense of belonging, for example are not compensated for when these are the factors that ensure psychological well-being of communities. Compensation and fulfillment of development promises were'delayed and not necessarily denied.' Access to education and health facilities was not achieved until nearly 10 years later, partially attributed to frequent closures of the mine that prevented the mine from honouring its promises in time. The uncertainty in the operations of the mine, loss of access to livelihood strategic resources was unsettling and created a sense of anxiety among resettled community members. While access to schools and clinics as physical assets was facilitated following resettling, the resettled community was not wholly part of the mining operation to the level that ensured human capacity development. For a highly technological undertaking as mining, resettled households could not benefit from any knowledge transfer. Furthermore, interviewed households reported increased distance to the tarred road; loss of sources of livelihood to closure of the mine, and loss of business opportunities in resettlement site; sub-standard houses with leaking roofs and cracks, as well as non-uniformity in compensation; inadequate grazing land; reduced agro-production due to water logging in the fields and poor soils; scarcity of firewood; and non-reinstatement of churches, among negative experiences that they have lived. Coping with the experiences of 'delay but not denial of access' and a 'mixed bag' of changes to different asset classes was differential based on age, sex and household composition that determined the level of available labour in the household.

STATEMENT OF ORIGINALITY AND DECLARATION

I declare that this work was unaided and is purely my own work except where I have acknowledged the source. I also confirm that this work has not been plagiarized and that my supervisors monitored my progress throughout the whole research and thesis compilation period.
I have not allowed anyone to copy and use this work for commercial purposes or take any sections of it as their own.

Lewis E. Tumbama

Signed by candidate

04th January, 2019

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CHAPTER ONE

1.0 INTRODUCTION

This chapter forms an introductory part of the thesis and is divided into four sections. The first section of this chapter comprises the background of the study which is followed by the problem statement and then the study objectives, significance and project scope. The last section comprises the organization of the dissertation.

1.1 Research Background

The mining industry is a 'double-edged sword;' on the one hand, it brings about socio-economic development by creating jobs, improving infrastructure, and yielding benefit to countries when mining companies pay taxes. 'Mining is often located in remote and less-developed areas where it can create jobs and innovation and bring investment and infrastructure at a game-changing scale over long time horizons (Sonesson et al., 2016 p.7).' On the other hand, the industry leads to socio-economic challenges which include forced displacement of communities (Terminski 2012). Contrary to expectations, where mining happens as a development undertaking, it often causes impoverishment of affected communities because, as Owen and Kemp (2015) note, physical displacement, relocation and resettlement pose social risk. In a study to review the state of knowledge on understanding and preventing impoverishment linked to mining, Cerena (1995) ably identified the following 8 social risks: landlessness; joblessness; homelessness, marginalization; increased morbidity; food insecurity; loss of access to common property; and social disarticulation. The latter is the 'dismantling' of communities' social organisation structures, through the dispersion of informal and formal networks, associations, local societies etc. (ibid, p.252). Mining can also stall development in other areas of human development. According to Sonesson et al. (2016), mining contributes to 'environmental degradation, carbon emissions, displacement of populations, worsening economic and social inequality, armed conflicts, gender-based violence, tax evasion and corruption, and increased risk for many health problems (ibid, p.7).'

Estimates on the scale of displacements due to development projects, in general, and mining industry in particular, are limited. In a study on mining induced displacements and resettlements (MIDR), Downing (2002) acknowledges this gap noting that 'unfortunately, no global survey has assessed the scale of MIDR (ibid, p.7).' Stanley (2004) also notes that statistics about the geographical distribution of displaced communities do not exist. However, available evidence suggests that the scale of MIDR is significant, causing social disruption that necessitates policy attention and response (Kemp et al., 2017). Authoritative and instructive works that discuss MIDR and its social costs include publications by Cerena, 1995; Downing, 2002; Earthworks & Oxfam America, 2004; Hilson, 2002; Hilson, Yakovleva, & Banchirigah, 2007; Rew & Park, 2000; Sonesson et al., 2016. These are reviewed in chapter 2.

Despite the paucity of data about the estimates of displacement communities and their geographical distribution, Terminski (2012) quotes Cernea (2006) approximating fifteen million people are displaced annually globally, due to large development projects. In Zambia, Colson (1971) reported on the displacement and resettling of 57,000 people as a result of the Kariba dam construction whose lives were dramatically changed by the harsh environment of the resettlement area characterised by poor rocky and sandy soils, poor rainfall and tsetse fly infestations. Based on Terminski (2012), Table 1 below gives a snapshot of the scale of development induced displacement in 11 African countries.

Table 1 Examples of mining induced displacement and resettlement in Africa

Country	Number of displaced persons	Mine/location	Comments
Ghana	About 30,000	Gold mining in Tarkwa district	Inadequate compensation, and environmental disruption (cyanide spill)
Mali	More than 3,335	AngloGold Ashanti	Affected communities: Sadiola, Syama and Morila.
South Africa	10,000 (957 households)	Anglo Platinum near Mokopane	Relocation was voluntary and was realized with the strong support of local authorities and tribal leadership
Zimbabwe	926	Rio Tinto's Murowa diamond mine	Company built new infrastructure to allow people to adapt to their new situation and the development of a local economy.
Botswana	At least 1,000	De Beers	Aboriginal San communities (the Gana and Gwi tribes) from the Central Kalahari Game Reserve.
DRC	15,000	Kibali gold project by Randgold Resources	Established Kokiza resettlement village for the resettled, with 3700 new houses.
Kenya	3,300-10,000 (450 households)	Toronto-based Tiomin Resources	A Titanium Mine in Kwale to displace mainly indigenous people.
Zambia	750(143 households)	Konkola Copper Mines	As per IFC guidelines, resettled communities were given access to social services: schools, a health centre, water supply and sanitation.
Tanzania	511(56 households)	Bulyanhulu Gold Mine	30,000 artisan miners resettled after the construction of Geita and Nzega gold mines.
Mozambique	4200(840 households)	Corridor Sands and Moma Sands Titanium Mines	Resettlements were in connection with the Corridor Sand Heavy Mineral Sand Project.
Republic of Congo	No data available	Zanaga iron ore project located in the Lekoumou district.	-

The examples in Table 1 are not exhaustive cases in each of these countries and the rest of Africa. The examples serve to primarily demonstrate the existence of MIDR in Africa. As noted above, exact figures about the scale of MIDR regionally or globally do not exist. In her work on the impact of the Gwembe Tonga development project on the Gwembe people in Zambia, Musonda (2008) notes that more than 400,000 have been resettled in Africa. These resettlements are linked to dam constructions. Therefore, in countries that are seeking development through infrastructure, hydro-power, mining and any other large scale land based investments such as commercial agriculture, communities are likely to be displaced and resettled by one of these factors. Quoting the Bankwide Review, Rew and Park (2000) indicate the sectoral contributions to displacements and resettlements as follows: dams (26.6%), transportation (24.6%), water supply/sewage (12.3%), thermal including mining (10.3%), urban infrastructure (8.2%), irrigation/canals (4.8%), environmental protection (3.4%), industry (2.7%), forestry (1.4%), 'other' (5.5%).

There have been some studies on the effects of such resettlements, e.g. Lillywhite et al. (2015) did a study on mining, resettlement and lost livelihoods in Mualadzi area of Tete Province, in Mozambique. The study revealed a number of experiences. The lived experiences of affected communities included food and water insecurity, loss of economic opportunities, fracturing of the community uncertainty, limited access to information, deficiencies in the remedy and recovery process in a low capacity environment (Lillywhite et al., 2015).

In the Zambian context, an addition to the work of Colson (1971) that pioneered resettlement research in this country, was the work by Scudder (2005) on "The future of large Dams". There remains a paucity of studies on the micro-level dynamics that accompany displacements and resettlements when communities have to move to pave way for development programs in Zambia. The study by the Human Rights Watch[1] on the implications of large scale land acquisitions in central Zambia is another case that is noteworthy to demonstrate the incidences of development induced displacements and resettlements in the country. Zambia is a target of investments because the country is endowed with natural resources (Zambia Development Agency, 2017). In the recent past, there has been a surge in interest for land in Zambia by both national and international investors for various reasons (Matenga and Hichaambwa 2017). As a result of this, cases of threatened and actual displacements are ubiquitous in the country.

Mining-induced displacement and resettlement is a development-induced development with different socio-economic and environmental impacts in different countries because of different standards of rights-protection institutions and the responsiveness of business to public opinion (Terminski 2012). Even in poor countries with poor policy enforcement, impacts will be different because local level dynamics are different. For example, within the same country, a mine in northern Zambia where people are largely smallholder farmers, will impact people differently in southern

[1] Human Rights Watch. (2017). Forced to Leave: Commercial farming and displacement in Zambia https://www.hrw.org/report/2017/10/25/forced-leave/commercial-farming-and-displacement-zambia (accessed October 10, 2018)

Zambia where they are largely both pastoralists and agriculturalists. A mine for Southerners, in this example, will affect their crop production but also their ability to rear animals. Similarly, their coping mechanisms will differ. In the same example of Zambian northerners and southerners, northerners will almost entirely rely on crops which hardly last for 12 months. On the other hand, southerners will rely on crops as well as their livestock. In developing countries where most DIDRs happen in forest areas, the socio-economic impacts on rural livelihoods are comparatively worse. This is because, as Dewees et al., (2010 p.61) state "woodlands are a pharmacy, a supermarket, a building supply store, and a grazing resource, providing consumption goods not otherwise easily available, particularly in subsistence economies." Rural communities are usually in 'socio-economic intensive care units,' and displacing and resettling them elsewhere would sometimes mean 'pulling the plug on their life-line.'

1.2 Problem statement

Development induced displacements and resettlements (DIDRs) paradoxically can have the effect of worsening livelihood perspectives for some. This also applies to mining projects, a form of development which may entail displacement and resettlement (Terminski 2012). Impacts of MIDR are known to vary based on many factors, including the functionality of policy and institutional frameworks that govern the mining sector, the level of operation of the mining, the asset portfolio of affected communities, among others. This means that impacts in Botswana from a gold mine among the San people will not necessarily be the same as those of base metal mine among situated in a farming and pastoral community in a Savannah setting. In Zambia, there are some reports about displacements and resettlements linked to development projects. However, with the influx of foreign direct investment in search of opportunities, the lived experiences and thus impacts and success or failure of MIDR remain under-studied, including the micro-level coping mechanisms of communities. Better knowledge of these could help inform policy, raise awareness and contribute to locally appropriate professional practices.

1.3 Research Aim and Significance

1.3.1 Aim

The aim of this dissertation therefore is to contribute to knowledge on mining induced displacement and resettlement in the Zambian context, by exploring the lived experiences of resettled families with regards to their coping strategies in one specific Zambian mining project. The chosen case is the Munali Nickel Mine in Southern Zambia, where 45 households were resettled between 2006 and 2010.

Broadly, this research was guided by the following research question:

- What are the lived experiences of resettled families at Munali Nickel Mine in Mazabuka, Zambia?

This dissertation seeks to explore the impacts of the displacement and resettlement process of the concerned households; positive and negative ones to enable a robust assessment of the development that the mining has brought to the community. By exploring the above research question in depth in one specific case, and comparing the results to accepted theory on displacement and resettlement, the dissertation further aims to extract insights which may affirm, advance or refute such accepted theory and the practice which is built on it. Detailed research questions are elaborated at the start of chapter 3, based on a review of practice and theory in chapter 2.

1.3.2 Significance of the research

Zambia is one of the countries endowed with significant amounts of mineral resources. The economy of the country almost entirely depends on the mining sector though the calls for diversification of the economy have intensified (GRZ 2017). Zambia has also a bifurcated land tenure system; 6 percent of the land is state land, while 94 percent is customary land under the custodian of traditional chiefs (Adams 2003). These figures are however challenged by other more recent studies. According to the World Bank (2009), customary land is estimated at 62 percent of the national territory. A more recent study estimates 51-54 percent (Sitko and Chamberlin 2016). In addition, Zambia has three ecological zones, a biophysical factor that shapes people's interaction with land; what they can grow as farmers, when and how much. Furthermore, Zambia is highly regionalized based on ethnic lines. These factors constitute a cohort of idiosyncrasies that indicate that even within Zambia itself, a mining operation in the north is not likely to have the same impacts as in the west, central, east or south. Nonetheless, as a case study, this research explores deeply and broadly the implications of establishing a mining operation among the Tongas in southern Zambia. The research therefore brings to the fore that mining-induced impacts on displaced and resettled communities are similar, however differentiated because of local level dynamics that cannot be generalized to national, regional or global levels. Observed lived experiences such as joblessness, increased morbidity, marginalization, landlessness, among others (see Cerena, 1995) can only be accounted for and understood by a case study that explores micro-level dynamics.

This research is therefore important in shedding light on the impacts of displaced and resettled households but also to understand the micro, household level dynamics that account not only for the impacts but also coping mechanisms. The choice of the qualitative single case study was informed by the nature of the research itself. As Cooper (2003) proposes, the choice was based on three fundamentals: (a) the type of research questions posed; (b) the extent of control an investigator has over actual behavioural events, that is, the ability of the researcher to engage meaningfully with the phenomenon under study; and (c) the contemporariness of the phenomenon under study, that is, the phenomenon under study is still there and the researcher is able to interact with the affected communities. Cooper (2003 p.13) defines a case study as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident."

In contributing to literature on lived experiences of displaced and resettled households, findings of this research offer more research insights into the phenomenon. Researchers will have a case to build on in understanding and nuancing emerging themes from mining-induced displacements and resettlements. Policy making will be informed by the findings of this research so that livelihoods of resettled communities are protected and meaningful development is ensured through programs such as corporate social responsibility that build relationships between communities and mining companies (Majer 2013). The findings of this research will benefit advocacy work for fair and sustainable compensations of affected communities, and protection of the environment that often is irreversibly destroyed during mining operations. The findings of this research will benefit communities themselves who are displaced and resettled because the research process was also a time to reflect on their own lived experiences of the phenomenon. Finally, beyond economic interests that mining companies pursue, the findings of this research can awaken the conscience of company owners to do business with a more human heart and face so that they can go beyond fairly compensating affected communities by providing effective support for their sustainable development.

1.4 Organisation of the dissertation

The dissertation is divided into six (6) main chapters, proceeding from this introductory chapter as follows:

Chapter two presents a review of various literature on involuntary displacement and resettlement. Mining induced displacements have been contextualized within the broader theme of development induced displacements at global level. The chapter also presents the evolution of development guidelines to respond to the challenges of development-induced displacements. In the same chapter, development programs in Zambia have been presented, including their associated socio-economic implications on the affected communities. The theoretical and conceptual frameworks have been presented, including the phenomenology of displacements and resettlements associated with mining development projects.

Chapter three presents the adopted research design and strategy, sampling procedure followed, the data collection and analysis method for this thesis and steps observed for establishing trustworthiness and upholding social research ethics.

Chapter four presents findings from the field research conducted. From the data collected, this chapter presents a summary of the themes compiled from stories shared by respondents, in terms of the number of respondents, total number of responses recorded from all respondents, and generally the themes experienced.

Chapter five (5) combines a discussion and analysis of the study findings presented under chapter 4 in light of other findings in other studies on DIDRs. Therefore, this section links the experiences of the respondents to available literature and whether sustainable development was attained or not.

Chapter six (6), presents a concluding statement and recommendations from the study. It also highlights areas that need particular attention for practitioners of involuntary resettlement.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

As a country, Zambia is rich in natural resources. The political environment has been stable enough not to drive current and potential investors away. The population is small when compared to the size of the country, and therefore, there is a lot of land for investments to exploit natural resources (Zambia Development Agency 2017). As a developing country with natural resources, Zambia has been pursuing pro-investor policies to attract investments in the country. These investments are primarily perceived as avenues to boost economic growth to improve the welfare of the people. This national context resonates with other national contexts where countries have continued to pursue investment policies to improve the business environment in their countries. For developing countries, as Chimhowu (2018) observes, the promotion of pro-investment policies are not matched with institutional capacity development to ensure successful implementation of development projects. The result is often what can be termed as the 'development that impoverishes.'

Against this background, this chapter is dedicated to reviewing mining induced displacements within the broader theme of development induced displacements at global level. The chapter presents the evolution of development guidelines to respond to the challenges of development-induced displacements. Development programs in Zambia have been presented, including their associated socio-economic implications on the affected communities. These have been reviewed to shed light on the 'impoverishing nature of development program' that lead to displacements and resettlements. The chapter is organised in the following sub-sections: development induced displacements and resettlements; tales and lessons from the World Bank and the African Development Bank development programs; development programs and projects in Zambia; access theory; sustainable livelihood framework; and the phenomenology of mining-induced displacements and resettlements. The chapter ends with a summary that brings out key points.

2.2 Development induced displacements and resettlements

Involuntary displacements and resettlements are generally linked to conflicts, natural disasters, long-term environmental changes, and the consequences of economic development (Terminski 2012). Of these categories of displacements, Terminski (2012) indicates that DIDRs come after natural disasters-caused displacements in terms of scale. DIDRs cause social disruption to affected communities. According to Colson (1971 p1), "massive technological development hurts." This realization later on permeated development policy arenas. This led to the development of policy instruments to provide investment guidelines in the mining sector. These have been adopted by many international funding groups such as the International Finance Corporation and other Multilateral Development Banks (Kemp, Owen, and Collins 2017). These standards were founded on the reconstruction model for settling displaced populations of (Cernea, 1997). Other standards include

the Equator Principles of 2013. There are others that relate to large scale land acquisitions for investments such as the Principles for Responsible Agricultural Investment that Respects Rights, Livelihoods and Resources (UNCTAD et al., 2010); and guiding principles on large scale land based investments in Africa (AU et al., 2014). All these guiding principles and standards are an effort to reduce DIDR impacts on affected communities that include landlessness; joblessness; homelessness, marginalization; increased morbidity; food insecurity; loss of access to common property; and social disarticulation (Cernea 1995). Besides these social impacts, DIDRs also affect biodiversity and ecosystem services during minerals exploration, infrastructure development and actual exploitation (Fernandes and Ribeiro 2017).

In terms of loss of economic opportunities, a study by Lillywhite et al. (2015) in Mualadzi in Mozambique has revealed that as much as the community rely so much on agriculture, they also engage in a wide range of other economic activities which included brickmaking, production of brooms and brushes, selling vegetables, charcoal making and collecting and selling stones among others which had all been lost in the new site (Ibid). With regard to food and water insecurity, Lillywhite et al. (2015)have revealed that water for daily needs is inadequate in the resettlement community compared to the old site where it was in abundance across seasons. It has further been revealed that the food is grossly inadequate to meet the daily needs of the families and as result, hungry. The study has attributed water and food insecurity in Mualadzi to poor quality of soils and lack of water which had affected crop production. The study has cited lost livelihoods and inadequate support during the transition periods which resulted in failure to fully restore the livelihoods.

Further, there was a strong sense from the community that social networks and livelihood patterns had been affected and lost. There was a general feeling of being unsettled and isolated, with people having lost a sense of place and spirituality the loss of which the authors link to not having a church in Mualadzi community and concerns about the relocation of the cemetery as well as loss of access to the river. Deficiencies in remedy process relates to lack of an effective grievance redress mechanism in place where the affected members of the community could go and register their grievances (Lillywhite et al., 2015).

Another relevant case worth detailing is the Kariba dam construction in Zambia. According to Colson (1971): In 1955 the construction of Kariba dam attracted public attention. The construction of the dam led to the displacement and resettlement of 57, 000 Tonga people. They were displaced and resettled on areas characterised by rocky and poor sandy soils, poor rainfall and infested with tsetse flies. “The residents were less concerned with the benefits which would accrue to the European dominated industrial sector of the economy than with practical considerations and consequences of the move on their own lives (p.75).” The order to relocate was met with resistance and violence erupted that claimed about 8 lives, with 32 people wounded. Thereafter, people complied with the government order. “It was in this demoralized condition that the Gwembe villagers found themselves in new regions where they would have to pioneer the land and start afresh” (p.45). The Tonga who were displaced and resettled had their lives transformed forever: in family life, kinship relations, and the local economy, religious and local practices. According to Scudder (2005), poor nutrition and

food shortage as well inadequate water supplies remain a serious problem for first, second and third generation settlers to date.

Besides the socio-economic losses that displaced and resettled communities suffer, they also go through psychological trauma as a lived experience. "Resettled families seldom restore lost social status and economic capacity fully (Cernea, 1997 p.1574)." According to Scudder (2005 p.24), physiological stress refers "to the various health impacts associated with removal or relocation. The author contends that as much as there are detailed pre-project demographic and socio-economic surveys done, health impact assessments have remained uncommon. In the report, "The Human Cost of Development and Resettlement," Bennett and McDowell (2012) however, note that the psychological burden of resettlement, and on the individuals who bear the cost is usually under-reported. According to Scudder (2005), stress and trauma are associated with involuntary resettlement, and Rew and Park (2000) indicate that a full package narrative about the displaced and resettled communities needs to include the compensation for social and psychological stress that come with displacements.

Quoting Oliver-Smith (2006), Scudder (2005 p.22) notes that development-induced involuntary resettlement is a "totalizing experience that is one of the most acute expressions of powerlessness because it constitutes a loss of control over one's physical space." This means beyond economic or monetary gains such as increased income and access to employment, social and psychological benefits such as better health care and education, and an improved sense of security and self- esteem are equally important in the lives of the displaced and resettled communities (Phonepraseuth 2012). It is noted here that forced displacement and resettlement lead to "sociocultural and psychological consequences as well as economic consequences, including crises of identity, a detrimental impact on health, and in turn exacerbated intracommunity and intergenerational tensions (Bennett and McDowell, 2012 p.207)."

Psychological stress manifests itself through anxiety, a typical lived experience of the displaced and resettled communities. According to Cernea (1997 p.1574), "psychological marginalization and behavioral impairments, anxiety and decline in self-esteem, have been widely reported" as common among displaced and resettled individuals. In a compendium of resettlements and livelihoods in the Philippines, Host (2017) reports on the fear and anxiety that grip the displaced as their houses are being demolished. During resettlement planning the displaced receive little land, and almost in all cases, the gender dimension does not favour women. Opportunities for women to earn money are rarely built into the projects, and extension work among women is restricted to non-income producing home economics topics. Katz-Lavigne (2016) indicates that compensations in the mining-induced displacements are gendered, with men receiving more than women because compensation packages do not take account women's loss of access to resources that they depend on the most for livelihoods. Acknowledging the importance of non-economic dimensions of displacements and resettlements, Bennett and McDowell (2012) observe that the less quantifiable and visible human dimensions of displacements are powerful, "the dismantling of social relations and networks, the loss of identity and status, combined with personal feelings of grief, anxiety, and powerlessness,

seem to have undermined the ability of some individuals to recover from displacement." Anxiety about their futures (Earthworks and Oxfam America 2004) deepens as the sense of anomie exacerbates the psychological stress.

2.3 Development for whom? An evolving practice for development induced resettlement and lessons learned

The World Bank's first comprehensive report on emerging lessons on involuntary resettlement of 22 projects in energy, rural development , natural resource and extractives by the Bank's inspection panel has revealed that the frequency of resettlement complaints across all projects confirms that it is one of the most challenging aspects of development (World Bank 2016). In terms of frequency of the projects and cases investigated for lessons learned, scoping risks ranked first as a lesson learnt with 20 of the 22 projects reporting it as a risk. Secondly, livelihood restoration was reported second with 18 out of the 22 cases assessed reporting it as lesson learnt while inadequate consultation and disclosure complaints was reported third with 16 out of 22 citing it as a problem while, others are compensation (15), supervision (12), grievance(8) and lastly, the choice of resettlement instruments as the least lesson learnt and only reported by 5 projects.

As discussed above, the Bank has disclosed that most project appraisal documents assessed failed to mention or discuss resettlement risks comprehensively. The panel further revealed that failure to identify the project impact area or area of influence which include the demographic dimension (beyond the project footprint), has been identified as a risk (World Bank, 2015).

Second, lack of meaningful consultation and participation which are best informed by the needs of those displaced emerged as a theme, which second most lessons learnt. According to the panel, most consultations done have not been a two-way conversation, with feedback mechanism that closes the loop or suggestions and views collected during consultations (Ibid). Thirdly a lesson learnt according to the Bank is lack of choice of appropriate resettlement instrument whether a full Resettlement Action Plan (RAP), a Resettlement Policy Framework or an Abbreviated Resettlement Plan depending on the situation on the ground. Lack of identification of the right resettlement instrument in most reviewed projects is said to have had a bearing on the identification of project risks and proper consultations process. The fourth lesson learnt according to the bank is inadequate supervision of the resettlement projects, which has a bearing on how issues are addressed.

Inadequate compensation and use of wrong valuation methods is another theme which was identified to have had a bearing on full restoration of livelihood for project affected people. The last lesson picked up by the panel is that livelihood works best when transitional support, development assistance and culturally appropriate resettlement alternatives are provided, which unfortunately has not been the case (World Bank, 2016 p.16). The reviewed report recommends a deeper analysis of the RAP implementation process in different countries to gain a better perspective of the issue of livelihood restoration. It further recommends that coming up with a socioeconomic database which

captures all quantified data and a qualitative description of all the systems of production and the diversity of livelihoods among the Project Affected Persons (PAPs) including activities of the populations to be resettled, their values and their lifestyles and survival strategies and their safety nets in case of problems be considered (World Bank 2016).

An occasional paper for the Centre for Social Responsibility in Mining of 2015 which looked at a number of resettlements (challenges and experiences faced by Anglo American) in mining compiled by Laura Brooks has revealed valuable lessons and experiences in the extractive industry. There were a total of 4 cases reviewed (2 South African Mines and 2 in South America) which are resettlement cases in the mining industry by the Anglo American Working Group.
The Mines reviewed were Mogalakwena Platinum Mine in Limpopo Province of South Africa which has so far resettled 957 households, Dingletone Iron Ore Mine in Northern Cape which has so far resettled 911 households, Quellaveco Copper Mine in Peru which completed its resettlement of 5 households and Minas Rio Iron Ore in Brazil which resettled 115 households in 2010. The lessons drawn from the case studies are valuable to all practitioners as they range from a small number of households for instance, 5 in Peru, to large numbers such as the 957 households at Mogalakwena in South Africa.

The major challenge learnt is that it is not easy to develop hard and fast rules for resettlement, given that the socio-political, economic and cultural contexts can vary between affected communities. What may work well in one context may be completely inappropriate in another. Furthermore, the multi-dimensional and inter-dependent nature of resettlement impacts often present unique complexities that need to be addressed with unique responses. Among the key lessons learnt which the team of practitioners revealed include:

- Consciousness: Effective resettlement planning requires conscious listening and participation. In some cases, this may require empowerment of stakeholders to support their ability to participate in decision-making. This was a major lesson at Dingleton Mine where the Company wanted to resettle people during exam time for local pupils (Ibid, p12).

- Psychological and cultural impacts: Psychological and cultural impacts was a major issue learnt across the case studies and that a house is not just a home. The impact of resettlement is often complex, intangible and at times unspoken. It is critical that psychological and cultural impacts of resettlement are identified and addressed throughout the planning and implementation phases (Ibid, p14).

The best lesson picked by the team was at Mogalakwena Mine who learnt that a structured approach to project management is critical in supporting effective resettlement planning and implementation. At Mogalakwena, the project team designed a documentation system with the community that aimed to establish transparency and legitimacy regarding the household agreements. The system involved the household representatives and the project team representative signing, photographing and finger-

printing documents. Whilst it took a number of months to design this system with stakeholders, the concept was easily transferrable to other sites. (Ibid, p16)

Other notable cases of resettlements include the Akosombo Dam in Ghana which displaced 80,000 people, the Narmada Sardar Sarovar Dam in India displaced 127,000 people, roughly 0.013 percent of the country's population (Musonda 2008). A Report on the assessment of the implementation of the African Development Bank (AfDB)'s involuntary resettlement policy of 2003 on the 69 of the 97 bank supported projects in the last 10 years, has been extensively reviewed. Of the 97 AfDB supported projects, an analysis of the lessons learnt with regard to the impacts of resettlements in 69 projects has revealed the following:

- Insufficient funds for resettlement in most cases due to non-sharing of the resettlement costs between the project funders and government and or private developers results in insufficient funds for the proper implementation of the entire process costs required for the post-completion evaluations (AfDB, 2015 p.31); and

- The second lesson is that there is need to mainstream environmental protection into resettlement and not vice versa. A summary of most of the 69 AfDB projects reviewed in the report is that most livelihood restoration programmes have been a disaster with few if not none that have recorded the anticipated and desired results.

It is clear that livelihood restoration is not given the attention it deserves in most projects. The reasons cited include affected people's preference of cash compensation compared to actual restoration of lost sources of livelihood and that it is not easy to find resettlement sites acceptable to the affected people. Further, investment in entrepreneurship training and sustainable livelihoods for the affected people is also given minimal attention and effort by project developers and implementers.

2.4 Development programs and projects in Zambia

A commissioned report on land acquisition has shown that during the past decade in Zambia has seen an increasing demand for land. This is due to an unprecedented development of infrastructure projects as well as increased investments in the mining and agriculture sectors by multinational and other global mining corporations. The report has shown that large-scale acquisitions of land for commercial agriculture and for mining are leading to loss of land and are undermining the livelihoods of affected rural communities. These land-based investments have been characterised by a lack of consultation with and participation by affected communities (Chu et al., 2015).

Amatheon Agriculture, an agricultural investor, Germany/United Kingdom-based has begun work on an agribusiness and farming project and amassed plots of land through the acquisition of brownfield sites within the farm block in, Mumbwa District of Central province, Zambia, which is

statutory rather than customary land. As of 2014, the investor had acquired 14 237ha of land, and voiced the intention of acquiring up to 60 000ha in total. (ibid)

Kalumbila Minerals Ltd. (KML) is a new mining venture under the First Quantum Minerals (FQM) Trident Mine project in Solwezi, and is Zambia's largest single mine. A total of 570 households were displaced and resettled at Shinengene resettlement scheme in 2013. (Trident Mine ESIA, 2012). An additional 2,000 people may face displacement due to the proposed Chisola Dam construction by the same mine.

Chiansi Irrigation Project (CIP) is an initiative of the Chanyanya Smallholders Cooperative Society (CSCS) in Kafue District. It represents a case of community organisation, whereby a community came together to form a cooperative, combining land into a block title, and engaging an investor to help create local jobs and infrastructure development. The CSCS has brought together approximately 1 575ha of land and engaged InfraCo, a British-based private infrastructure development group that seeks to provide infrastructure development projects in a private-public partnership model. The project began in 2008 as a pilot project, and is now set for the start of Phase 2, an expansion of the current model. However, as a result of the project, a number of CSCS members were displaced and resettled. Similarly, in 2013, Dangote Cement also displaced about 115 farmers from cement processing plant area, about 20 households from the quarry site.

Chu et al. (2015) findings show that Zambia currently lacks an adequate legal framework to secure customary, informal and unregistered land rights to protect the rights of people affected by such commercial investment, and provide for transparent and accountable land administration. Despite the cited negative impacts in the cited projects, there are a number of positive impacts recorded in Zambia which include, economic growth and development at national level, improved housing, clean water and job creation for the resettled families in mine projects.

In the preceding sections, it has been demonstrated that there are material and non-material impacts when communities are displaced and resettled by development programs. These impacts are linked to the diminished abilities of communities to access resources for their livelihoods. In cases of positive impacts, communities have more improved ability to access alternative and or more additional resources for their livelihoods. Building on the foregoing sections, the following sections explain the theory that explains people's loss of ability to support their livelihoods. The following two sections review access theory and the sustainable livelihood framework.

2.5 Access theory

Mining induced displacement may involve the loss of "physical and non-physical assets, including homes, communities, productive land, income-earning assets and sources, subsistence, resources, cultural sites, social structures, networks and ties, cultural identity and mutual help mechanisms" (Downing 2002 p.3). Farming communities lose their land, but also their off-farm income sources

when they are displaced for road, dam or any other development program (Cernea, 1997). Displacement essentially leads to the loss of access to resources that define people's livelihoods. When communities are displaced, they become what Zoomers (2010) refers to as 'foreignised,' as their land is 'neo-liberalised' into private hands for economic development programs (Chimhowu 2018). As families are displaced and resettled, this creates a situation of "joblessness, homelessness, marginalization, food insecurity, loss of common lands and resources, increased health risks, social disarticulation, the disruption of formal educational activities, and the loss of civil and human rights" (Downing, 2002 p.3).

According to Narh *et al.* (2016 p.4), access theory is concerned with a "bundle or web of powers, including property that enables actors to gain, control, and maintain access to things in which they have or perceived to have a stake and derive benefits from them." Ribot and Peluso (2009 p.153) define access theory as the "*ability* to derive benefits from things." Their use of the word '*ability*' is intentional in that it is broader than 'rights,' and includes benefits from things such as material objects, persons, institutions, and symbols. That is, the derivation of benefits from both material and tangible things such as medicinal plants or wild fruits from a natural forest, and immaterial and intangible benefits such as cultural values. Traditional ceremonies in Zambia, like in other parts of Africa are centered around people's interaction with their environment; forests, water or land. Therefore, when people lose the ability to access resources that are part of their cultural heritage, it amounts to curtailing their cultural identity. In the words of Cernea (2008 p.117), "the values extracted through expropriation are not restituted adequately through compensation alone." When communities are displaced and resettled, communities assume a different role vis-à-vis the resources and assets that underpinned their livelihoods. This therefore, alters access relations, and depending on an individual's or group's position and power within various social relationships (Ribot and Peluso 2009), some are advantaged and others are made worse off. For example, as noted by Katz-Lavigne (2016), because of the socio-cultural norms and gendered patterns of resource access, women are made worse off compared to men in terms of compensations levels that do not reflect women's specific contributions to livelihoods.

Related to the access theory is the sustainable livelihood framework. The following section therefore builds on the access theory through which this research work was conceived. The section details the conceptual framework, highlights different components of the framework to underscore the processes and how they are related to the lived experiences of the displaced and resettled households.

2.6 Sustainable livelihood framework

Sustainable livelihoods have increasingly gained importance in the discourses of rural development, poverty reduction and environmental management (Scoones 1998). Different scholars and organizations define sustainable livelihood differently. Definitions of sustainable livelihoods are often unclear, inconsistent and relatively narrow. Some organisations have come up with their own definitions where they imply livelihood to mean a means of earning a living and includes access to

tangible and intangible assets. Quoting Robert Chambers and Gordon Conway (1992), Krantz (2001 p.1) defines sustainable livelihoods as follows:

A livelihood comprises the capabilities, assets (stores, resources, claims and access) and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels and in the short and long term.

For Scoones (1998 p.5):

A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base.

Any mining-induced displacement occurs in a specific context with its own idiosyncrasies that are different from other development-induced displacements (Terminski 2012). Therefore, the sustainable livelihood framework offers 'a roadmap' for understanding the asset portfolio of displaced and resettled households to explore how the loss of *ability* to access the assets typified their lived experienced of being resettled by a mining company. In the sustainable livelihood framework, the assets are in the form of human, natural, social, financial and physical capitals. These determine the differential capabilities to cope with shocks and how to reduce poverty and improve adaptive capacity (Ifejika et al., 2014). Figure 1 below illustrates these assets that households (need to) have in order to have positive livelihood outcomes as an imperative of a development intervention.

The framework identifies that communities live a vulnerable context characterised by shocks, trends and seasonality. Communities need access to the capital assets to cope with the vulnerability context that could be triggered or be as a result of shocks, trends or seasonality. However, access to these assets is facilitated or impeded by the policy, institutional and processes environment. Based on the community members' ability to access the assets, they are then able to design livelihood strategies in response to the vulnerability context so as to cope and achieve livelihood outcomes that include more income, increased well-being, reduced vulnerability, more sustainable use of natural resources and empowerment (figure 1). Contextualising this framework within this research, the Nickel mining operation that led to the displacement and resettlement was an external shock. It created a vulnerability context for the community. Based on the prevailing policies of the country as well as the country, including tenurial land rights, the resettled households had to mobilise their capital assets to develop livelihood strategies to have livelihood outcomes that either improved or worsened their already existing asset portfolio. Ellis (2006) notes that the activities and access to the assets that define community livelihoods are mediated by institutions and social relations that together determine the living gained by the individual or household. Details of the framework are in the presentation and discussion of results section.

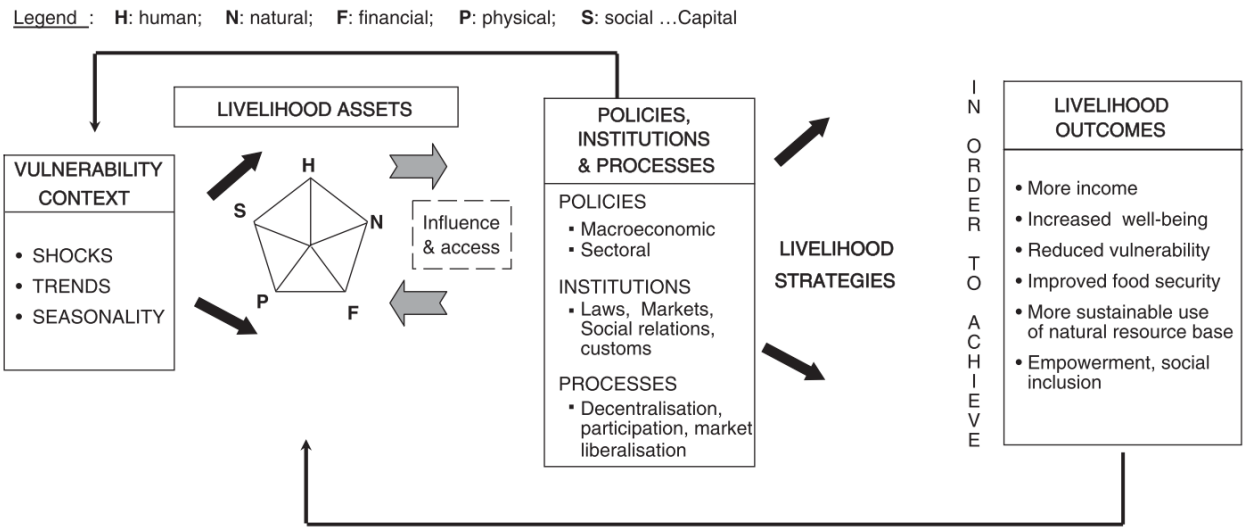


Figure 1 Sustainable livelihood framework. Source: Allison and Horemans (2006)

There is consistency amongst all livelihood scholars and authors including Ellis (2006), Krantz (2001), and Scoones (1998) that the sustainable livelihood approach was an attempt to go beyond the conventional narrow definition of poverty eradication. This narrow focus only accounted for manifestations of poverty through limited incomes and generally inability to afford basics of life, and social exclusion. Further, there is, among all these scholars, an implication, and recognition of a perception of poverty as a multidimensional condition, requiring attention to various factors which function against poor people's ability to make a living in an economically, socially and environmentally sustainable way as advocated by the weak sustainability proponents (Mebratu 1998).

2.7 The phenomenology of displacements

Phenomenology as an approach has been used to understand lived experiences of communities that have been displaced. The displacements could be as a result of development programs, or civil wars. Parrish (2018) has used phenomenological approach to describe the experience of displaced individuals and families in a condition of statelessness in a refugee camp and their experiences pre-flight, trans-flight, and post-flight in Greece. In the study, Parrish found that separation of family members and lack of educational opportunities and skills development were common among the displaced in refugee camps. Bartholomew et al. (2015) used phenomenology to study the meanings ascribed to pre-resettlement stress among refugees from Myanmar. They found that the ascribed meanings regarded loss from oppression, resignation and acceptance in a context of regular violence, ongoing insecurity while confined in camps, and redefined selfhood. In a study of the way to see people and places using phenomenology, Seamon (2000) confirms that people and environment compose an indivisible whole, and that phenomenological method can be described in terms of a radical empiricism. Utržan and Wieling (2018) have also used phenomenology to study the lived experiences of Syrian refugees' pre-resettlement, resettlement/migration, and post-resettlement in

the United States. In this study, their findings suggest that the effects of conflict-induced displacement and resettlement permeate across multiple ecologies. These range from the individual and their interpersonal relationships to their larger community and society.

From these examples of studies, phenomenological approach has proved useful in understanding lived experiences of people who have been displaced; enhancing the understanding of both explicit and latent meanings that concerned people have given to the situations of displacement that they are experiencing. This has been possible through interactions with people that are experiencing the phenomenon under investigation. The interactions are through interviews with the people experiencing the phenomenon. In this regard, it can be said that an academician, a policy maker or a businessman is not the right person to describe or ascribe the meaning of displacement, unless they themselves have had an experience of being displaced.

2.8 Summary

Given the negative as well as some positive impacts experienced in most projects reviewed at global, regional and national levels, it is established here that most projects which recorded a significant number of negative experiences such as the Kariba dam were implemented before the 1990s. With the development and refinement of policy instruments from the 1990s up to 2010, there seems to have been a convergence process. The World Bank Group, and a number of regional Development Banks have adopted a set of consistent policy principles. These involved the development of policy instruments, manuals and guidebooks that supported the establishment of good practice. The most recent development was the Equator Principles which applied to the private sector. The high point of this was the Bank's Doing Dams Better publication, which sought to establish Nam Theun II (in South Eastern Asia) as a best practice for large projects (www.international rivers.org).

The second stage, from about 2010 to the present, has been a stocktaking exercise, mainly involving reviews by the World Bank's Independent Evaluation Group's review of Safeguards policy in the World Bank Group, the 2015 AfDB review of implementation of the involuntary Resettlement Policy and the 2015 review of lessons learned from the World Bank Inspection Panel. The general conclusions are:

1. That resettlement is still not well done; that it is insufficiently resourced, and focuses far too much on fulfilling front-loaded conditions and far too little on implementation and evaluation;
2. That livelihood restoration is a particularly weak point and focus has been, rather inappropriately, on delivery of fixed asset compensation at replacement value; and
3. The merging of social issues of resettlement under the environment has been an especially weak point, leading to the social issues being generally consigned to second place whereas they are usually critical.

Chapter two has laid the foundation of this research by looking at the literature on development-induced displacements and resettlements. It has delved into the economic and environmental but also the non-socio-economic dimensions of the implications of development-induced displacements and resettlements. The development of implementation guidelines and policies to promote best practices has also been reviewed. Guided by the research general objective of the study, the chapter has shed light on the impacts that DIDRs have on affected communities. To enrich the review, several examples from different countries have been given to illustrate the impacts of DIDRs. Doing so has helped to underscore how context specific dynamics determine not only the nature and level of impacts, but also how affected communities cope with the impacts. Building on reviewed literature, the next chapter will illustrate the theoretical and conceptual frameworks, and the methodological approaches for exploring the lived experiences of displaced and resettled households by a Nickel Mining Company in southern Zambia.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the adopted research design and strategy, introduces the case, sampling procedure followed, the data collection and analysis method for this thesis and steps observed for establishing trustworthiness and upholding of social research ethics.

3.1 Research questions

Based on the 'loss of access' and 'loss of having' that encapsulate a fundamental understanding of the gravity of development-induced displacements and thus difficulty of planning resettlements, this research uses access theory as a theoretical lens to explore the lived experiences of MIDR persons in southern Zambia. Thus, consistent with the aim of the research and the broad research question to explore the lived experiences of resettled families at Munali Nickel Mine in Mazabuka, Zambia, the specific questions that the research sought to answer were:

i) Did loss of access manifest in the studied case, and if so, how? What are the psycho-socio-economic implications of the Munali Nickel mining-induced displacement and resettlement?
ii) What characterizes the livelihoods of resettled families following the establishment of the Munali Nickel Mine? Which assets were positively or negatively affected by resettlement and compensation?
iii) What are the coping mechanisms of the displaced and resettled communities following the establishment of the Munali Nickel Mine?

Question 1 is concerned with understanding how resettled households have been affected socio-economically. The question is therefore concerned with exploring what the negative and positive impacts and experiences have been on the resettled households. Question 2 is concerned with exploring how resettled households have responded to the socio-economic impacts (as explored and understood in question 1) that Munali Nickel has had on them. In exploring the coping mechanisms as household response to the impacts, question 2 implicitly explores the asset portfolio of affected households. This is rationalised on the basis that coping mechanisms of households are embedded in their asset portfolios. Finally, mining-induced displacements are a form of development-induced displacements. Following from questions 1 and 2, question 3 therefore is concerned with a critical appraisal of Munali Nickel Mine as a development project. Therefore, this set of three questions coherently brings together different aspects of development-induced displacements in a manner that helps to explore and understand Munal Nickel Mine in southern Zambia.

3.2 Study Type and Design

3.2.1 Case study

The research used a case study to explore the lived experiences of displaced and resettled households. As an exploratory research, it was a qualitative approach as contrasted with a quantitative one. According to Malterud (2001 p.483) a qualitative approach "is used in the exploration of meanings of social phenomena as experienced by individuals themselves, in their natural context." It was therefore used in order to produces the type of context-dependent knowledge (Flyvbjerg 2016) about the lived experiences of households that were displaced and resettled by the Nickel Mine. The choice of the qualitative single case study rather than a quantitative single or multiple-case studies is underpinned by the nature of the proposed study itself, "by the research

questions rather than the researcher's preference (Marshall, 1996 p.522)." As Cooper (2003) proposes, the choice is based on three fundamentals: (a) the type of research objectives and corresponding research questions, (b) the extent to which the researcher have control over the ways in which the research work will be carried out, and (c) the degree of focus on current as opposed to historical events, that is, if the researcher will be dealing with affected people (current) or others other than the ones affected (historical) . Cooper (2003 p.13) defines a case study as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clear."

Qualitative research is powerful in exploring a phenomenon such as mining-induced displacement and resettlement. The researcher 'wear the lens' of the affected to understand 'how' and 'why' they hold the perspective that they do about their lived experiences (Cassell and Symon, 2004) . The 'what' questions in this study constitute the substance while the 'how and why' constitute the form (Cooper, 2003). For this study, this process of exploring and understanding the 'what, how and why' of the lived experiences could only be possible through interviews that ensured that the questions were tailored to the displacement and resettlement by a Nickel Mining Company, the phenomenon that was under study. In this way, the questions facilitated bringing to the fore experiences and perspectives of the interviewed affected households (Cassell and Symon, 2004).

Case studies have been criticized in literature. The criticisms include supposed lack of rigour, little basis for scientific generalisation of results (Cooper, 2003); and researcher's subjectivity and arbitrary judgements without hard facts of the phenomenon under study (Flyvbjerg 2016; Malterud 2001). However, in surmounting some of the inherent challenges of qualitative case studies, "triangulation, respondent validation, clear detailing of methods of data collection and analysis, reflexivity, attention to negative cases, and fair dealing (Malterud, 2001 p.483)" are crucial. In addition, comparing credibility, confirmability and transferability in qualitative approaches compare with internal validity, objectivity, and generalizability, respectively, of quantitative approaches (Malterud 2001). It is important to note that "inference in case study research can only be logical and derives its external validity not from its representativeness but because our analysis is unassailable (Cassell and Symon, 2004 p.177)." In this regard, therefore, qualitative studies aim to provide illumination and understanding of complex psychosocial issues and are most useful for answering humanistic 'why?' and 'how?' questions (Marshall, 1996).

3.2.2 Phenomenological approach

This research sought to explore the lived experiences of households that were displaced and resettled. The lived experiences in terms of the socio-economic and ecological impacts; coping mechanisms of displaced and resettled families; and perception of the 'development' resulting from Munali Nickel Mine were the phenomena of this research work. The study captured the meaning and common features of these phenomena of lived experiences (Starks and Trinidad 2007). In other words, the research sought to explore the meaning that displaced and resettled communities made of the socio-economic implications; the coping mechanisms and 'development.' Through interviews,

the research focused on the subjective existential meaning of each of the phenomenon mentioned as it was experienced by displaced and resettled households (Connell 2003).

Therefore, the philosophical underpinning of the research was phenomenological. According to Starks and Trinidad (2007 p.1372), the goal in phenomenology is "to study how people make meaning of their lived experience." Connell (2003) speaks of phenomenology as both a philosophy and a research method. As a philosophy it is a "particular way of approaching the world and apprehending lived experience […], as a research method, phenomenology is a rigorous process of reexamining what Husserl (1962) termed "the things themselves (ibid, p.8)." Vaismoradi et al., (2013) speak of phenomenology as an epistemological perspective. For Higginbottom (2004 p.12), "phenomenology is a qualitative methodology that seeks to uncover the meaning and essence of given phenomena." With a phenomenological approach that was both philosophical and methodological, the researcher of this research work asked questions "about lived experiences, as contrasted with abstract interpretations of experience or opinions about them (Starks and Trinidad, 2007 p.1374)." For this reason, as will be explained under the case study, purposive sampling was used to recruit interviewees who have experienced the phenomena under study (Starks and Trinidad 2007). The interviewing enabled an exploration and understanding of the "meaning of the participant's experiences; making the unspoken visible and audible (Higginbottom, 2004 p.12)."

Exploring lived experiences requires that the researcher understands and reflects on their positionality so that assumptions and past experiences of the phenomenon under study do not influence data collection. Positionality as well as reflexivity enabled the researcher to think through how different local dynamics, including identities of the households and other people encountered might shape and influence the manner in which the research was undertaken, as well as influence the research outcomes (Hopkins 2007). Reflexivity requires that researchers reflect about how their biases, values, and personal background, such as gender, history, culture, and socioeconomic status, shape their interpretations formed during a study (Creswell 2014). This was important because as I have protracted years of working as a resettlement specialist, and I have dealt with many cases of development-induced involuntary displacements and resettlements. I was aware, as Malterud (2001 p483) indicates that "a researcher's background and position will affect what they choose to investigate, the angle of investigation, the methods judged most adequate for this purpose, the findings considered most appropriate, and the framing and communication of conclusions." This therefore, called for bracketing on my part as a researcher.

Consistent with interpretative phenomenological analysis, bracketing is important and it requires the researcher to understand commonly held beliefs and presumptions in order to open themselves to a phenomenon and view each experience in its own right from the perspective of those who experience it (Creswell et al., 2007). This strategy was adopted, and it proved appropriate as it helped accord and afford sufficient descriptive detail to illustrate lived experiences of the families and provided an experientially based understanding of the essence of living a displaced life. This was deemed appropriate for this study as it provided the envisaged and the initially 'hypothesised' details to illustrate lived experiences of the families and provided an understanding of the effects of being

resettled as well as their perception of how they coped with resettlement. In a nutshell, the study was influenced by the research whose aim was, among others, to gain an understanding of people's experiences of mine induced displacements and resettlement (Lillywhite et al., 2015) as well as reviews by (Creswell et. al., 2007) whose works have been used as a guide in terms of methodology for this study.

The research employed interpretative phenomenological analysis. Being an exploratory research, interpretative phenomenological analysis enabled a detailed examination of the lives of households; exploring their personal experiences and perceptions or accounts of the displacement and resettlement, as opposed to an attempt to produce an objective statement of the displacement (Smith and Osborn 2008). Nobody could tell the story of the lived experiences of being displaced and resettled as could affected people themselves. It was in this context that, as Smith and Osborn (2008 p.55) note, interpretative phenomenological analysis is a "suitable approach when one is trying to find out how individuals are perceiving the particular situations they are facing, how they are making sense of their personal and social world. Interpretative phenomenological analysis is especially useful when one is concerned with complexity, process or novelty." The accounts of the displaced and resettled households in Mazabuka shed light on what they have gone through. This then contributes to what lived experiences of displacements and resettlements are.

3.2.3 Specific objectives of the case study

In light of the above aim of the study and research questions, the research was guided by the following specific objectives:

i) To explore and understand the socio-economic implications on displaced and resettled households;

ii) To explore the coping mechanisms of displaced and resettled families; and

iii) To assess the 'development' that the mining has brought to Munali with displaced and resettled households.

3.3 Study Setting and population

The Project area, where the study community is situated is located in Mazabuka district in the Southern Province, approximately 60 km southeast of Lusaka, the capital of Zambia. The town of Kafue is approximately 16 km northeast of the deposit. The border with Zimbabwe is approximately 75 km southeast of Munali. The Project area is located 2.5km from the Lusaka – Livingstone tar road. The following figures show the location of the mine with regard to the major towns and the resettlement community referred to as the Resettlement Action Plan (RAP) Village.

3.3.1 Study sample choice and size

According to Murphy *et al.* (1998) qualitative research focuses on understanding unique cases ideographically, rather than focusing on generalisation of results. Consistent with the phenomenological approach of this research work, sampling was about choosing informants (Gentles et al., 2015). Although a total of 45 households were finally resettled in the Resettlement Action Plan (RAP) Village, a number of other families were only given cash compensation because they were not resident in the mine area. This research being a qualitative study, the appropriate sample size ensured that research questions of the study were adequately answered (Marshall, 1996). This is verifiable when in the research process, the researcher recognises data saturation. That is, there are no more new categories, themes or explanations emerge from the data being collected (Marshall, 1996). In addition, Morse *et al.*, (2002) indicate that sampling adequacy, evidenced by saturation and replication means that sufficient data to account for all aspects of the phenomenon have been obtained. Saturating data ensures replication in categories; replication verifies, and ensures comprehension and completeness (Morse et al. 2002).

Phenomenology proposes 2 to 10 participants as sufficient to reach saturation, allow sufficient in-depth engagement with each participant and detailed examination of convergence and divergence in interview transcripts (Creswell et al., 2007). It must allow sufficient and in-depth engagement with each participant and as well as ensure detailed examination. Given the logistical limitations and accessibility challenges faced during the data collection time, it was decided that a total of 11 be selected to participate in the study.

Of the 11 respondents, 6 were males and all of them headed their households. 4 of the 5 females were widowed and headed households and 1 was married and stood in as a respondent because the husband was away at the time of interviews. The husband heads the household. All the respondents, except one, who took part in the study were mainly, elderly people who have been heading their households and continuously lived in the resettled community since the time of displacement and therefore considered to have sufficient and diverse life/lived experiences of resettlement

3.3.2 Location

The mine site, which is the former settlement area for the resettled families is located 60km to the South-east of Lusaka, the capital city of Zambia. It is located within Chief Naluama's chiefdom. The town of Kafue is located about 16km to the North East of the current location of the mine while the Kariba dam is located approximately is located 75km to the south east of the site. The mine area, where the community used to live is located 2.5km from the Lusaka to Livingstone tarred road. Access to site is by motorable gravel roads. The Kafue River is located about 20km to the north.

3.3.2.1 Topography

The old site is characterized by flat land that is bound to the north and south by the hills. The area is also incised by some streams which, depending on the wetness of the season, would be generally dry for most part of the year. Surface elevations in the vicinity of the Munali Nickel deposit vary

between 980 and 1,200metres above sea level. The highest point is 1,320m which is located on the southeast boundary of the mine area.

3.3.2.2 Land Use and soils

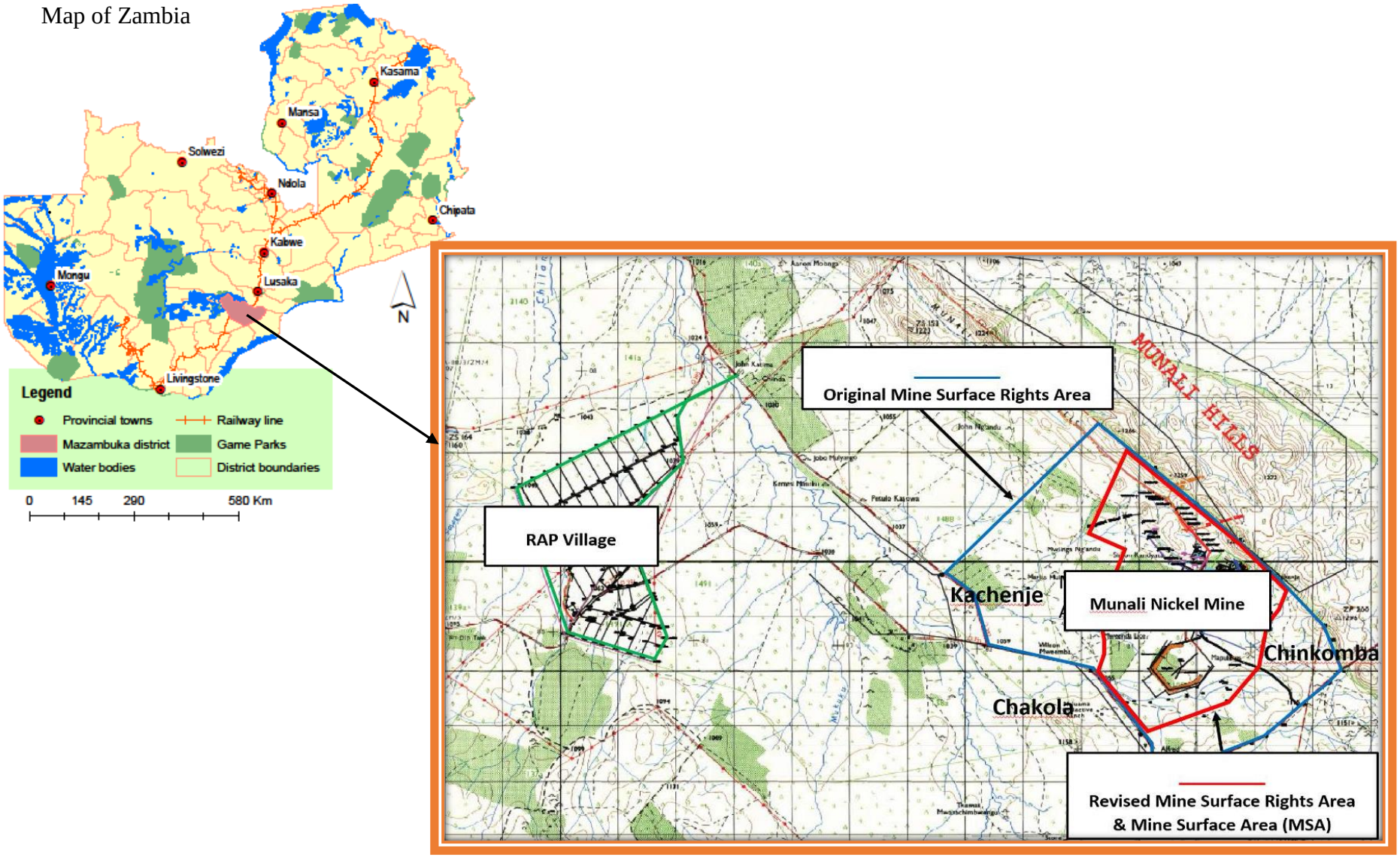
Before commencement of mining activities, the majority of land cover was characterised by shifting cultivation practices, burning, and charcoal burning activities. In terms of crops grown, the resettled community grew cotton, maize, sunflower and groundnuts. Other land uses in the area were, large-scale coffee growing by commercial farmers on the peripherals of the site, charcoal burning activities and animal husbandry (limited to the keeping of goats, pigs, chickens, ducks and cattle).

Soils occupying high ground had a deeply weathered profile, well drained, and considered low fertility. More fertile, and sometimes hydromorphic soils, with less well-developed profiles were generally found along dry watercourses. Upland soils were commonly deep red to yellowish grey with a very thin darker upper horizon with some organic matter.

3.3.2.3 Social Infrastructure

The old site had access to two schools which most families attended and these are Naluama School and Mugoto Basic Schools. With regard to medical facilities within the old area, the community had access to 3 main Rural Health Centres (RHC's) namely Naluama Rural Health Centre, Nasenga Rural Health Centre and Mugoto Rural Health Centre (Munali Mine ESIA, 2005.p63-65). The mine management meeting revealed that 45 households were resettled by the Nickel mine. The relocation exercise was done in phases with the first phase resettled in 2006 and the last phase ending in 2011.

Map of Zambia



Map 1 showing the Mine and RAP Village location
Source: Munali Nickel Mine Plant Upgrade.
Source of map of Zambia: Author's creation in GIS 10.1 based on data from http://www.mapcruzin.com/free-zambia-country-city-place-gis-shapefiles.htm and http://www.diva-gis.org/gdata

3.3.3 Study sampling, data collection procedures and ethical considerations

Being a predominantly qualitative study, purposive sampling of participants from the affected area was adopted. Participants were therefore purposively selected from the list of the 45 resettled families as purposive sampling is the most important kind of non-probability sampling technique to select primary participants (Creswell et al., 2007). Purposive sampling was used to indicate households to be part of the data collection based on their experience and knowledge of the displacement and resettlement process (Gentles et al., 2015). In order to generate the qualitative data required for the study, the research employed the dialogical and dialectical procedures through administration of forms and engaging in in-depth interviews with 11 purposively sampled respondents. Dialectical procedure is a procedure whose aim is discovery of truth while dialogical means helps in analyzing the significance of spoken, communicated or written utterances (Creswell 2014). The conducted in-depth interviews allowed probing the lived experiences of respondents which prompted them to talk, and crosschecking which helped to validate emerging patterns. All interviews with the 11 respondents were conducted in Tonga, a local language of the study area.

Prior to the commencement of in depth interviews with the 11 respondents, separate one –on-one - introductory meetings were first held with the Mine Company Corporate Affairs Manager, the Nurse in charge at Munsangu Resettlement Clinic and the Head teacher at the Munsangu Resettlement School. All necessary data regarding the number of resettled families was collected as well as an overview of the status of mine operations. Information regarding the profile of the school and clinic were also discussed and shared by the officers in charge.

Other data compiled and presented in the thesis was collected through an intensive review of literature on resettlement-globally, within the continent and locally. It also involved review of a number of articles, the Environmental and Social Impact Assessment (ESIA) reports, Munali Mine Resettlement and Relocation completion report.

As a requirement by the University of Cape Town- faculty of Engineering and Built Environment, Approval of Ethics in Research Committee, an application was submitted which was approved on 2nd June 2017. The committee considered the study a low risk project and a copy of the approval is attached in the annex.

Further, in line with the University of Cape Town general ethical requirements, before any data was collected from the respondents, an approval to interview the resettled families was obtained from the Mine Management. Secondly, all participants were well informed of the nature and purpose of the study and an assurance given that there was no harmful procedure involved and that participation was free and voluntary and that at any point during the interview process, anyone could opt out without giving any reason. Lastly, a consent form to allow collection as well as recording of the information was signed by all the 11 respondents.

3.3.4 Data Analysis

Primarily, data analysis involved content analysis. Content analysis and coding of emerging themes was done in Nvivo Pro 11 software, and Stata/IC 13.0 was used for graphing. According to Vaismoradi et al. (2013 p.400), content analysis is a 'systematic coding and categorizing approach used for exploring large amounts of textual information unobtrusively to determine trends and patterns of words used, their frequency, their relationships, and the structures and discourses of communication.' It is a systematic, objective and quantitative analysis of both the manifest and latent contents of communication (Kassarjian 1977). Content analysis therefore, afforded the possibility to measure the frequency and variety of key messages regarding the lived experiences of households that were displaced and resettled at the Nickel Mine (Altheide 1987). Content analysis was considered consistent with the phenomenological interpretation to uncover the meaning and essence of lived experiences as phenomena (Higginbottom 2004) of resettled households. Resettled households expressed orally the meanings that they made of their lived experiences, and therefore, content analysis enabled the understanding and interpretation of the meanings as they were expressed by affected people themselves (Starks and Trinidad 2007).

During the analysis of the results obtained, the definition of sustainable livelihood of Scoones (1998) used as was the operational definition that was used. Sustainable livelihoods thinking is underpinned by putting people's social and economic activities at the centre of the analysis; transcendence of sectoral boundaries; making micro–macro links; being responsive and participatory in addressing management priorities; building on strengths; and taking a broad view of sustainability (Allison and Horemans 2006). In the context of this research, this operational definition calls for a look into the capacities, assets and activities of displaced and resettled households that enabled them to have means of living before and after the displacement. According to Scoones (1998 p.1), the framework details how "sustainable livelihoods are achieved through access to a range of livelihood resources (natural, economic, human and social capitals) which are combined in the pursuit of different livelihood strategies (agricultural intensification or extensification, livelihood diversification and migration). Central to the framework is the analysis of the range of formal and informal organisational and institutional factors that influence sustainable livelihood outcomes."

The qualitative data analysis process and guidelines are as listed below:

- **Data cleaning:** which involved reading through the collected data, more than twice.
- **Data preparation and transcribing:** The first round of data preparation involved initial transcription of the collected textual data, and stories respondents shared with the researcher from the field notes taken. The second round in the transcription of textual data involved paragraph by paragraph editing and review of the transcribed (in the first round) using the recorder to crosscheck any omissions made in the field notes. The third round of the transcription process involved translating back the compiled English transcripts to Tonga-a local language used. This was done to ensure that no meaning of any word had been changed

during the transcription process and this was done by an independent person, who was actually a research assistant.

- **Data coding and Theme identification:** After compilation of transcripts from the collected stories from the 11 respondents, identification of common themes/text in all transcripts with descriptive value was done. Identified themes were categorized into main and subthemes and in to negative and positive themes experienced.
- **Search for common patterns and theme meaning development**: All identified themes and some words and or phrases whose meaning was not clear were presented back to the respondents for the actual meaning assigning. Engagement in phenomenological research focuses on the meaning of a particular aspect of experience, assuming that through dialogue and reflection the quintessential meaning of the experience will be reviewed. Language is viewed as the primary symbol system through which meaning is both constructed and conveyed. This process involved going back in the field to the field and confirming and reconfirming the meaning of certain words and phrases in the transcripts with the respondents.

This round was necessary to undertake in order to fill the identified gaps in the transcribed data, from selected respondents and was used to confirm and or validate the derived meanings from the data collected so as to minimize attaching any assumptions to the findings. The integration of identified themes and the assigned meanings was then compiled into a comprehensive description of phenomena as lived experiences of displacement and resettlement. Theme description and meaning of the shared experiences was the general outcome of this step.

3.4 Limitations/Assumptions

At proposal stage, it was envisaged that all the selected 12 participants would be captured and data collected from all of them. Only 11 were interviewed due to difficulties in getting the 12^{th} participant. Another limitation the study encountered was the incompleteness of the collected data, some of which was heavily characterized by unclear words and phrases and therefore value laden. This called for a second round of data collection, particularly targeting a few of those respondents (for clarity) who used unclear phrases and words. Much as the study provided detailed information on the lived experiences of the 11 respondents, the main limitation is the sample size. Although from a phenomenological perspective, this is acceptable and justifiable. The sample size (of 11) makes it difficult to generalize the experiences and findings and has a bearing on the transferability of the findings.

Further, because of the design and methodology of the study, there is clear homogeneity of the sample in terms of tribe and region. However, the sample size helped in fulfilling "Member Checking" and or data validation as I managed to get back to all participants whose words, phrases and sentences needed clarity. The process of Member Checking, which is a process to verify the content of interviews (Lincoln and Guba, 1989 p.314).

During the data analysis stages, many themes emerged from the qualitative data gathered and some of them had nothing to do with pre-resettlement experiences. These were clearly perceptual experiences or impacts as it has yet occurred, for example loss of livelihood.

The study had several strengths with regard to trustworthiness, credibility and transferability of findings.

3.5 Trustworthiness of the study

Trustworthiness in the thesis has been established in line with Lincoln and Guba (1989) outlined below:

3.5.1 **Credibility**

According to Murphy *et al.* (1998 p.170), credibility indicates the "researcher's conclusions are to be deemed credible if the constructors of the particular perspectives being reported confirm that they represent their particular version of reality." With regard to the development of trustworthiness of the study with the study participants, the researcher developed a trusting relationship and rapport with the 11 participants. This was also done by developing a close relationship with the local leadership of the community during the entire data collection period. This relationship was adequate to identify and clear personal and respondent's distortion of data (Lincoln and Guba 1989). Credibility also refers to the extent in which realities of participants are credible or believable to the original constructors of reality. It was enhanced through prolonged engagement, peer debriefing and member checks as outlined below (Lincoln and Guba 1989). Results credibility therefore, could be assured through the iterative and interactive engagement that I had with households that took part in the interviews. The data reflected participants' views and versions of the narration of their lived experiences. Another aspect of credibility was the constant engagement with my two research Supervisors on the finalization of field forms, proposed data collection, road map and analysis as well as results presentation and interpretation of recorded themes. This is referred to as "Peer Debriefing (Erlandson et al., 1993 p.140)."

3.5.2 Transferability

Transferability is described as being parallel to external validity or extent to which results can be transferred to another context or setting (Lincoln and Guba 1989). Much as this research cannot be transferred to other settings when the phenomenological nature is taken into consideration, to ensure transferability, the researcher used "thick" description of background data and methodology to enable other researchers to decide whether the findings can justifiably be applied to other settings. As in other qualitative approaches to research, the aim of the approach to have an enriched understanding of the phenomenon under study rather than transferability of results (Marshall, 1996). Thick description is defined by Lincoln and Guba (1989) as a way of achieving a type of external validity. By describing a phenomenon in sufficient detail, one can begin to evaluate the extent to which the conclusions drawn are transferable to other times, settings, situations and people.

Thick description also refers to a detailed account to the detailed account of field experiences in which the researcher makes explicit the patterns of cultural and social relationships and puts them in context (Foley et al. 2005).

3.5.3 Confirmability

Confirmability is parallel to objectivity or extent to which data, interpretations and outcome of interviews were rooted in contexts as well as participants and not the researcher's imagination. According to Murphy *et al.* (1998 p.171), confirmability indicates the "provision of an audit trail, which would allow other researchers to examine the process by which researchers have arrived at their conclusions." This was established by verifying and validating transcripts of interviews with participants. In addition, the academic supervisor followed the trail of the thesis, starting with the transcriptions and ending with the report to ensure that the findings and conclusions of my thesis are sound (Lincoln and Guba 1989). There was a second round phase in the collection of data, and on the analysed study findings. This was necessary to undertake in order to fill the identified gaps in the transcribed and analysed data, from selected respondents and was used to confirm and or validate the derived meanings from the data collected so as to minimize attaching any assumptions to the findings.

3.6 Summary

Chapter three has detailed the methodological approach as well as the research philosophy and ethical consideration of this work. It has described in detail the case study. It has highlighted the important elements involved in data collection and handling. The next chapter presents results, followed by a discussion and analysis in Chapter 5.

CHAPTER FOUR

4.0 STUDY RESULTS

This chapter presents the findings of the study. It presents data on the demographics of the respondents. It presents in great details the respondents' lived experiences as negative and positive experiences but as themes. Coping mechanisms are also presented.

4.1 General profile of respondents

The profile of households that participated in the research are presented in tabular form. The general profile of respondents are first presented in table 2 below. The resettlement programme at the Munali Nickel Mine was done in a phased process, from 2006 through 2010. Therefore, the table contains information regarding gender, age, marital status, family size, education level, and the year that the sampled household was resettled.

Table 2 General profile of respondents

Anonymised Respondents IDs	Gender	Age	Marital status	Education level	Family size	Year resettled
MM	Male	56	Married	Secondary	17	2007
MH	Female	83	Widow	None	6	2007
G	Male	31	Married	None	6	2009
ChP	Female	50	Married	Primary	6	2009
CP	Male	75	Married	Primary	5	2006
CM	Male	82	Married	College	6	2006
AM	Male	51	Married	College	17	2010
SN	Female	68	Widow	Primary	19	2007
SM	Male	89	Married	Primary	7	2008
NM	Female	53	Widow	Primary	6	2007
ES	Female	72	Widow	None	4	2006

Source: Based on collected field data

5 of the interviewed participants were female, representing ~ 45 percent female participation and 55 percent male. The age range was between 31 and 89 years old, the mean age being ~ 66 years old. 64 percent were married, and 36 percent were widowed. The family size ranged between 4 and 17 members per household, giving a mean number of 9 members per household of those interviewed.

4.2 Gender representation by age

The respondents were put in the following five age groups: 30-39 years; 50-59 years; 60-69 years; 70-79 years; and 80-89 years. In terms of gender, there were two females in the age group of 50-59. There was one female respondent in each of the following age groups: 60-69; 70-79; and 80-89. Therefore, five female heads of households took part in the interviews. For male respondents, there were 2 respondents in the 50-59 and 80-89 age groups. There was one male in the 30-39 and 70-79

age groups. Therefore, 6 male heads of households participated in the interviews. Figure 2 below shows the distribution of respondents disaggregated by gender and age groups.

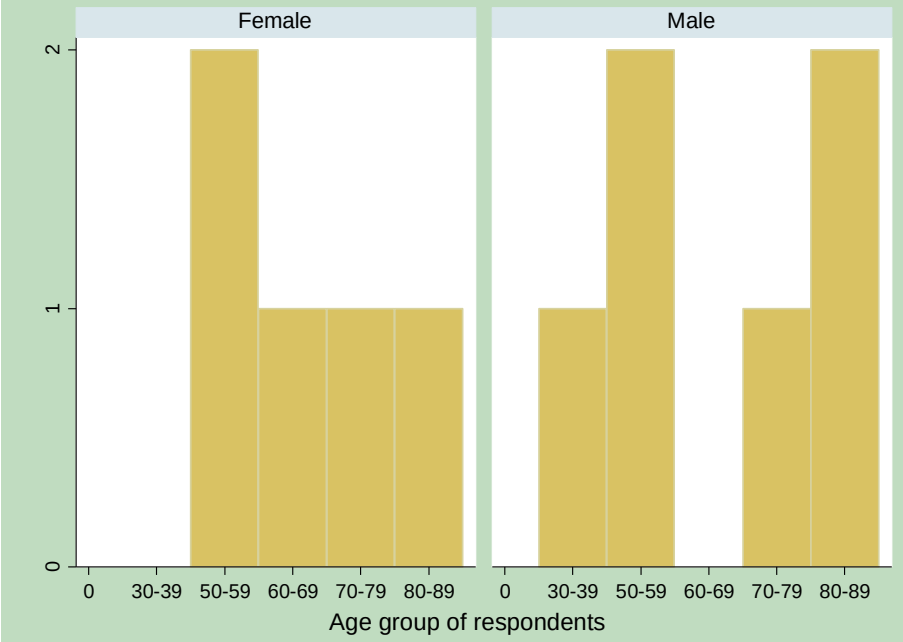


Figure 2 Gender distribution of respondents by age group

4.3 Members per household distribution

Disaggregated by gender and age groups of respondents, the highest number of members per household was headed by a female in the 60-69 age group. The total number of members was 19. The lowest number of members per household was 4, headed by a female respondent in the 70-79 age group. Other female respondents in the 50-59 and 80-89 age groups were heads of households with 6 members each. For males, the highest number of members was 17, and the lowest was 5 in the 50-59 and 70-79 age groups, respectively. Other male respondents in the 30-39 and 80-89 age groups were heads of households with 6 and 7 members, respectively. These details are represented in figure 3.

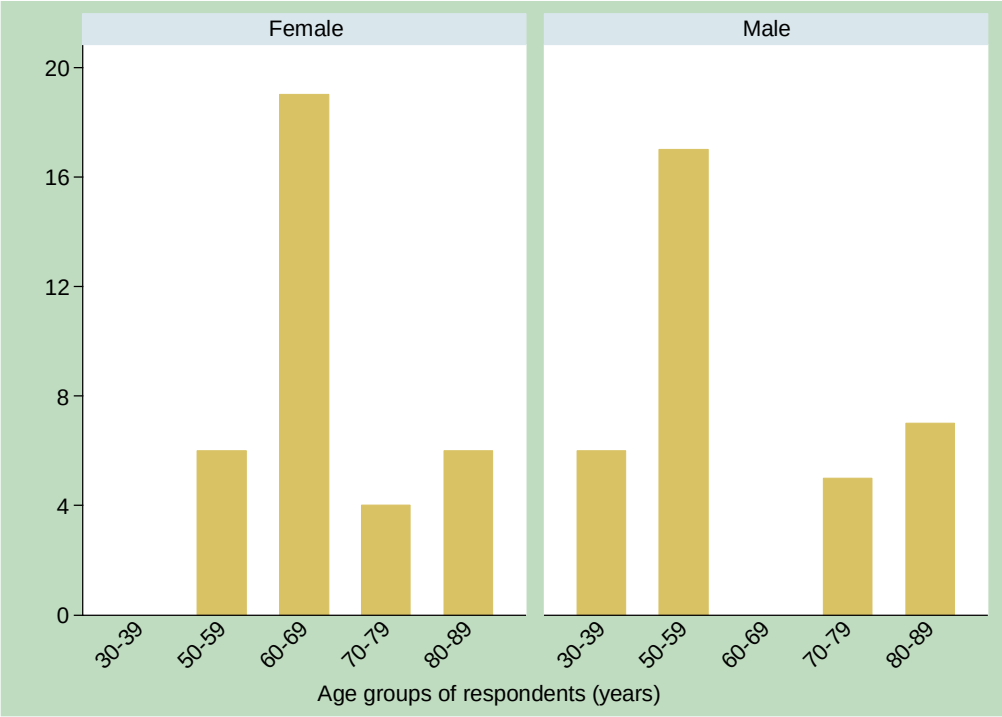


Figure 3 Respondents' data disaggregated by gender age group and members per household.
Source: Author's computation based on collected field data.

The respondents showed different levels of literacy based on their levels of education: some were not literate at all (None), while others had done primary, secondary and tertiary education. Among them were married while others were widows. From the data collected, those who had reached tertiary level of education were married and males. Figure 4 below shows the presentation of data disaggregated by education levels, age group distribution, marital status and the number of members per household. From the married group who were all men from those interviewed, the age groups 50-59 and 80-89 were heading households of 17 and 7 members, respectively. One married male in the 30-39 age group with no education (None) was heading a household with 6 members. 50-59, 70-79 and 80-89 married male age groups had primary education and were heading households with 6, 5 and 7 members, respectively. One married man with a secondary education in the age group of 50-59 age group was heading a household of 17 members. No widows had reached secondary or college. Those who had reached primary school were in the 50-59 and 60-69 age groups and were heading households with 6 and 19 members, respectively. Those with no education at all (None) in the age groups 70-79 and 80-89 years old were heading households of 4 and 6 members, respectively.

Figure 4 Data disaggregated by marital status, age groups of respondents, education levels and number of members per household. Source: Author's creation based on collected field data.

4.4 Respondents by marital status

Of the 11 respondents selected to take part in the study, 55% were males who headed their households and 45% were females who also headed their households. There was no child headed households that took part in the study. With regards to the marital status, the following table shows the percentage distribution of the respondents. Of the 11 respondents interviewed, 64% were married and 36% were widowed. There were no widowers, single or those on marital separation who took part in the study. Figure 5 presents this data disaggregated by gender. Of the 5 female respondents who took part in the research, 80 percent were widowed and only 20 percent were married. All the male participants were married.

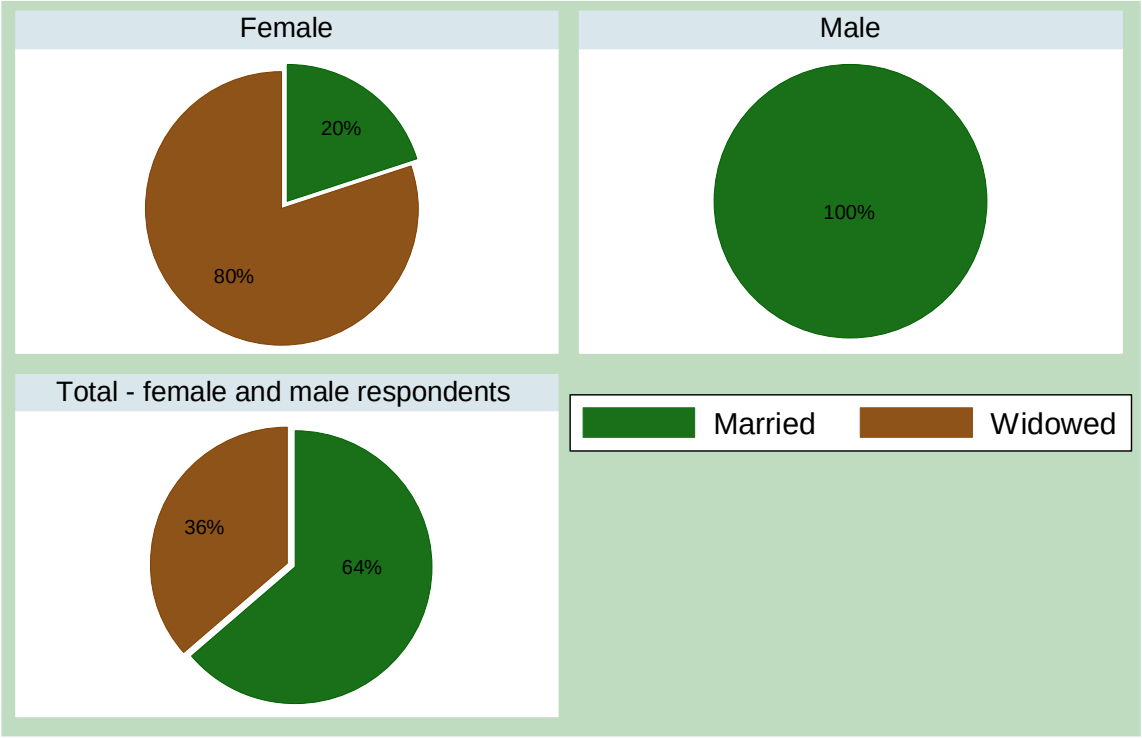


Figure 5 Data disaggregated by gender and marital status. Source: Author's computation based on collected field data.

From the data presented in the three figures above, there is an observable trend indicating that the females who took part in the research had lower levels of education, had bigger families to look after and less means to survive on due to their marital status situation; 80 percent of those interviewed were widowed.

During interviews, 10 themes were identified:

- lack of transparency;
- resistance to relocate;
- no feasible resettlement options;
- inadequate community participation in resettlement process;
- lack of livelihood sources and access to markets;
- lack of sustained access to energy sources;
- forced relocation;
- opportunity to have more land and work with leadership;
- reproduced settlement pattern and cultural setup;
- poor state of road infrastructure.

These characterized and revealed the lived experiences of households that were interviewed of displacement and resettlement. Figure 6 below presents these themes and their frequency of mentions during the interviews.

Reproduced settlement pattern and cultural setup, forced relocation, and poor state of road infrastructure were the least frequently mentioned from the developed themes. Lack of transparency and lack of livelihood sources and access to markets were the most frequently mentioned themes. No feasible resettlement options, lack of sustained access to energy sources, and opportunity to have more land and work with leadership were second as the most frequently mentioned themes. Finally, resistance to relocate and inadequate community participation in resettlement process were third most frequently mentioned themes.

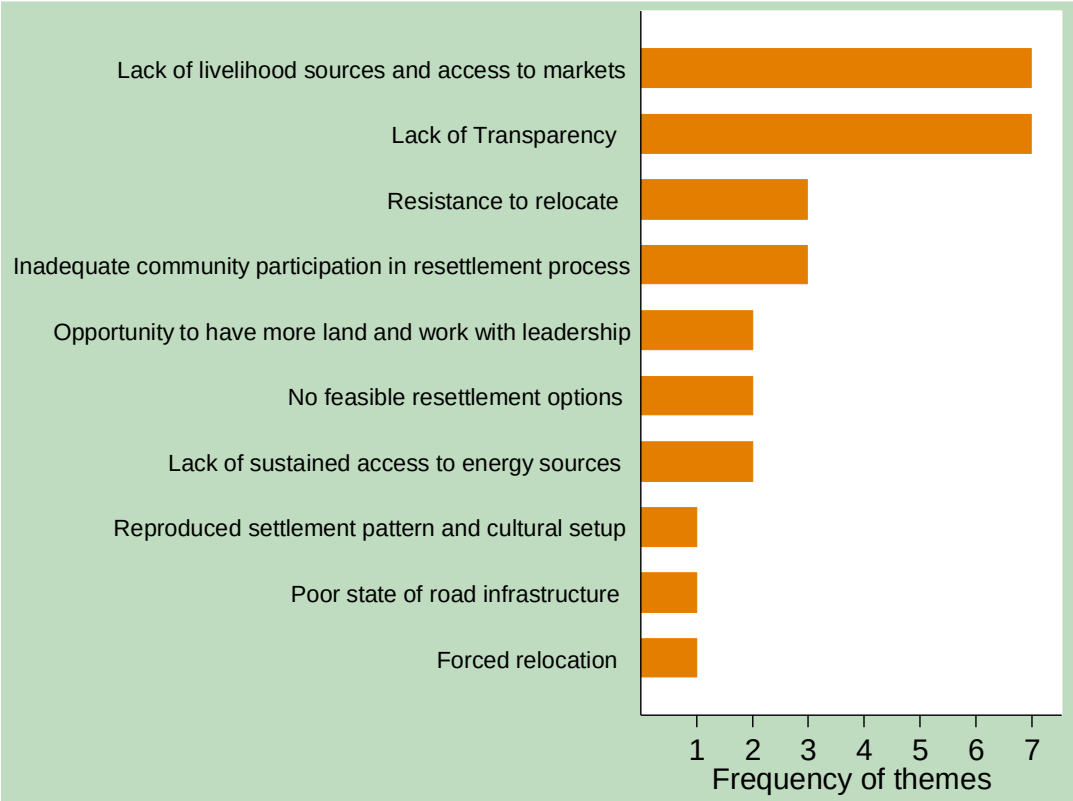


Figure 6 Frequency of themes from interviewed households. Author's creation based on collected data

From the findings, lack of transparency on the part of the mine and lack of livelihood sources and access to markets where the most experienced themes. Both were experienced by 7 of the 11 respondents. The least experienced themes were forced relocation and poor state of infrastructure as well as reproduced settlement pattern, each with 1 response. By reproduced settlement pattern the respondent implied that the Mine ensured that if a household comprised the nuclear and extended members of the family, houses were built for all of them, thereby reproducing exactly what was lost in the old area.

There were five positive (green) and nine reported negative (orange) lived experiences by respondents as shown in figure 7 below.

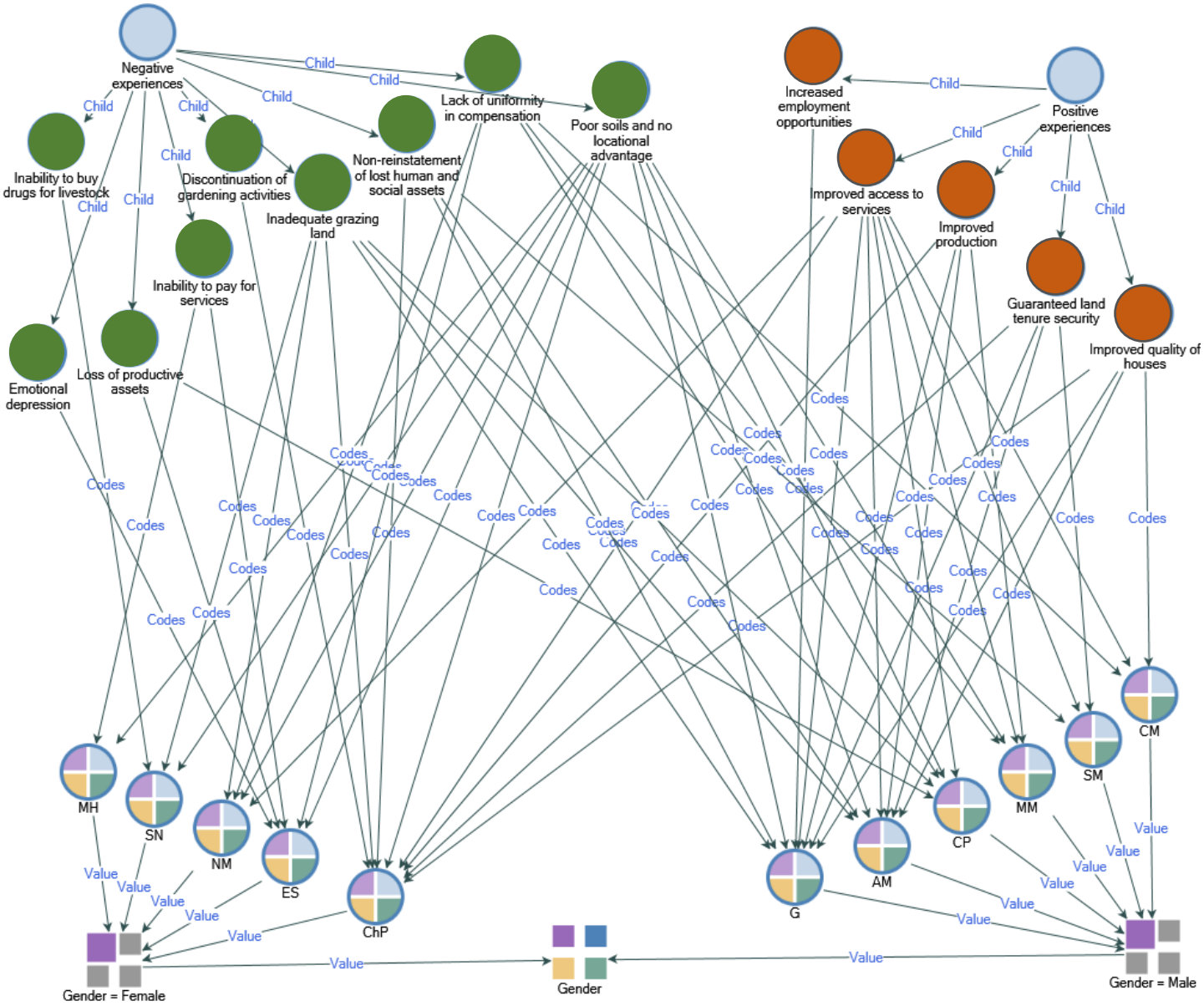


Figure 7 showing a graphical summary of lived positive and negative experiences by households that were interviewed disaggregated by gender: female respondents on the left; and male respondents on the right. 5 positive experiences were reported against 9 negative ones.
Source: Author's compilation based on field data interviews

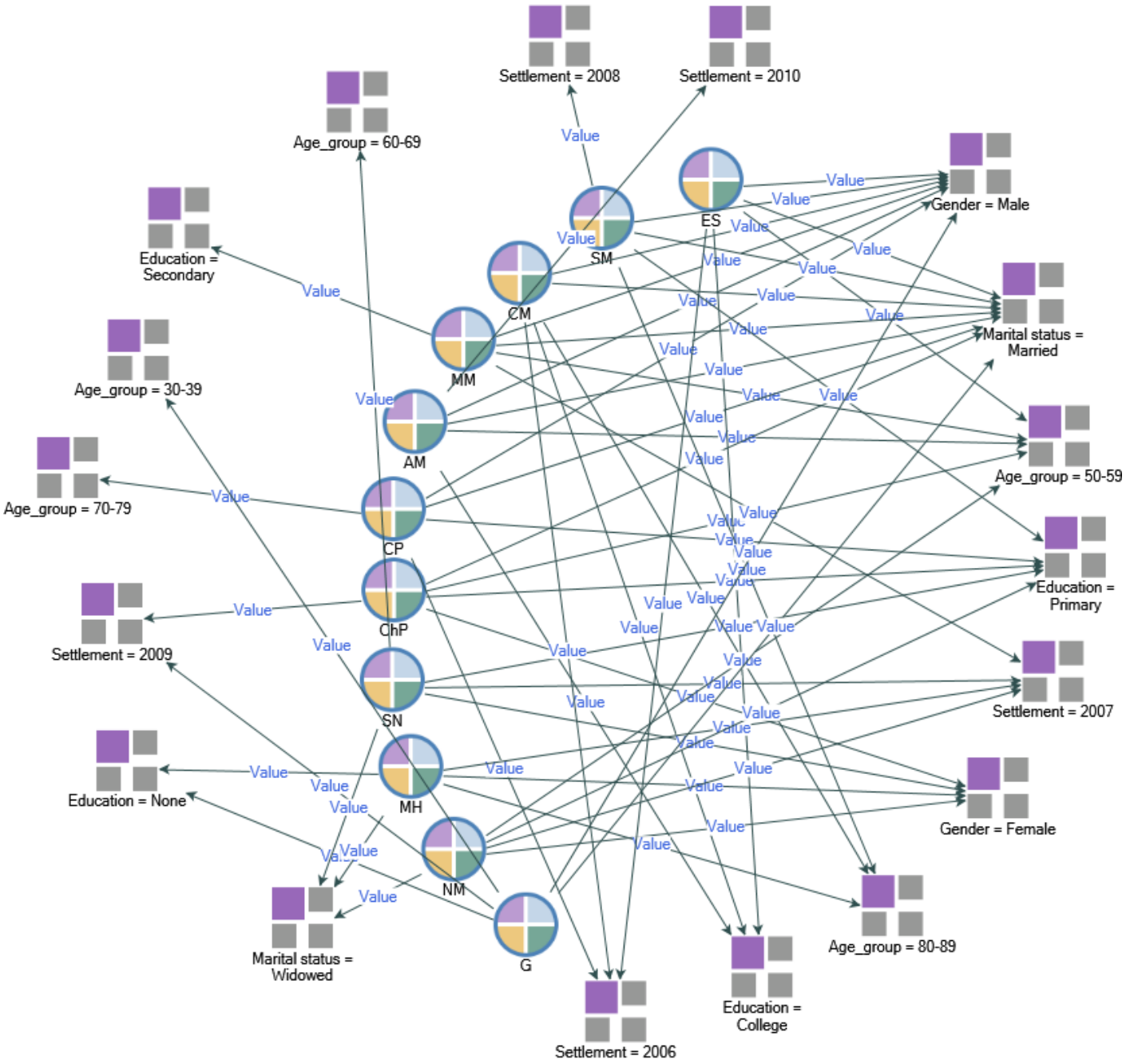


Figure 8 showing the interactions of interviewed households regarding demographic data.

Going clockwise, the level of common demographic data reduces. Thus it can be seen that, in their order were gender (being men); marital status (married); age group (50-59); education (primary); year of settlement (2007) were the first five demographic data that many interviewees shared the most in common. Similarly, there was only respondent for each of the age-groups 30-39, 60-69 and 70-79 years, one respondent with a secondary education, one respondent who settled in the new area in 2008 just like in 2010. At the level of these demographic data points, the interviewees shared the least common elements. Looking at this graph, for example, we can tell that G and MH had no education (None). G settlement in 2009, was married in the 30-39 age group and male. On the other hand, MH was widowed (like SN and NM), in the 80-89 age group, settled in 2007, and (needless to say) female. The figure also shows how participants interact at different levels to demonstrate level of commonness of demographic data.

Source: Author's creation in Nvivo 11 based on field data.

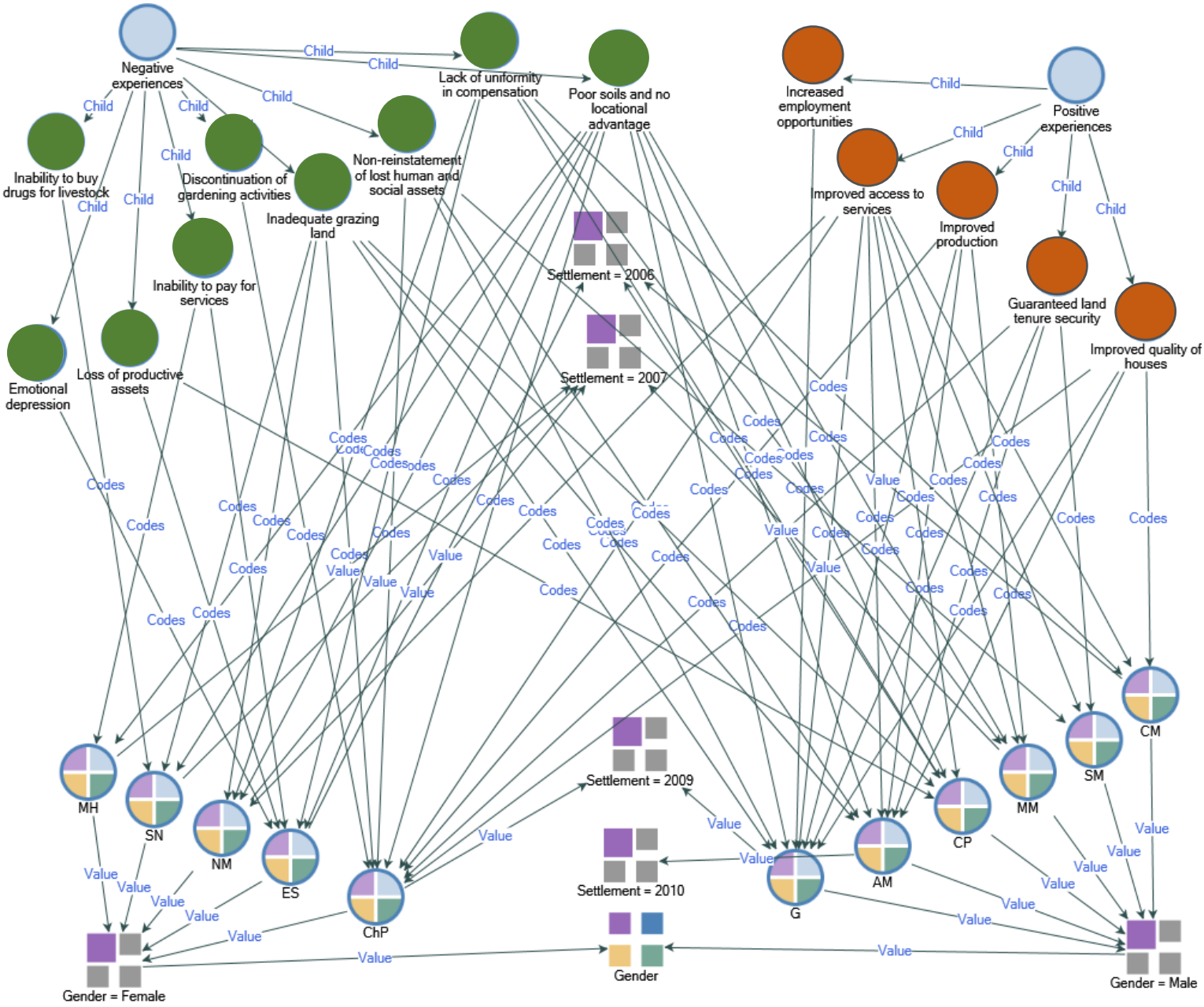


Figure 9 showing the coding of thematic positive and negative lived experiences combined with gender and years of settlement.

On top are the anonymised respondents. On the left are orange filled circles representing positive lived experiences. Going anti-clockwise, the most coded theme was improved access to services which respondents have experienced as a positive lived experience. Increased employment opportunities was the least coded as positive lived experience. On the right are negative lived experiences of respondents represented by green filled circles. Going clockwise, poor soils and location advantage was coded the most among the negative lived experiences, and discontinuation of gardening activities, emotional depression and inability to buy drugs for livestock were the least coded. This suggests that poor soils and no locational advantage was the negative lived experience that was affected the most of the respondents. It was coded 9 times. At the bottom are demographic data for gender and when respondents were resettled. Most of those interviewed settled in 2007, and males were more than females among respondents.

Source: Author's creation in Nivo 11 based on field data.

A reflection on graphs 7, 8 and 9 reveals that some important differences that could help understand their lived experiences. Graph 7 shows that most negative experiences were disproportionately coded to female respondents as they reported them during the interviews. Graph 8 reveals that most of the female respondents were not only widowed, they were also advanced in age (50-59; 60-69 and 80-89) age groups. They either had no education at all or only primary. Graph 9 shows the lived experiences and data is disaggregated by gender but also showing years when respondents were settlement. It is can be seen that among respondents, more males were settled in 2006 than females (2 versus 1); more females were settled in 2007 than males (3 versus1); an equal number was settled in 2009 (1 from each gender class); and only 1 male respondent was settled in 2010. From the negative and positive experiences reported, despite females having been early enough, they still reported more negative experiences than their male counterparts. ES, a female who was the first to be settled among the female respondents actually reported emotion depression.

A strong theme that emerged from the interviews was that the Company geologists and or surveyors carried out their survey works in the settled mine license area without adequately engaging the community to communicate the mine preparatory works and schedule of activities as well as the resettlement processes to be followed. Subsequently, community residents said they felt the actions and activities of the mine showed a lack of transparency. Lack of transparency made communities feel bullied and disrespected. This was partly attributed to power imbalances between the mining Company and them. In addition, lack of transparency was expressed through unfair levels of compensations because communities could not hold the Company accountable. This instilled a level of intimidation in the communities.

Of those who said they had experienced lack of transparency during the preparatory stages of the resettlement process, 4 were male and 3 were female respondents as shown in the table above.
In describing what the community experienced during the preparatory stages of the resettlement process, the following were the expressions of feelings of lack of transparency by some respondents.

"I just used to see them come and get soil samples and go back. No one told us details about anything. The information we knew was just based on rumours. The truth about the whole process was so scanty, we had no details". ***CP.***

During the course of sharing this experience, CP described the theme as generally frustrating.

……."What was ***frustrating*** *about it is that they even started doing works in our yards, right at the back of our houses and that's when we were prompted to ask them exactly what was going on and happening"?.*

During the second round of interviews where the researcher was seeking meaning to some of the phrases and words shared by respondents, CP explained what constituted frustration for him was that he felt so bad because all exploration works started in his field and just before he harvested his cotton crop. The surveyors destroyed his crops and he just found a red tape around a drilled hole

area and crops destroyed without his consent although the mine later paid for the crops through the District Department for Agriculture.

Even those who were psychologically prepared to be resettled based on the presence of historical mine/mineral exploration workings in the area, implied that there was no transparency as below.
"*I heard about the coming of the mine at the time they were busy doing the sampling in the area although, suffice to say that the area was dotted with historical workings in the form of pits dating from as far back as 2003*". ***CM***

Similar to lack of transparency in the process, an equal number of respondents reported lack of livelihood sources and access to the markets as some of the most discomforting experiences they had been through.

From the analysis of the compiled transcripts for the 11 respondents, a total of 7 respondents experienced lack of other sources of livelihood. Of the 7 who had experienced this theme, 4 were female respondents and 3 were male respondents. Of the 4 female respondents, 2 are widowed and 1 is married.

Being resettled, 15km away from the main tarred road, which provided the community with business opportunities to trade in various goods coupled with loss of gardening opportunities in the new site, constituted loss of a number of alternative livelihood sources and income. For example, from sale of charcoal to motorists by the tarred road, sale of various agricultural products such as maize, pumpkins, groundnuts as well as vegetables. Due to lack of adequate water for gardening of vegetables in the newly constructed water troughs around the boreholes in the new area, the activity has been discontinued and thereby loss of income needed for the wellbeing of the families is expressed by a respondent below.

"*I used to grow vegetables and sell by the road side, but here there are no dams and discontinuation of gardening meant loss of all the money I used to realise after sale of vegetables. Gardening was done throughout the year, rain fed cropping which we now depend on here is as you know, a seasonal activity. Worse still, there is no market for agro products in this place. That side I used to sell anything by the roadside, make some profit and it could help buy the necessities for my family. Further, the mine is now closed, so there are no employment opportunities for our children so I have a huge burden of looking after them****".* **NM**

From the observations made during the field visits regarding the aspect of livelihood, it would be fair and reasonable to say that the residents who cited this probably meant inadequate as opposed to complete lack of the livelihood sources. What has rather compounded the experience of inadequate sources of livelihood is the distance as one respondent stated when asked how his family has been coping with lack of sources of livelihood.

"*Compared to where we used to stay before, the travel distance and time has tremendously increased. To go to the tarred road side to buy anything you need to cycle for a long period of time*

and this is a burden on us now. Due to the increased distance from the market, it does not make economic sense to travel 15 Km, for instance, to just go and buy a basic commodity such as salt" ***G***

Asked as to how respondents coped with their experiences, the following were the responses shared.

*…. **"**As to what has helped me to cope with the negatives that characterize life here, I would say it is hard work which has been helping me. I am creative and do not wait for rains to come, as you can see, I am making washing basins and steel pots which I sell to members of this community. If there is anything to do at the mine, I will go and attend to any piecemeal work available, I do not choose. All I am interested in is money which will help my family**"** G.*

For others, especially the aged, felt there is not much they could do to cope with the problem of increased distance to the tarred road and markets and that it is a blunt experience they have to face.

…"On the distance to the road side, there is nothing an old man like me can do, unfortunately, it is something we have to live with. People actually wake up as early as 05AM just to go and get a few groceries to the road side" SM.

One of the widows summarized this experience the 7 of the 11 respondents went through since the year each respondent was resettled as below.

…"We miss our old place due to proximity to the tarred road. Business was easy to do, not in this area." **NM**

Emerging from the main theme of lack of transparency in the handling of the resettlement programme by the mine, were 3 subthemes through which the same study respondents experienced the main theme. See the table below for the subthemes.

Table 3 Subtheme identified of main-lack of transparency

Main theme experienced	Subtheme emerging	Number of respondents
Lack of transparency	Disrespect for the community	2
	Perceived worsening quality of life	3
	Inter/Intra group formation to ensure transparency	1

Lack of transparency also emerged through what respondents felt was disrespect for the community and a perceived worsening quality of life. To try and mitigate what the community felt as lack of transparency, those resettled after the first group resorted to formation of committees (intra/intra group formation) representing the affected families.

Inadequate communication of the discovery of mineral resources of economic value which would result in full scale drilling and subsequently operationalization of a mine sent fears to the community which, according to them, culminated in a perception of a worsening quality of life for them.

The second most experienced main themes are community resistance to relocate and inadequate community participation in the resettlement process, both themes experienced by 3 of the 11 respondents stating that they had experienced them.

As stated above, the community felt the actions of the mining Company surveyors/contractors where they carried out their activities without thorough communication and engagement of the community constituted disrespect for the indigenous land owners. Continuous drilling activities within the farm of local residents' fields without regard to their right to know what was happening created a discomfort. The way and manner the resettlement process was handled, with lack of transparency and regard for the land owners possibly led to resistance on the part of the community to relocate.

"The worries expressed and questions we started asking the surveyors made them call for consultative meetings which we started attending. During the meetings, we complained and expressed unwillingness to relocate as we had gotten so used to the area. They told us that from their findings thus far, it was clear that the mine would be opened up in the area and that residents needed to relocate to pave way for the development of the mine". ***CP***

Emerging from the main themes of community resistance to relocate and inadequate community participation were also the subthemes in the table below through which study respondents experienced the main theme.

Table 4 subthemes identified of main-Community resistance and inadequate participation

Main theme experienced	Subtheme emerging	Number of respondents
Community Resistance to relocate	Community pressure	3
	Limited or no alternative sites presented	1
Inadequate community participation	Inconclusive negotiations/forced relocation	3

Emerging from the experience of community resistance to relocate were two subthemes of community pressure and limited or no alternative sites for resettlement, with each being experienced by 3 and 1 respondent respectively.

Respondents felt that some of the reasons they had resisted to relocate was because the mine did not present them with alternative sites for resettlement. The other reason advanced by respondents are that they had gotten used to the area and relocation was not an option. Due to pressure from those resisting to relocate, the mine presented, before the community, an alternative place, which is in

Kafue Gorge. Kafue gorge is located about 30km away from site. Most residents refused to move to Kafue Gorge as explained below.

"The mention of the word resettlement made residents to ask where they will be taken if they are to be moved. We also asked what will happen to our fields. In response, the mine said that they would find us alternative parcels of land for our lost fields and build us houses too.
The first suggestion was that all the affected families would be moved to Kafue Gorge. They took us in a bus, to go and see the land in Kafue Gorge, which everybody refused. I personally told the mine that I had never lived in Kafue Gorge so I refused to consider that place. I refused and told them that I was going nowhere with my children". ***NM***

The responded further added ……*"I tell you I came back feeling very frustrated and I wished I had not gone there to see the place. The place is very hilly and looked lifeless. As a widow, I could not imagine staying in a place like that"* ***NM***

During the second round of interviews meant to seek the meaning to some of the phrases and words shared by respondents, the respondent clarified what she meant by the area being lifeless and hilly. The respondent explained that indeed, the place is hilly and mountainous and may not be suitable for grazing of cattle as the resettled community practiced pastoral farming as a way of life. Lifeless also meant that the area had a lot of wild animals and settling in a place like that would have meant being victims of human-wild animal conflicts and loss of crops every season.

The experience of inadequacy of community participation also emerged through what respondents felt and experienced as inconclusive negotiations and or forced relocation. This theme was experienced by 3 respondents, namely CP, SM and NM.

Given the experience and feeling of inadequate involvement in the process and the limited number of alternative resettlement sites given to the affected community, 3 of the 11 respondents felt this was partly due to the fact that whatever negotiations the mine had engaged in with affected members of the community were said to have been inconclusive and the process therefore considered to have been done by subtle persuasion.

The third category of main themes (affected community not offered feasible resettlement options, Lack of sustained access to energy sources and opportunity to have more land and work with leadership) all revealed a total 2 of the 11 respondents stating that they had experienced the themes.

From the findings, 2 of the 11 respondents interviewed said that they felt the mine did not offer them feasible resettlement options. Despite the researcher's repeated emphasis that respondents share only experiences they went through during the resettlement preparatory stages, some respondents still went ahead to share what is considered a resettlement experience such as access to energy sources which they only experienced during the time they were already resettled.

With this said, 2 of the 11 respondents said that they have been experiencing a challenge of lack of sustained access to energy sources in the new area for cooking and an opportunity to own more land.

"The other-irony of this place is that there is no firewood available for cooking. We sometimes go to the nearest White owned farm to fetch the wood and if for some reason the owner refuses, then it is a struggle to cook. There is no electricity in this area too" ***NM***

Further, 2 respondents said that resettling in the new area had given them an opportunity to own more land than what they used to have previously. From the stories shared, the mine offered all resettled residents 15 hectares compared to the 5 to 10 hectares each family lost when they were resettled. During the relocation negotiation process with the mine, those who anticipated an experience of this theme said this had now actualized as they had benefitted from increased production in the new site as a result as one respondent explained.

"With regard to what has been positive for me and my family is that firstly, the land was cleared here for me and I just went straight into cultivation and this helped us a lot. Like others, the land given to me was much bigger than what I used to have in the old site and because of this, I produced more bags of maize. Just in the first year, I produced 600 x50kg as opposed to 400x50kg where I used to be" ***AM***

The experience of opportunity to have more land and work with leadership of the mine during the resettlement preparatory stages is linked and therefore emerged through improved production and livelihood, perceived provision of electricity and security of tenure and a perception of improved quality of life as reason for acceptance to resettle which motivated them to relocate. The main theme also emerged through the fact that a respondent had information and was psychologically prepared to relocate.

From the analysis of the background information of the respondents, the 2 (CM and AM) who experienced this theme have attained tertiary education and therefore better placed to take up leadership position in the community.

Table 5 Subtheme identified of main-Opportunity to work with leadership

Main theme experienced	Subtheme emerging	Number of respondents
Opportunity to have more land and work with leadership	Improved production and livelihood	1
	Perceived provision of electricity and security of tenure motivation to relocate	1
	Had information and was psychologically prepared to relocate	1
	Perceived improved quality of life as reason for acceptance to resettle.	1

The fourth category of main themes identified (forced relocation, reproduced settlement pattern and cultural setup and poor state of road infrastructure) were each experienced by just a respondent and therefore constitutes the least and uniquely experienced themes.

Overall, respondents felt they have lived in the new area feeling they were forced to relocate while the same number of respondents said that the bad state of the road has been a negative experience since the time they were resettled.

Conversely, the same number of respondents expressed happiness that the lost cultural setup and settlement pattern had been reproduced in the new area. The mine ensured that the number of impacted and lost structures, together with the settlement pattern –within the village where all reproduced in the new site.

"From a social point of view, all has been well as I still stay with the same people, the same families who were my neighbours where we used to be. The mine reproduced the settlement setup we used to have. So we do not live with strangers, we have been regrouped" SN.

4.5 Development, identification and general description of positive and negative themes

4.5.1 Positive experiences

There are a total of 5 positive themes which were recorded as having been experienced by the 11 respondents interviewed as shown in the table below.

Table 6 positive themes

Experienced Theme ► (+ve themes)				Improved access to services	Increased employment opportunities	Improved production and acquisition of productive assets	Guaranteed security of land tenure	Improved quality of houses	Total themes experienced
No.	Respondent ID ▼	Gender	▼ Year Resettled						
1.	CP	M	2006	√					1
2.	CM	M	2006	√				√	2
3.	SM	M	2008	√			√		2
4.	AM	M	2010	√		√	√	√	4
5.	MM	M	2007	√		√			2
6.	G	M	2009	√	√	√	√	√	5
7.	NM	F	2007	√					1

8.	ChP	F	2009				√	√	2
9.	SN	F	2007	√		√			2
10.	Es	F	2006						
11.	MH	F	2007						
Total No. of respondents experiencing theme				8	1	4	4	4	

From the findings above, the most experienced positive theme is improved access to services and the least experienced positive theme is increased employment opportunities which were reported by 8 and 1 respondent respectively. The remaining three experienced positive themes were experienced by an equal number of respondents and these are improved production and acquisition of productive assets, guaranteed security of land tenure and improved quality of houses. Each of these themes was experienced by 4 respondents.

Of the total number of respondents who took part in the study, only 3 female respondents did not cite improved access to services as a positive experience of their resettled life. Of the three (3) respondents (**ChP, Es** and **MH**), two respondents (**Es** and **MH)** who did not experience improved access to services as a positive theme are both widows who were resettled in the first phase of the Mine resettlement programme. During the interviews, the two respondents said that their experience of resettlement has been more negative than positive and therefore unable to pay for most services such as school and medical fees despite travel time to the two services having improved as stated below.

"*Apart from the water the mine has given us, I personally don't see anything positive that I can share with you. If you talk about school, it is not for free and if I don't have money, how do my grandchildren attend that school?****" MH***

Increased employment opportunities were the least experienced theme with only 1 respondent recorded as having experienced it. The only respondent who experienced this theme is male and the youngest (31) of all the 11 respondents who took part in the study. One of the possible reasons for this experience, relates to the fact that he is probably one of the most youthful head of household among the resettled families, and as such he is time and again given an opportunity to do piecemeal work at the mine which has been on Care and Maintenance since 2013 (Mabiza ESIA, 2013).

Results show that guaranteed security of tenure, improved production and acquisition of productive assets, improved quality of houses all constitute the second set of most experienced positive themes with a score of 4 responses each.

With regard to guaranteed security of tenure theme, review of the literature shared by mine management revealed that at the time of conducting this study, the mine was already in the process of titling all parcels of land given to the resettled families in order to ensure security of tenure for all resettled families.

"We had always thought someday, someone will just come and ask us to move out of these house, out of this land again, but guess what?, the mine is right now processing our title deeds, we already signed the letters of offer from government in 2016.This is exciting news to me, this is how we should live" ***SM.***

The respondents also felt that the experience is a positive one because the exercise involved the clear marking of boundaries distinguishing one farm from the other, and had therefore reduced the number of cases of land wrangles in their previous site. Land wrangles and boundary disputes was said to have characterized their life in the previous site.

Like guaranteed security of land tenure, improved production and acquisition of productive assets recorded a total of 4 respondents (AM, G, MM and SN) who said they had been experiencing this positive theme. An analysis of their responses has revealed that during a good and fairly wet rainy season, production in agriculture generally improved and the proceeds, from the sale of surplus, used to buy productive assets such as cows, fertilisers, certified seeds and ox-drawn implements like ploughs.

According to mine management, the increased production has been made possible because of more land that has been given to the families compared to what they lost and the provision of farming inputs such as fertilisers as startup capital for all the resettled families in the first two years of resettlement. In addition, the training, support and guidance the community underwent in conservation farming techniques whose main aim was to improve crop yields and crop diversification.

"*With regard to what has been positive for me and my family is that firstly, the land was cleared here for me and I just went straight into cultivation and this helped us a lot. The land given to me was much bigger than what I used to have in the old site and because of this, I produced more bags of maize. Just in the first year, I produced 600 as opposed to 400 where I used to be."* ***AM***

Overall, of all the respondents who experienced the 5 positive themes, G experienced all the 5 themes than any other respondent and the least is CP and NM who experienced only 1 theme each.

4.5.2 Negative themes

Based on the responses from the 11respondents interviewed, 9 negative themes were developed and recorded as having been experienced by the 11 respondents as shown in the table below.

Experienced Theme ► (-ve themes)	Loss of Productive Assets	Lack of uniformity in compensation	Quality of soils and lack of locational advantages	Inadequate grazing land	Inability to pay for services	Inability to buy drugs for livestock	Non-reinstatement of lost human and social assets	Emotional Depression	Discontinuation of gardening activities	Total themes experienced

No.	Respondent ID ▼	Gender ▼	Year Resettled ▼									
1.	CP	M	2006	√	√	√	√						4
2.	CM	M	2006		√								1
3.	SM	M	2008							√			1
4.	AM	M	2010			√	√			√			3
5.	MM	M	2007		√	√							2
6.	G	M	2009			√	√			√			3
7.	NM	F	2007		√	√	√						3
8.	ChP	F	2009			√	√			√		√	4
9.	SN	F	2007			√	√		√				3
10.	Es	F	2006	√	√	√		√			√		5
11.	MH	F	2007			√		√					2
Total No. of respondents experiencing theme				2	5	9	6	2	1	4	1	1	

Table 7 Negative themes identified

From the recorded negative experiences, poor quality of soils and lack of locational advantage was the most experienced and felt negative theme with a recording of 9 of the 11 respondents while the least experienced themes were emotional depression, discontinuation of gardening activities and inability to buy drugs for livestock which recorded a response each.

"I do not know about others, but for me and my family, life has been unpleasant for us in this area. Compared to where we used to live, our agriculture production has just been going down with time due to poor soils. During the rainy season like this, water literary ponds in our fields for days. How can crops do well like that?" ***NM***

Asked as to what exactly had been unpleasant about the life experience when expressing discontentment with the type and quality of soils, the respondent clarified that due to poor soils, the expected income from the sale of agro produce had been going down with time (since resettlement) due to low productivity, making family life generally unpleasant and unbearable. The researcher's field observations during the transects of the site revealed that the soils were dark clay in colour, consistent with one respondent's description;

"What has really been negative about this area is that the land we are given here is not good enough because it's black soil and it sticks, easily floods and water log making it difficult to grow the crops". ***MM***

Coupled with the poor soils, is lack of locational advantage which respondents said had to do with the distance from the main road. The place is located in a dambo like area with poor soils for agriculture according to the respondents and is far from the main road making transportation and marketing of agro produce difficult.

A further analysis of the table above has revealed that 2 of the 11 respondents (CM and SM) who did not cite poor quality of soils and lack of locational advantage as negative themes experienced also experienced the least number of themes.

Asked how the respondents have been coping with this theme, some said that depending on the magnitude of the food shortage problem due to flooding, in that particular year, the Mine in conjunction with Central Government would provide relief food to residents.
Those who practice the principles of conservation farming like minimal tillage and application of organic manure which costs less usually have had their crops spared and productivity increased.

Emotional depression was particularly experienced by only a respondent, a widow (Es). From the story she shared, the respondent explained that she had been going through economic and social difficulties since the death of her husband. She reported that she had not been able to adequately provide for the family, and had no access to productive assets and therefore was unable to even pay for services, hence her frustrations.

Asked how she and other respondents who experienced emotional depression, discontinuation of gardening activities and inability to buy drugs for livestock themes were coping, the

respondent who has been unable to buy drugs for livestock said she resorted to burning of charcoal for sale in order to cope. The respondent who has experienced emotional depression could not specify exactly how she was managing by just said it was by the Grace of God.

Second to the most felt and experienced negative theme is the problem of inadequate grazing land which 6 of the 11respondents cited. The most negative aspect of the theme is that the grazing area for cattle is not just located very far away from the settlement, but is also inadequate to cater for the current animal population as well as far away from the source of drinking water for animals. Residents walk long distances to reach the grazing area.

"*The other biggest challenge we have and see continuing in future is the issue of inadequate grazing land for cattle. Compared to the old site where we used to have access to the communal grazing land, the mine did not factor that important aspect in the design of the area. Tonga people are by tradition, pastoralists. Despite the cattle population increasing every year, we do not understand this and do not even want to think about it.*" ***CP***

Respondents reported that as a result of the long distance their children had to walk to the grazing area, animal ended up destroying other people's crops along the way thereby attracting financial charges for replacement of destroyed crops.
Asked as to how they have been coping with this experience, some respondents said it had affected their children's school attendance and performance at school.

The other strategy respondents shared which they have been using to cope with the theme of inadequate grazing land is that families had gotten used to walk long distances and wake up as early as 06 AM to take the animals for grazing and come back in the evening, after 5PM. They described this strategy as a very involving daily negative experience.

Thirdly, lack of uniformity in compensation –with regard to the type and quality of houses built took the third position (5 of 11 respondents) in terms of the most felt and experienced negative themes.

"…….the houses they built for us are not good compared to what they have now built for the recently resettled families as you will see for yourself. Despite being the first families to be resettled, they built us houses which look like shops, not plastered inside and the roofs not properly done. The house developed cracks many years ago and it has been like this. Because of this, we have lived with roofs that leak. This has been frustrating especially in the rain season". ***CP***

Asked what he meant by saying that the houses looked like shops during the second round to seek clarification from respondents on the meaning of certain words and or phrases, the respondent said that, he meant the roofs were mono pitch shaped types like most shops in the villages. Overall, respondents consider the quality of houses for those in the first phase as poor compared to those built for the subsequent phases.
"The quality of our houses as the first families to be resettled is of poor quality. Because of the roof which have been leaking, all the planks are rotten now. All is good during the dry season, not rain season". ***NM***

Asked to share their experiences on how they have been coping with this negative experience, most residents said that they have accepted the situation as it is, while others said that during rainy season, they make sure there are empty water buckets in all where the house roof leaks from.

"It is difficult to say how I have been coping. It is by the grace of God. Tell me yourself, how can you cope with all these challenges when you have nothing to lean on? How do you cope with a house which turns into a dam during the rainy season and you have to use buckets to remove the water each time it rains? How do you cope each time it rains and your blankets are wet in the middle of the night. In short I survive by the grace of God, there is not much to talk about in terms of positive experiences?" **Es.**

When female respondents are compared to their male counterparts, the results are represented in the **figure 10** below:

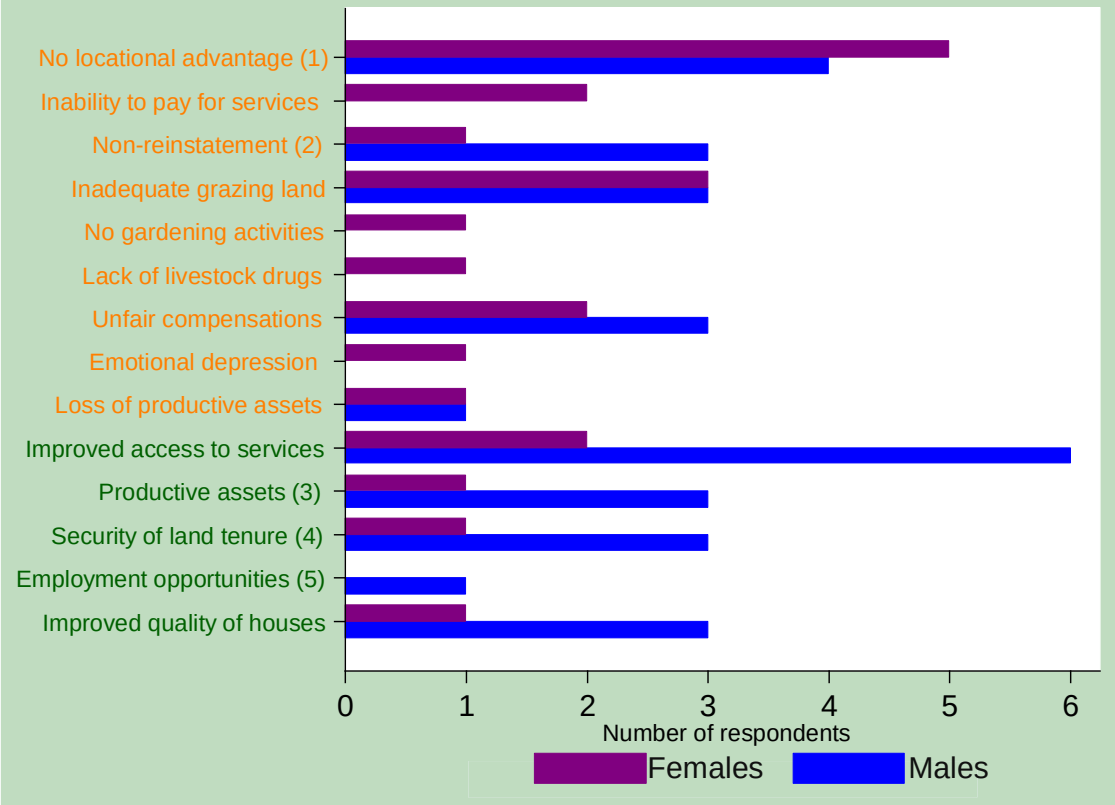


Figure 10 showing themes of lived experiences of displacements and resettlement.
In dark green are positive lived experiences; and in orange are negative expressed lived experiences. In brackets, 1 refers to poor quality soils and no locational advantage; 2 is non-reinstatement of lost human and social assets; 3 is improved production and acquisition of productive assets; 4 is guaranteed security of land tenure; and 5 refers to increased employment opportunities. Generally, with the exception of non-reinstatement of lost human and social assets and unfair compensation, female respondents scored higher in reporting about negative lived experiences of displacement and resettlement than men. On the other hand, men scored higher in reporting about positive lived experiences of resettlement and displacement.

Table 8 Pre and Post resettlement scenario

livelihood resource/ asset	pre- resettlement scenario	post resettlement scenario	general comment& concluding remark
Human	• Community reported to have had fair access to human capital. Community members lived near schools, clinics etc	• 10years after resettlement, medical facility is only 50% complete. • School within the community is 100% complete • Conservation farming teachings have been going on.	• Overall, the community had access to the facilities before resettlement. • Given the time taken to reinstate the facilities, overall access and attainment of human assets has been affected, much as proximity to services has improved.
Social	• Resettled families had well established personal and family relationships with the neighboring villages. • Had access to different church denominations. • Families lived close to their friends, other extended members of their families and could easily visit those in other towns due to proximity to tarred roads	• Despite resettlement, the Mine tried to enhance and strengthen family networks and interconnectedness due to reproduction of settlement patterns from old site. • Creation of former grouping called Mugoto Foundation to ensure implementation of the agreed mine obligation for the benefit of all affected families (www.mabizaresources.com). • Failure to timely reinstate churches in the new site	• On one hand, the mine tried as much as possible to come up with house designs and settlement layout patterns which has enhanced and strengthened nuclear family networks and interconnectedness through reproduction of the settlement patterns from old site. All members of the family (Nuclear and or extended) live together. • On the other hand, failure to timely reinstate the churches in the new location has resulted in negative experiences on the community social development with regard to their right to worship. Respondents now walk long distances to go to church, which are outside the resettlement area.
Physical	• Lived 1 km from tared road • Had access to Water and Sanitation and other	• Access road to the RAP village from tarred road reported not in good condition. • Community has 100% sustained access to clean drinking water and sanitation.	• With regard to transportation and business transactional costs, attainment of this capital (and partly financial capital as well) has been affected due to the condition of the road and the increased distance away from the tarred roads.

	assets this livelihood asset category.	• Improved quality of houses despite the first group to be resettled which had discontent on designs and quality.	• Despite the increased distance away from the tarred road overall, there is a perceived improvement with regard to water and sanitation facilities and quality of houses reinstated by the mine.
Natural	• Analysed transcripts show that they had fertile and productive soils. • Access to firewood and other sources of energy and had adequate communal grazing land	• Mine has reinstated all lost agricultural land and provided full security of tenure. • Resettled families experiencing poor quality of soils which affect crop performance due to flooding and or droughts. Old site had good, well drained and fertile soils. • Limited source of firewood due to lack of access to woodlands. • Inadequate grazing land.	• Since the resettled community's source of livelihood is predominantly land based, a combination of the poor quality of soils causing flooding and restricted access to and inadequate reinstatement of grazing lands for a predominantly pastoral community can be said to have reduced overall access to the natural capital. • Inadequate grazing land was reported as one of the frustrating experiences of resettlement by most respondents.
Financial	• Had livestock and could easily sell it by the road side. • Could easily sell various types of agricultural produce by the road side. • Had no access to formal employment in the mine. • Had access to regular, though piecemeal works in the neighbouring farms along the tarred road.	• As in the pre-resettlement era most households own livestock such as cattle, chickens and goats. However no assessment of a reduction in size of the herd and or numbers done. • Unsustainable access to employment opportunities due to prolonged and frequent mine closures. • Lack of other business opportunities as compared to previous site.	• Since the resettled community's source of livelihood is predominantly land based, a combination of the poor quality of soils causing flooding and restricted access to and inadequate reinstatement of grazing lands for a predominantly pastoral community can be said to have reduced overall access to the capital. • Cattle is a form of savings, is considered a financial capital and source of family pride within the community.

CHAPTER FIVE

5.0 DISCUSSION AND ANALYSIS OF THE FINDINGS

5.1 Introduction

This chapter discusses the findings of this research; the lived experiences of the interviewed displaced and resettled households. The discussion is in light of the impacts or implications of DIDRs. In this way, the research findings therefore reflect and contribute to literature on DIDRs of communities. The discussion brings the uniqueness of Nickel mine case in Zambia in a more specific sense, while at the same time, contributes to the discussions about the phenomenon in literature, more generally.

The discussion remains consistent to the research aim and its objectives to be able to draw insights into the extent to which these have been achieved through this research. Thus, at the end of this chapter, it is clarified to what extent the lived experiences of displaced and resettled households in Mazabuka have been explored; understanding the nature of the lived experiences, coping mechanisms, and how communities perceive 'development' from the establishment of Nickel mine in their area. In line with the research objectives and research questions, the discussion is divided into the following sections:

- The first section (5.2) on socio-economic lived experiences answers question 1; what are the socio-economic implications of the Munali Nickel mining-induced displacement and resettlement?
- The second section (5.3) on coping mechanisms answers question 2; what are the coping mechanisms of the displaced and resettled communities following the establishment of the Munali Nickel Mine?
- The third section (5.4) is on the reflection on 'development' following the establishment of the Mine and resettlement of people answers question 3; how can rural development be characterised following the establishment of the Munali Nickel Mine?

The chapter ends with a summary that consolidates the salient points raised in the discussion in a manner that shed more light on the topic under study, but also brings to the fore what is unique about the case of Munali Nickel Mine. Points raised to underscore the uniqueness of the case illustrate the value addition of this research to contribute to the body of knowledge about development-induced displacements and resettlements in general, but also about mining-induced displacements and resettlements in particular.

5.2 Socio-economic lived experiences of resettled households

In exploring the lived experiences of the resettled families with regard to psychological, socio-cultural and economic, a total of 29 responses were recorded from the 11 respondents interviewed. The 10 main themes compiled from the 11 respondents' experiences are lack of

Transparency, resistance to relocate, no feasible resettlement options, inadequate community participation in resettlement process, lack of livelihood sources and access to markets, lack of sustained access to energy sources, forced relocation, opportunity more land and work with leadership, reproduced settlement pattern and cultural setup and poor state of road infrastructure.

Of all these experiences recorded, lack of livelihood sources and access to the market as well as poor state of the road constitute the economic aspects of the experiences of the study objective; to explore the lived experiences of the resettled families with regard to psychological and socio-economic implications." Reproduction of the settlement pattern and cultural set up theme addresses the socio-cultural aspect of the objective. However, non-reinstatement of the churches as revealed by respondents is a breach of their right to worship is confirmation that the re-settlement did not achieve the socio-cultural aspect of the objective.

The findings from this study are consistent with the findings of a study commissioned by the University of Queensland Centre for Social Responsibility in Mining where the study author stated in frustration as one of the lessons learnt that a house is not a home. ……that the impact of resettlement is often complex, intangible and at times unspoken as there are complex psychological and cultural impacts whose underlying causes can be diverse and range from concerns such as loss of a sense of place to the ability to practice cultural traditions at the resettlement sites (Brooks 2015).

The experiences of the respondents with regards to the economic aspect is consistent with the findings in most of the literature reviewed. For instance, AfDB, (2015), World Bank (2016), and Lillywhite et al., (2015), all found that loss of sources of livelihood was a major problem in most resettlement projects. In Mualadzi community in Mozambique for instance, the authors contend that "there was a strong sense from the community that social networks and livelihood patterns had been affected and lost (Lillywhite et al., 2015)."

Much as the psychological experiences could not be captured from the main themes, it however emerged and was addressed through the subthemes. For instance, the recorded perception of the worsening quality of life is a stressful experience and therefore psychological and is therefore consistent with the findings of one of the reviewed literature, the Future of Dams book, although the findings of the author of the book, went a step ahead and captured the gender dimension of stress.

The second aspect of psychological stress as envisaged by (Scudder 2005)Scudder is anxiety over the future, which according to Scudder is adversely experienced by women than men and because of fear of the unknown, the community resisted to relocate (Colson, 1971). Community resistance to relocate and inadequate community participation were experienced through limited or no alternative sites presented to the affected community.

The theme "Inconclusive negotiations/forced relocation" recorded is also in line with the findings of reviewed literature. According to Colson (1971), the native People were generally less concerned with the general benefits of the project and therefore resisted to relocate. "The

residents were less concerned with the benefits which would accrue to the European dominated industrial sector of the economy than with practical considerations and consequences of the move on their own lives" (p.75). Further, the Kariba Dam findings have revealed that resistance to relocate, as ordered by the government authorities led to violence which resulted in the death of about eight (8) people and thirty two (32) people wounded before eventual compliance (Colson, 1971). The positive themes recorded as experienced by the 11 respondents interviewed which include, improved access to services, increased employment opportunities, improved production and acquisition of productive assets, guaranteed security of land tenure and improved quality of houses is confirmation that the economic aspect of the research objective has been addressed.

With respect to consistence with reviewed literature, apart from the pre1990 resettlement programmes which were implemented before resettlement became an established policy safeguard issue, most projects in the literature reviewed have shown compliance with provision of improved housing. As to whether the provided housing is adequate and a true reflection of what was lost by residents, is outside the scope of this study and could not be achieved by the study objectives.

However, review of literature on the experiences of involuntary resettlement from those recovering from mining induced resettlement in Mualadzi area of Tete Province, in Mozambique has revealed a number of contradicting experiences. In this area, the mine resettled community suffered disadvantages which included food and water insecurity, loss of economic opportunities, fracturing of the community uncertainty and limited access to information, deficiencies in the remedy process and recovery in a low capacity environment (Lillywhite and Kemp, 2015).

5.3 Coping mechanisms of displaced and resettled households

It should be stated here that the number of responses which determined the achievement of this objective was dependent on the number of negative themes shared by the respondents. While some respondents shared and described the strategies used to cope with their experiences of lived resettlement, others did not.

Table 9 Coping strategies

Negative theme	**Coping strategy shared and employed by respondents**
Increased distance to the tarred road	Waking up early to compensate for increased travel time and increased distance; and buying in bulk to avoid frequent travels.
Loss of sources of livelihood to closure of the mine, and loss of business opportunities in resettlement site	*Casual works as they are made available by the mine; make braziers, steel pots and basins; extended family dependency; sale of livestock during economically difficult times; and charcoal burning.*

Sub-standard houses with leaking roofs and cracks/non uniformity in compensation	Complaints filed to the Mine by all affected. Most residents said that they have accepted the situation as it is, while others said that during rainy season, they make sure there are empty water buckets in all corners and points where the house roof leaks from.
Inadequate grazing land	*Families wake up very earlier to walk the long distances to take the animals for grazing and come back late in the evening; and boys miss classes.*
Reduced agro-production due to water logging in the fields and poor soils	Apply organic manure which is not easily washed away; and the government has given relief food.
Scarcity of firewood	*Using solar panels; and ask for firewood in neighboring commercial farm*
Non reinstatement of churches	Temporal structures constructed; and walking long distances to access the church services

From table 8, the coping strategies suggest that the biggest negative impact that came with the resettlement was the disrupted ability of community members to have easy access to resources and places that were part of their socio-cultural environment. There was curtailed ability to access grazing land, firewood, fertile soils that never got inundated with water after a downpour, and curtailed easy access to markets as well as churches.

Straddling has emerged as a coping mechanism to the impacts of resettlement. Communities reported on unpredictable casual job opportunities and making braziers, steel pots and basins to improve their income base and supplement the losses from poor crop production. It is noted also that the long hours spent on travelling to strategic places such as markets and grazing is a huge cost. Walking long distances is physically exhausting but also time consuming. Consequently, they have less time to spend on immediate socio-economic activities. In addition, owing to the distance and time, education of boys in traded off for reasons that include taking animals for grazing and collecting firewood.

That they have to receive relief food from the government in the resettlement site is a humiliating experience because they feel they are beggars, and survive at the mercy of the government, extended family members and neighbours. They have a limited portfolio of assets to enable them survive on their own. As noted by Lillywhite et al. (2015) in Tete in Mozambique, the resettled households in Munali had low capacities. At the time of this research, churches within had not been completed. Churches are places of moral and spiritual support, but for solidarity that is extended to helping the needy. Resettled households at the time of the research could not derive the socio-economic and moral benefits from church environments because they were not completed. Going to churches that are far away makes them feel not wholly part of the community.

From the literature reviewed, findings from the Mualadzi Mine community are very similar to what the Munali Mine community experienced. Limitations of the physical environment such as poor quality soils and flooding are similar. With regard to the coping strategies employed by resettled families, there are also similarities. The Mualadzi community interviewees said that they had also engaged in other activities for supplementary income such as brickmaking, cutting firewood and producing handmaid goods such as brooms, making and selling charcoal (Lillywhite et al., 2015).

5.3.1 Relevance of coping mechanisms to the LSF

As shown above, the key features of the SLF include, the vulnerability context, the livelihood assets and transforming structures and processes. In general, the SLF is a framework which helps us to understand the complexity of people's livelihoods, the constraints and opportunities they have as a result of an intervention in their host community and or the challenges and opportunities they are facing in the resettled community.

In its simplest form, the framework depicts stakeholders as operating in a context of vulnerability within which they have access to certain assets (Gamper et al., 2002). What respondents experienced as presented in the preceding chapters above is influenced, to a large extent, by the context within which they had been resettled and, should therefore be understood and analysed in light of the vulnerability context of the framework, which in this case is the new resettlement area. The vulnerability context is characterized by various shocks, trends and seasonality (DFID 1999).

The second part of the framework comprises the livelihood assets which are natural, social, physical, financial and human capital.
The third part comprises the transforming structures and processes and the livelihood outcomes all of which will be explained in the next section of the analysis. Processes are usually embedded in a matrix of formal and informal institutions and organisations and mediate the ability to carry out livelihood strategies to achieve the desired livelihood outcomes or not (Scoones 1998).

Lastly, as to whether the affected families have had access to the capitals and subsequently attained sustainable development will be dependent on a number of factors including ability to access the livelihood assets as well as ability to use them in the face of shocks, trends and seasonality that define the context in which they have been resettled by the mine.

5.3.1.1 Human Capital

Human capital represents access to community health and educational facilities, knowledge and skills which together enables people to achieve their livelihood objectives by pursuing different livelihood strategies (DFID, 1999, 2004, Krantz, 2001).

In the context of the Munali Nickel Mine resettlement programme, restoration of all lost assets and ensuring sustained access to newly created assets after resettlement has a bearing on the

attainment of sustainable development of respondents' livelihoods with regard to human capital.

Meaningful human capital development with regard to construction and provision of schools and health facilities can only be achieved if there is willingness to attend teaching sessions or classes and people access medical services. In direct support will only be considered if cultural processes and institutions shown in the overall DFID Sustainable Livelihood Framework inhibit participation and attendance (DFID 1999; Krantz 2001). At the time of conducting the study, the clinic which is still under construction by the Mine was 50% completed and already operational. It is located within the community and therefore accessible in terms of proximity.

According to records obtained at the Munsangu resettlement Clinic which serves a total of 45 households has a total of 3 qualified medical personnel. The availability of medical supplies against the total required is very high and stands at 95%. The most common diseases in the community are respiratory infections, digestive disorders and diarrhoea.
At the time of the study, school had already been constructed, completed and handed over to government and what the community had lost in the previous/old site, had been fully restored by the mine.

With respect to proximity, the school is located within the community and therefore accessible by all resettled families. According to statistics obtained from Munsangu Basic School the total enrolment stood at 286 with that of Girls at 146 and Boys at 140. The School has a very low number of dropouts, across all grades. Only 2 pupils had dropped out in 2017.The main reason attributed to this are the termly outstanding fees which the guardians could not afford due to the death of the pupil's parents.

Attendance rate is defined in the context of the total number of children that have attended school per week as a percentage of the total school population. With respect to attendance rates, the School reported an impressive attendance rate which stood at 86% for Boys and 92% for Girls. The reason cited for the boys' attendance rate being less than that of girls is related to transforming structures and process, specifically, cultural institution. Boys are usually sent to go and look after cattle, a practice which may impact the academic performance of pupils. Despite the impressive pupil attendance rate, the teaching staff was, however reported to be inadequate with only 8 of the 20 required qualified teachers currently teaching. Overall, the study has revealed that of the 11 respondents, 8 said that they had experienced improved access to services with specific reference made to full restoration of the school and the ongoing construction of the clinic.

"…Besides, for the first time in our life, the family has access to a school and clinic as well as clean water which was not the case in the old site. All these facilities and amenities are just a walkable distance away. Government has also found it easy to provide veterinary services to the community as they are not far apart as it used to be in the old site." CM.

Although details of the financial accessibility aspect could not be covered adequately, one of the three respondents who did not cite improved access to services as one of the experiences of their resettled life had this to say;

"Apart from the water the mine has given us, I personally don't see anything positive that I can share with you. If you talk about school, it is not for free and if I don't have money, how do my grandchildren attend that school?" MH.

Below is a billboard of the newly constructed Munsangu School by the Mine to cater for all the educational needs of the resettled families.

Figure 11 Billboard of Musangu School

From the foregoing, access to human capital, with regard to access, proximity and willingness to use can be said to have been fairly given the long time the mine took to provide the services. From the time the community was resettled, both the school and the clinic were only recently constructed and operationalized in 2015.

5.3.1.2 Natural Capital

DFID, (1999 p.11) defines natural capital "as a natural resource stock from which a livelihood is derived and these include land, trees and forests, wildlife, water and aquatic resources and wild fruits." For the study area, this capital is very key as the community is rural based and culturally pastoral and therefore depends on natural capital for survival. The mine also exists because of the Nickel which is derived/extracted from the ground and constitute natural capital.

With regard to access to land, findings have revealed that all the resettled families have had their lost parcels of land restored in full by the mine.

Besides, and in line with Performance Standard No.5, International Finance Corporation Guidelines (IFC, 2012) which the mine has been using as a guide in their implementation of the resettlement programme, the aspect of security of tenure of the land given to the resettled families has been done. Regarding ownership of land, the study has revealed that all the

resettled families have letters of offer and were just waiting issuance of Title Deeds from the Zambian Ministry of Lands. This positive experience in the attainment of natural capital was shared by 4 of the 11 respondents.

With regards to the quality of soils and the livelihood benefits the resettled families were deriving from the resource, the experiences shared were predominantly negative. The highest number of respondents (9 of the 11) complained that their most negative aspect of their stay in the new resettlement area was poor quality of soils and lack of locational advantages which related to distance from the tar road and the occurrence of floods in the area. This discontent, made it difficult for the 9 families to derive a meaningful and sustainable livelihood from the resource.

Meetings held with Mine management as well as the interviews conducted revealed that the soils in the area flood easily, causing ponds of water which affects crop growth and generally agricultural productivity.

"I do not know about others, but for me and my family, life has been unpleasant for us. Compared to where we used to live, our agriculture production has just been going down with time due to poor soils. During the rainy season like this, water literary ponds in our fields for days. How can crops do well like that?" ***NM.***

Further, access to energy resources which is a major source of energy for the resettled families was said to be one of the negative experiences by 2 respondents, who fetch it from the nearby private farm. The two families also reported that they had resorted to charcoal burning in order to augment and sustain their affected livelihoods.

With regard to the locational advantages respondents complained about, the following is a discontent shared by one of the respondents.

"This area is not good. In the first crop season, we had serious problems with wild pigs and warthogs attacking and destroying our crops. It was a very sad experience. We lost our produce. It was a loss on our part and it affected our projected income for that year.
The first three years were characterized by heavy rains. Our crops were affected and so was the production due to flooding. We got almost nothing and suffered a lot. As I said, I do not like this place because I am now very old, poor, widowed and without a man to help me plan my future. I can no longer fend for my grandchildren who are keeping up with me." **MH.**

Second to the poor quality of soils experienced is the inadequate grazing land which 6 of the 11 respondents complained was another major negative experience of the new area.
As stated, the resettled community is a pastoral community and this has had a negative impact on their livelihood as one of the respondents stated:

"*The other biggest challenge he said he has been through and will do so in the foreseeable future is the issue of inadequate grazing land for cattle. Compared to the old site where they used to have access to the communal grazing land, the mine did not factor that important aspect in the design of the area. Tonga people are by tradition, pastorates. Despite the cattle*

population increasing every year, we do not understand this and do not even want to think about it." **CP.**

Transforming structures and process which constitute informal institutions and processes such as local cultural practices have a direct impact upon whether people are able to achieve a feeling of inclusion and well-being (DFID, 1999 p.8). This was important and relevant for this research. The land that the Nickel was established on was traditional land whose management and governance was embedded in the cultural norms of the people. The land had no title deeds and therefore, had no market value since it was not saleable. In addition, the Senior Chief had the final word on who would settle where and how much they could have. Therefore, at community level the weak negotiation position of people did not give them enough leverage in terms of determining their continued access and use of the land.

From the stories respondents shared, it is clear that there is a restriction in terms of sustainable access to grazing land and consequently attainment of sustainable development with regard to this resource. This therefore, confirms marginalisation and social disarticulation lived experiences that Cerena, (1995) identified among displaced and resettled communities.

According to (Scoones, 1998 p.7) measuring the natural resource sustainability is difficult as it also entails linking of indicators of resource depletion or accumulation to the temporal dynamics of system resilience (ability to recover from disturbance) and livelihood needs. From the experiences the respondents shared regarding the natural capital, it is clear that the natural resource capital of the livelihood pentagon has suffered a considerable reduction in terms of the resettled families' sustainable access and ability to derive the anticipated livelihood benefits.

5.3.1.3 Financial capital

Financial capital denotes the financial resources that people use to achieve their livelihood objectives and it comprises the important availability of cash or equivalent that enables people to adopt different livelihood strategies. Of all the capitals, financial capital is the easiest to transform into other capitals and a key determinant in the outcome of livelihood programmes (Ibid). For instance, it can easily be used to create other capitals through purchase of land, food, farm machinery among others (DFID 1999).

According to DFID (1999), financial capital is categorized into two (2) main types, namely available stocks and regular inflows. In the context of the resettlement programme by the Munali Mine project and this study, available stocks would denote among other things, available money the respondents have as savings in the bank after sale of agricultural produce as well as livestock which includes cattle, goats etc. Because of this, financial savings are the preferred form of available stocks (Krantz 2001). On the other hand, regular inflows, would denote sustainable access to financial resources through monthly or piece meal earnings from available employment opportunities at the mine.

In terms of the 11 respondents' access to financial capital, the study findings revealed that the entire community is, by background, pastoral who have always depended on cattle as the main source of financial capital. What however threatens the sustained access to the community's livestock development and stock increase is the problem of inadequate grazing land which, 6 of the 11 interviewed respondents reported as a negative experience in the resettled community.

"The other biggest challenge he said he has been through and will do so in the foreseeable future is the issue of inadequate grazing land for cattle. Compared to the old site where they used to have access to the communal grazing land, the mine did not factor that important aspect in the design of the area. Tonga people are by tradition, pastoralists. Despite the cattle population increasing every year, we do not understand this and do not even want to think about it." ***CP.***

What can be confirmed is that the study has revealed that the grazing land is grossly inadequate to cater for the animal population in the resettled community. The study has also further revealed that because of the resettlement programme, government has found it easy to provide technical extension services to which the majority of respondents (8 of the 11) said they had sustained access to.

With regard to the regular inflow of financial capital, the sustained access to employment opportunities at the mine by the resettled community has been a challenge due to frequent mine closures.

From the Sustainable Livelihood Framework perspective, the frequent and now prolonged mine closures constitute a negative aspect of seasonality which has exacerbated the vulnerability context in which the resettled families are already struggling to accumulate and attain the livelihood assets and other capitals. Figure 12 below shows the history of Munali mine operations and how global commodity prices has affected sustained access to employment opportunities. The mine has been on care and maintenance since 2014 and this has had a bearing on sustainability of employment opportunities and subsequently sustainable community development as this has had an effect on the creation and attainment of livelihood assets such as finance at both individual and family.

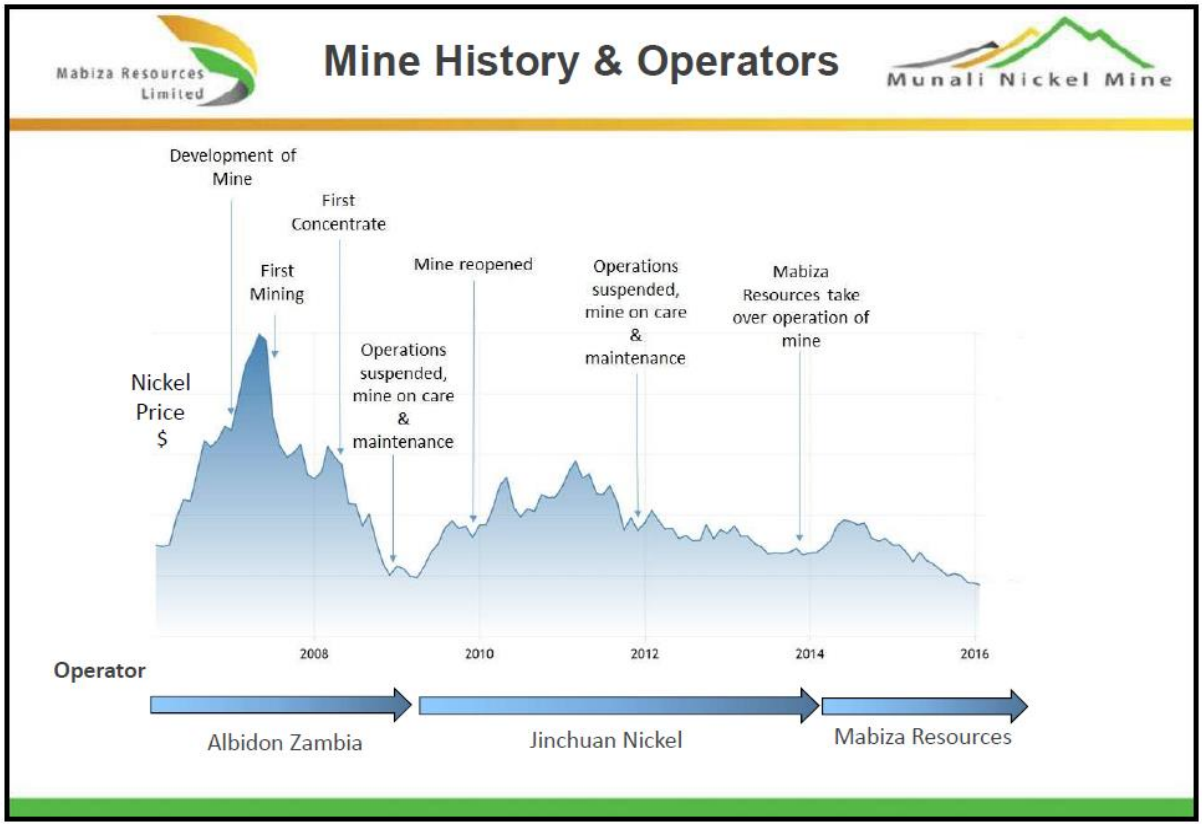


Figure 12 The history of the mine
Source: *Mabiza Resources, 2017, (www.mabiza.co.zm)*

5.3.1.4 Physical capital

Physical capital comprises basic infrastructure such as roads, water and sanitation facilities as well as producer goods needed to support livelihoods (Scoones 1998). A motorable and functional road network (which results in reduced travel time and cost), secure and decent shelter, adequate water and sanitation facilities constitute the key components of the required basic infrastructure. Physical capital is closely linked to the other capitals especially the financial and social capitals in that, improved infrastructure such as roads and houses has a bearing on the quality of life (human capital enhancement).

In the Munali resettlement programme, all families were built modern houses and have access to clean water and sanitation compared to the old site. In terms of travel time and cost, survey findings revealed that the distance has increased and so has the cost of travel. In terms of overall provision of physical capital for the resettled families, the mine has managed to build modern houses and provided the residents with security of tenure for all. Clean water and sanitation has also been provided.

Given the operational challenges of the mine, the community can be said to have had sustained access to and development of physical capital with regard to housing, water and sanitation. Further, development of physical capital such as roads for the resettled community is expensive and that it would be fair to call for close collaboration with central government to provide such

infrastructure and improve not only the travel costs but also reduce travel time and enhance realization of sustainable livelihoods.

5.3.1.5 Social capital

Social capital is defined as social resources upon which people draw in pursuit of their livelihood objectives and is developed and strengthened through networks and interconnectedness, membership trust, reciprocity and exchange (DFID 1999; Scoones 2009). With respect to the network and interconnectedness aspect of social resources, - the study findings show that only 1 respondent said that the mine Company had tried as much as possible to reproduce the old settlement pattern in the new site, a strategy that had strengthened the existing social interconnectedness and family relations. Interviews with Mine management also revealed that the idea behind the design of the settlement pattern was to ensure that as much as possible, family members are given an opportunity to stay together as was the case in the old settlement.

With regards the membership and trust and or membership of formalized groups, the most notable formalized grouping involved the signing of a Memorandum of Understanding (MOU) with the community in 2013 to create and operationalize the Mugoto Foundation to ensure that the obligations of the resettlement programme are fulfilled even in times when there were no operations at the mine. Formation of the formalized groupings ensures adherence to mutually agreed or commonly accepted rules, norms and or sanctions and has a bearing on the attainment of a strong and sustainable social capital (DFID 1999). Membership or social affiliation to such groups may have negative or positive benefits depending on a person's hierarchical position within the formation or grouping as the study has revealed below.

"……. It was also mixed feelings for me because much as I hated relocation, I had an opportunity to be part of the team that was negotiating for the community. I worked closely with the chief and other affected families, so I knew what was on the table and this did not worry me so much and actually helped me prepare for it psychologically. For instance, I was aware that the mine would give everyone a minimum of 15 hectares and no one had more than 10 hectare where we used to be. This excited me, and made me look forward to move/relocate actually. So generally, from a preparedness perspective, that is what I experienced." CM.

The lack of fulfillment of promises is an often used technique by investors to get social license from communities to start operating. Investors tend to oversell positive elements while downplaying the negative socio-economic and environmental repercussions (Bruton, 2002; Dalupan et al., 2015). Investors know how important it is to maintain the what ICCM (2015) refer to as company-community relationship.

Study findings have revealed that the resettled community predominantly embrace Christianity and therefore the other notable aspect of the formalized grouping in the RAP community is the church, where adherence to teachings and values of the Christ is expected to have an impact on the social cohesion of the community and subsequently, the strength and development of the social capital. Quoting Judith Maxwell (1996 p.13), Easterly et al. (2006) refer to social

cohesion as processes of "building shared values and communities of interpretation, reducing disparities, in wealth and income and generally enabling people to have a sense that they are engaged in a common enterprise facing shared challenges and that they are members of the same community."

Social cohesion is the connectedness among individuals of social groups that facilitates collaboration and equitable resource distribution at household, community and state level. It refers to those things which hold society together such as religion and cultural practices. Sustained access to the church from the time the community was resettled (from 2006 through 2010 to date) has been quite a negative experience for all resettled families. Study findings have revealed that 4 of the 11 respondents expressed negative feelings of discontent with regard to access to their churches.

"In terms of Christianity, people are currently walking long distances to go to churches although some groups have opted to build their own temporal church shelters. As a result, most pastors have ended up losing most of their flock, which has an impact in the membership of the congregations" AM.

In addition to what the community has experienced in terms of access and attainment of livelihood assets in the resettled community and what has been presented above, the table below presents a summary of the probable pre- resettlement scenario and the post resettlement scenario (based on the experiences shared with the researcher) and the general comment.

5.4 Perception of mining-induced 'development:' a reflection

Minerals are one of the resources that Zambia is endowed with. Currently, its contribution to GDP is about 15 percent (GRZ 2017). The country depends heavily on the mining sector for socio-economic development. Therefore, mining for development is an important activity. Taxes from the mining sector support the government coffers to improve national infrastructure, service delivery, including servicing government loans. At the national level, therefore, proceeds from a well-functioning mining sector contribute to national development. In addition, the government uses mining to bring about development in rural areas where, as Scholes and Biggs (2004) note, most governments are unable to provide basic needs for the populations. The policy thrust is underpinned by the fact that development projects such as mining can help reverse structural barriers and unemployment in rural areas to spur development (Mtero 2017). Mining for rural development, like any other development programs in rural areas, essentially relies on the good will of mining companies through practices such as corporate social responsibility (Ranangen et al., 2014; Hawkins, 2018).

For a country like Zambia where development programs in rural areas happen on customary land, many socio-economic issues are pertinent to the definition of what kind of development is brought to the communities. Chimhowu and Woodhouse (2006) make an interesting case that having title deeds that supposedly improve land tenure security for impoverished communities can easily make them landless. This is because title deeds make them able to sell

that land to somebody that wants to buy. This can easily happen because sell of property is a coping strategy and mechanism that impoverished households can use to meet immediate needs such as paying school fees or medical services.

In the context of the results obtained from this research, reflecting on the lived experiences of displaced and resettled communities, we can draw some insights into the 'development' of the Nickel mining. The mine has been developed, have people's lives been socio-economically developed? Kates et al., (2005 p.10) quote the Brundtland's definition of sustainable development: "to ensure that sustainable development (sic) meets the needs of the present without compromising the ability of future generations to meet their own needs." In the context of this definition, this reflection considers how the development of the Nickel mine in Mazabuka is a means of making displaced and resettled households use their resources in way that does not compromise the ability of future generations to meet their own needs. This is at the community level. At the national level, this is difficult to determine, but also outside the scope of this research.

The most reported negative lived experience by the households that were interviewed was unequivocally poor quality of soils and lack of locational advantage, then followed by inadequate grazing land. Just like many rural communities elsewhere in developing countries are tied to natural assets and agriculture (Scherr 2000), more so for the poorer community members (Kalaba et al., 2009; Kamanga et al., 2009), the lives of the households were clearly tied to the use of land. In fact the Tonga people who are in this part of the country and were displaced and resettled are culturally and traditionally pastoral and agricultural communities. Therefore, the displacement and resettlement impacted their socio-economic means of production, but also disturbed their cultural and traditional ways of interacting with the environment through grazing and other means. At this level therefore, these two negative lived experiences confirm marginalization and social disarticulation that Cerena (1995) identified among common lived experiences concomitant with development-induced impoverishment through displacements.

12 years before the Brundtland report in 1987, Myrdal (1974 p.729), defined development as "the movement upward of the entire social system." In this definition, the author included both economic and non-economic factors such as "educational and health facilities; the distribution of power in society; and more generally economic, social, and political stratification; broadly speaking, institutions and attitudes (ibid, p.729)." Social and environmental impacts of development projects are sometimes downplayed (Bruton, 2002; Dalupan et al., 2015), yet these constitute the building blocks that sustain communities in the absence of government support or any form of economic development. In some instances, positive benefits from development programs such as land based investments are oversold, while negative impacts are downplayed (Anseeuw et al., 2013).

In Zambia, compensations are a matter of negotiation between the investor and the community members. The government of Zambia has a resettlement policy for the landless, but has no policy that legally obliges it (government) to set standards of compensating displaced and

resettled communities. From the negative lived experiences of interviewed households: loss of productive assets; lack of uniform compensation; poor soils and lack of locational advantage; inadequate land for grazing; inability to pay for services; inability to buy drugs for livestock; non-reinstatement of lost human and social assets; emotional depression; and discontinuation of gardening activities, it can be suggested that households have been foreignised from their customary land (Zoomers 2010) because their land has been neo-liberalised (Chimhowu 2018), having been sold. The expressed negative lived experiences are similar to those Limpopo, South Africa where Mtero, (2017 p.190) reports that "mining-related land dispossessions have had adverse impacts on land-based and agrarian livelihood activities namely, homestead garden cultivation, ploughing in large fields and livestock rearing."

Positive lived experiences indicate that some good has been done and the community members have been able to cope with displacement and resettlement to some degree. They mentioned improved access to services, increased employment opportunities, improved production and acquisition of productive assets, guaranteed security of land tenure and improved qualities of houses. Majer (2013) indicates that the mining industry has high level of employment, though Mtero (2017) found that local people's employment opportunities are imperceptible. From the pool of respondents of this research, only one respondent indicated employment as a positive lived experience. Some mining operations are technical while others are physically demanding. This means that, looking at the literacy levels and the age of the respondents, it is not surprising that employment is not a positive lived experience by many displaced and resettled communities. This brings in another dimension that most people who benefit from employment opportunities offered by mining operations do not come from the vicinities. This means that there will be more people from other parts of the country and world who will form a socio-economic enclave that will be different from the local people. This further accentuates the sense of anomie of the local communities.

In conclusion, mining-induced displacement and resettlement as lived by communities at the Nickel Mine in Mazabuka, is a 'double edged sword'; bringing about some economic benefits while at the same time disrupting the human-environment nexus. Through the discussion of the socio-economic implications; coping mechanisms and perception of development, it has been shown that to some degree, households have experienced landlessness expressed through lack of enough grazing grounds; joblessness expressed through limited casual jobs, marginalisation, concerns over food security following discontinuation of agricultural activities by some members; loss of access to common property and social disarticulation. In a country where policy exists and its enforcement is a priority, households are more likely to benefit more from mining-induced developments. As Hawkins (2012) notes, policy transfer is not always helpful because micro level dynamics need to be reflected in the policy guidelines. Investing companies come with economic interests that guide their investments as well as their policy directions. These are not done in the interest of the people, but rather in the interest of the Company. In some countries, particularly developed ones, governments intervene to shape the level of investments and how it will be done, and protect the socio-economic and environmental interests of the local people (Terminski 2012). This is not the case in developing countries.

Overall, sustainable development cannot be said to have been attained with regard to access to all forms of the livelihood assets by all the respondents and the community in general. Families had different access to different livelihood outcomes and subsequently, the livelihood assets and or capitals. Despite all respondents pursuing crop and cereal and livestock farming as the main livelihood strategies and all given the same size of land, they reported to have had different experiences with resettlement due to the varying levels of literacy and educational attainment and age groups. Development has been experienced differently by different respondents and or families and with regard to access to certain livelihood assets as described in the table above.

Through the detailed discussions in this chapter, the three objectives of this research have been achieved. The data and the discussion have brought to the fore the lived experiences of displaced communities at the level of socio-economic implications of the Nickel Mine in Mazabuka. A detailed analysis and discussion of coping mechanisms have also been done through the optics of the sustainable livelihood framework. Finally, a careful and balanced reflection on 'development' from the Nickel Mine has also been done with reference to sustainable development as has been defined Kates et al. (2005).

5.5 Summary

As detailed in the table of pre and post resettlement scenarios, the Munali Nickel Mine case presents a 'mixed bag' of outcomes at the level of household and community assets. Given the long time the mine took to build the school and clinic (since 2006), access to facilities that help maintain and build human capital could be said to have been compromised. The school and clinics were only reinstated in 2015. These were only delayed but not denied. The resettlement at Munali Nickel Mine was both physical and economic. According to the International Council on Mining and Metals (ICCM) (2017 p.29), 'effective identification, design, planning and construction of alternative villages, housing and related facilities in order to mitigate effectively for physical losses.' It is hard to tell to what extent the resettlement planning took into account these factors, however it could be said that there has been a push to ensure that the Company put in place related facilities to mitigate the physical losses. At the level of natural capital, floods were reported to have impacted the level of benefits that communities could derive from land. This was exacerbated by the fact that the communities were resettled on soils with a poor fertility status. During the research, it was not clear if the Company had prior information about the biophysical properties of the site where households would later be resettled. It could also not be established if households knew beforehand where they would be resettled. However, it could be suggested that since there was lack of transparency, it is possible that there was no full disclosure of the resettlement site, or if there was, households may never have known that the soils had a poor fertility status and that the site got inundated. From the portfolio of household and community assets, improved physical capital was generally appreciated as a positive lived experience of the resettled households. Houses, water and sanitation were provided.

Building on the afore-going, the other unique characteristics of the researched case can be summarised in the engagements between the mining Company and the affected households. First, the researched case has shown that grassroots organisations that involve affected communities and local authorities can play a role in assuaging the gravity of socio-economic negative impacts on them. The creation of the Mugoto Foundation Trust in November 2013 has been instrumental in accelerating the completion of community development programmes and the relocation of affected households, as agreed under the Resettlement Action Plan ("RAP"). The Foundation is run a Board of Trustees comprising one representative from the District Commissioner, one representative from the Chief, two representatives from the Munali Mine, two representatives from the Mugoto Liaison Committee and one representative from the town clerk. Figure 13 below shows the sign post, indicating how formalised the Foundation is.

Figure 13 Mapping of the study community

Second, this research has reported that there are frequent closures of the mine that disrupt operations of the mine. Lack of job opportunities could partly be attributed to this. Despite the disruptions that might affect the profit margins on the part of the mine, this case found that the Mine endeavoured to keep the level of socio-economic disturbance to the minimum. This was demonstrated in the house designs and settlement layout patterns which have enhanced and strengthened nuclear family networks and interconnectedness through reproduction of the settlement patterns from old site. All members of the family (Nuclear and or extended) live together. At this level, it could be said that there was due consideration for the family ties that are very important in rural communities. In other words, Munali Nickel Mine represents a case that goes beyond fixed assets to consider important social factors. From other cases reviewed, no data indicated this level of engagement between investors or developers and affected communities. It was not however, within the scope of this research to explore what accounted for these processes that yielded the uniqueness of these outcomes at Munali Nickel Mine.

Third, putting up houses that affected communities unequivocally appreciated and agreed are better than where they used to live, ensuring that affected communities have 100 percent sustained access to clean drinking water and sanitation, and affected communities have security of tenure of their land suggest that the mining Company had taken the welfare of communities seriously. The Munali Nickel Mine in this respect presents a contrasting set of lived experiences to those in the Gold mines in Ghana (Hilson, Yakovleva, and Banchirigah 2007), the Kariba Dam construction project (Colson, 1971), mining in Tete in Mozambique (Lillywhite et al., 2015), the displacement of communities from farm blocks in Central Zambia[2], and mining in Limpopo in South Africa (Mtero 2017).

These three levels of engagement between the mining Company and the affected communities is understood and appreciated within the existing policy vacuum in Zambia to legally oblige investing companies to compensate displaced communities. Nickel happened to be under good productive soils that communities used for crop production and animal grazing. They have been resettled to poorer soils, an action that led to communities being foreignised, marginalised and disarticulated. Comparatively, looking at the three levels of engagements between the Company and the affected households, it could be suggested that the Munali Nickel Mine is not the worst case of MIDR. It presents a case of 'you can't have it all; what you lose on the swings you gain on the roundabouts'

CHAPTER SIX

[2] https://www.hrw.org/news/2017/10/25/zambia-commercial-farms-displace-rural-communities

6.0 CONCLUSION AND RECOMMENDATIONS

6.1 Conclusion

As stated in Chapter one, the purpose of this study was to contribute knowledge on the phenomenon of mining-induced displacements and resettlements in the Zambian context, by exploring the lived experiences of resettled families in one specific case study. Specifically, the study set out to explore the socio-economic implications; understand the coping mechanisms of those resettled; and to give a critical reflection on the meaning of development that has come with the establishment of this particular Nickel mine.

The study was guided by the following three research questions:

i) Did loss of access manifest in the studied case, and if so, how? What are the psycho-socio-economic implications of the Munali Nickel mining-induced displacement and resettlement?
ii) What characterizes the livelihoods of resettled families following the establishment of the Munali Nickel Mine? Which assets were positively or negatively affected by resettlement and compensation?
iii) What are the coping mechanisms of the displaced and resettled communities following the establishment of the Munali Nickel Mine?

From the results that have been obtained, with regards to the research question 1, there was 'delay and not necessarily denial.' Loss of access needs to be nuanced. Resettling communities to a new area necessarily leads to loss of access to resources and environment that they are used to for their socio-economic and cultural well-being. Interviewed households reported loss of their strategic area for marketing their produce, grazing land and enough farmland, and churches that are part of the fabric of their social ties to one another. Access to education and health facilities was not achieved until nearly 10 years later, partially attributed to frequent closures of the mine that prevented the mine from honouring its promises in time. The uncertainty in the operations of the mine, loss of access to livelihood strategic resources was unsettling and created a sense of anxiety among resettled community members.

With regards to question 2, impacts on livelihoods can be described as a 'mixed bag'. While households reported facilitated access to schools and clinics as physical assets, the resettled community was not wholly part of the mining operation to the level that ensured human capacity development. The resettled community is an agricultural community, and not a mining community. By default, there was a mismatch, and therefore, for a highly technological undertaking as mining, resettled households could not benefit from any knowledge transfer. In addition, the literacy levels were too low for them to favourably compete with job seekers from other parts of the country. Access to natural capital was curtailed. Interviewed households reported lack of enough farmland and grazing land; forcing them to wake up early to graze their animals. As regards social capital, the establishment of the foundation created their sense of representation and voice; helping to hold the company accountable in fulfilling its

obligations and promises. On the other hand, the delays in building churches which play a vital role in solidifying social contacts and interactions were a compromise on their social capital.

With regards to question 3, with a lean portfolio of livelihood assets, the coping mechanisms were found to be differential. The findings revealed that despite the cultural homogeneity of the sampled families, lived experiences after resettlement were different based on socio-economic situation of households. This was determined by who the head of the household was, literacy levels and family labour availability, because agriculture is the main livelihood activity. Coping with the experiences of 'delay but not denial of access' and a 'mixed bag' of changes to different asset classes was differential based on age, sex and household composition that determined the level of available labour in the household. This also influenced the level of straddling in each household. From the demographic data of interviewees, younger families cope comparatively better than others, especially older ones. Besides straddling (for example, charcoal burning, casual work, making braziers, steel pots and basins), coping mechanisms include waking up early to compensate for increased travel time and increased distance; and buying in bulk to avoid frequent travels; family dependency for remittances; and sale of livestock.

From the reviewed literature, DIDRs are a common phenomenon across the globe. Nonetheless, exact figures on the scale and scope of the phenomenon are non-existent. Despite this paucity of data, through a review of literature on the common characteristics of DIDRs, Cerena (1995) has shown that landlessness, joblessness, homelessness, marginalisation, increased morbidity, food insecurity, loss of access to common property and social disarticulation are common features.

Mining-induced displacement and resettlement is a development-induced development with different socio-economic and environmental impacts in different countries because of different standards of rights-protection institutions and the responsiveness of business to public opinion (Terminski 2012). The researched case in Zambia has resonances with other studies on development-induced displacements and resettlements as summarised by (Cernea, 1995). Particularly, displacement and resettlement impacted socio-economic means of production of the households. This also disturbed their cultural and traditional ways of interacting with the environment through grazing and other means (marginalization and social disarticulation).

Cognisant of the negative impacts of DIDRs at global, regional and national levels, particularly before 1990, the period between 1990 and 2010 saw the development and refinement of policy instruments to improve the manner in which development programs would be implemented. Manuals and guidebooks to guide good practice were developed, spearheaded by the World Bank and regional Development Banks. In addition to the efforts of multilateral development banks, the Equator Principles which applied to the private sector were also established to foster good practice. The post 2010 period has been about stocking-taking the domestication and implementation of developed principles. Indications are that resettlements are still not done well; livelihood restoration is weakly considered in DIDRs; and livelihood restoration, social implications of DIDRs are mostly only peripherally considered.

Notwithstanding the findings of this research that confirm the generally known impacts of DIDR, this case demonstrates unique characteristics worthy noting. The researched case presents a 'mixed bag' of outcomes. In reported cases of mining induced displacements in other places that involve physical and economic displacements, people's abilities to access resources are compromised. Their portfolio of assets are disrupted. There is a deep sense of anomie accompanied by feeling of marginalisation and disarticulation. As has been reported, interviewed households experienced these. However, households also reported on easy access to services, better housing and access to clean water and sanitation and security of tenure of the land. One of the findings of this research is the establishment of a Foundation that holds the Company accountable to its promises, demonstrating the Company's willingness to build good rapports with the community. In addition, the Munali case presents a situation in that there have been prolonged closures. It is possible that the closures partly explain the level of response of the Company in fulfilling its promises.

There is consistence in what has been revealed and the key experiences of displaced people in the findings of this study. For instance, the most pressing of the main themes and experiences from this study are lack of transparency and loss of main sources of livelihood both of which have been identified as lessons learned and or forms of disadvantage resettled people face in most studies. The main reason for this in most reviewed literature seems to suggest, that sustainable livelihood restoration is a weak point and focus has been, rather inappropriately, on delivery of fixed asset compensation at replacement values.

In all the reviewed literature, there is no project or case study which has shown adherence to the international policy provision's Livelihood Restoration Plan objective which is to improve or restore livelihoods and standards of living; avoid the risk of project-induced impoverishment. (www.ifc.org). The study has shown that much as the Nickel Mine has successfully replaced the land acquired from all the families, built them fairly decent houses and provided them with adequate land and accessible clean water and provided general support under the mine's Farmer Support Programme, there is no evidence either from meetings held with mine management or from the respondents' experiences that the affected families have been equipped and assisted with the necessary livelihood skills, resources and skilled supervision to start and run sustainable small-scale enterprise of their choice. This seem to be the case with all the mine and non-mine induced resettlement projects reviewed.

Lack of transparency has been a concern in most case studies reviewed as is in the case of this study. Further, from all the recorded both positive and negative themes, which are consistent with findings in most of the reviewed literature, I have learnt that it is a reflection of what the respondents have gone through and experienced in the resettled site and currently constitute what it means to be resettled. To the 11 respondents, the stories shared and recorded constitute the lived experience of resettlement.

Lastly, from all the literature reviewed and as stated in the problem statement of this thesis, there is lack of adequate qualitative and perceptual baseline data regarding the lived experiences of the resettled families. Apart from mixed method research done in Mozambique,

which looked at the voices and experiences of the mine displaced families, there are few studies that have explored the lived experiences of resettled families. From the reviewed literature, there are also few studies following in the Scudder-Colson tradition, which examined outcomes of resettlement projects. Process and outcome based research are closer to a study focusing on lived experiences in that they determine the end result of resettlement.

In the absence of a much more informed background on the Nickel mine case from the RAP documents (which could not be accessed), where I could establish and validate most of what respondents reported that a lot of promises were made, expectations raised during the pre-resettlement phase, and then commitments such as restoration of schools, churches and clinics completely ignored for 10 years, I would generally conclude that this study is another case of how not to plan and implement a resettlement project if we are to attain sustainable development among the resettled families and community at large. This was generally in contrast to what the International Council on Mining and Metals (2015) advised to over-deliver rather than over promise community development project. This conclusion is based on the significance of all the recorded lived experiences especially the negative experiences.

6.2 Suggestions for future research

From the findings of most literature reviewed, and the lived experiences of the 11 study respondents it is clear that there still is a need to do resettlement right.

Based on the findings of this research work, the following areas are recommended to advance research in mining-induced displacements and resettlements. The suggestions are divided into specific (that follow from results from this study) and general (that can build on the findings of this study because of their relevance):

6.2.1 Specific suggestions for future research

1. Given that mining projects themselves may have hiccups that can derail a company's intent to carry out the planned resettlement process and compensation, research is suggested to understand mechanisms that could be deployed to insure wellbeing of displaced persons whose livelihoods are already precarious, in the event that the mining project goes into care and maintenance or is sold to another owner or simply fails completely;
2. Given the differential ability of resettled families to cope with the implications of development induced resettlements, research is suggested to investigate the feasibility of resettlement guidelines that are responsive and sensitive to demographics of affected people (taking into determinants of coping mechanisms of resettled groups) and specific social and gender needs of the affected people; and
3. The establishment of a foundation was a demonstration of affected people's involvement in obliging the company to fulfil its promises. Further research is suggested to understand factors that support the exercise of power from below by resettled people, who are often seen as powerless and disfranchised. It is also

recommended that the effectiveness of such committees with regard to their capacity to compel the mining firms to comply with commitments made is taken into consideration.

6.2.2 General suggestions for future research

1. As has been noted, in more developed countries with functional policy and institutional frameworks, local people's rights are better protected and the socio-economic and environmental impacts of development-induced displacements and resettlements are milder compared to developing countries. Based on the findings of this research, further research is encouraged in the direction to understand better the role of policies and institutions in developing economies in shaping the manner in which development-induced displacements and resettlements are done;
2. Given the Zambian case where corporate social responsibility is voluntary, 'name and shame' is non-existent, and Company responsiveness to public opinion is at the periphery of doing business, further research is recommended to assess Company responsiveness to the introduction of corporate social responsibility as policy obligation;
3. Mining is an expensive operation, but also a lucrative business undertaking. It is primarily motivated by economic reasons rather than social ones. Looking at the socio-economic and environmental costs of mining, further research is recommended to econometrically understand to what extent 'mining-induced development is not actually mining-induced impoverishment' both in the short and long terms. This econometric analysis can help to answer whether mining development is for the development of the Company or the development of the local people; and
4. Mining operations involve global value chains. Research is recommended to better understand value chain in the mining industry and this shapes micro-level impacts and outcomes. This can help to improve research methods and approaches, but also shed light on nodes in the value chain that necessitate policy enforcement or reforms.

In addition to the proposed areas of further research above, case studies to enrich meta-analyses of lived experiences of those resettled by the mining industry are still paltry. More case studies are needed to inform about micro-level dynamics that shape development impacts and outcomes, but also how communities cope or respond in situations of policy vacuum to support them. A combination of social, economic and environmental research methods will advance our understanding of lived experiences of the resettled families within the extractive industry.

6.3 Recommendations

The Zambian government needs to step up its role in development programs that displace and resettle communities. The Department of Resettlement at the Office of the Vice President is more reactive than preventive. While prevention is better than cure, the Department of Resettlement is not even able to cure or effectively mitigate the negative lived experiences of displaced and resettled communities. To reduce the resource burden on the Department, it is

highly recommended that the government of Zambia put in place enforceable policies to guide responsible investments that do not jeopardize people's livelihoods and harm the environment. Corporate social responsibility needs to be a legal obligation rather than a voluntary exercise on the part of the investing Company.

Given the resources that Zambia is endowed with, the government needs to ensure that the policy and institutional frameworks respond to the proliferation of land based investments in the country. Of great concern is the capacity of the Zambia Environmental Management Agency that is under-staffed and needs capacity development. The Agency needs to be capacitated with a socio-economic unit and a dedicated social safeguard person competent enough to not only review the RAPs and check for technical soundness and adequacy in light of the policy requirement but also to monitor and audit implementation of these RAPs.

Given the time taken to reinstate the impacted and lost community assets such as schools, clinics and churches among others, it is recommended that companies allocate a specific budget for compensation and specifically reinstatement of lost assets to minimize negative experiences as has been the case with the Munali Nickel Mine. The budget for reinstatement of community assets should be set aside before commencement of actual mining so that in case of unforeseen circumstances as has been the case with the closure of Munali Mine due to international metal price fluctuations, the resettled community does not suffer. Because reinstatement of assets was not properly planned for and a budget set aside before commencement of mining, the frequent mine closures affected not only the operations of the Company but also the timely reinstatement and completion of a school clinic and churches which took close to a decade to complete. Churches are yet to be constructed.

Further, it is recommended that the farmer support programme which the mine is implementing be strengthened to include intensive programmes on conservation farming and other sustainable farming techniques. The department of agriculture, conservation farming unit should be brought in to collaborate with the mine (if not yet done) so that a lasting solution is found to address the problem of poor quality of soils. Full reinstatement of lost sources of livelihood is done for the families so as to cushion the negative experiences of resettlement. Being a pastoral community, there is urgent need to extend and expand the grazing land for animals as it is currently a major source of concern for the resettled families.

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