Economic sustainability of small mining communities: a case study of Kathu

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Declaration

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Abstract

With the global fluctuations in commodity prices and increasing costs, most mines go through periods of downscale and eventually close down. The closures lead to various negative socioeconomic impacts such as higher unemployment, declining growth and increased poverty levels encountered by affected mining communities. This study explores the roles that mining companies and other key stakeholders should play in the development of local economies in order to bring about economic sustainability. The South African legislative and policy framework are scrutinised for their effectiveness in promoting economic sustainability. In addition, key factors limiting the effective implementation of developmental strategies are also identified. Local economic development is often selected as the desired developmental strategy with the aim to create jobs, improve living standards and overall contribute to the economic sustainability of the mining locality. Kathu town, located in the Northern Cape province in South Africa, was used as a case study. Various outlooks, including legal, economic, and social perspectives on the challenges the town face were obtained through the use of interviews, document analysis and memos. Using constant comparative analysis to analyse the data obtained, themes such as a weak community involvement, lack in trust, poor collaboration, poor municipal capacity and possible legislation and policy flaws emerged. The study showed efforts towards sustainable local economic development. However, these efforts might not be sufficient for economic sustainability post mine-closure. Themes in support of this finding include: first, legislation and policy frameworks are promoting growth and not planning for decline to ensure an economically sustainable town. Second, the level of Kathu town's dependency on the mining companies remain high and the local government is not fulfilling its roles and responsibilities optimally due to the lack of capacity and funding. Third, community members are not participating or contributing to development, however, the proposal of collaborative planning might address the issue. Last, fluctuations in commodity prices and incapacity will hamper the prospects of future development. Despite the challenges hindering the economic development of Kathu town, the mining company and local municipalities realise and acknowledge the shortcomings in their efforts towards promoting economic sustainability. The study makes recommendations about improving the legislative framework and planning arrangements, and hopes to contribute to the knowledge base from which all key stakeholders will learn.

<u>Key terms:</u> Economic sustainability, local economic development, small town, mining, mine closures, socio-economic effects, sustainability, planning for closure, development policies, growth theories.

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I dedicate this research study to my mom, Coralie, in heaven who has taught me to persevere and never give up.

List of acronyms and abbreviations

CDS Centre for Development Support

DEAT Department of Environmental Affairs and Tourism

DMR Department of Mineral Resources

DPLG Department: Provincial and Local Government

ERLN Economies of Region Learning Network

GDP Gross Domestic Product

GLM Gamagara Local Municipality

IDP Integrated Development Plan

JTGDM John Taolo Gaetsewe District Municipality

KIO Kumba Iron Ore

LED Local Economic Development

MPRDA Mineral Petroleum Resources Development Act (No.28 of 2002)

MSA Municipal Systems Act (No.32 of 2000)

NDP National Development Plan 2030

NFLED National Framework for Local Economic Development

NFSD National Framework for Sustainable Development

NPC National Planning Commission

OECD Organisation for Economic Co-operation and Development

RSA Republic of South Africa

SEAT Socio-Economic Assessment Toolbox

SLP Social and Labour Plan StatsSA Statistics South Africa

UN United Nations

UNDP United Nations Development Programme

Definitions of key concepts

The key concepts defined below are referred to throughout the study. The purpose of outlining these definitions is to ensure that the same interpretations and understanding articulated in this research study is shared with the readers.

Constitution - The Constitution of the Republic of South Africa is the highest supreme law of the country that contains fundamental principles outlining the general philosophy, objectives and powers of national, provincial and local government and provides the basis for all the subsequent acts and policies to follow (Republic of South Africa, 1996).

Economic sustainability - The term 'economic sustainability' is rarely found in research studies and there is a lack of its proper definition. In this research study, economic sustainability refers to economic development that minimises the negative impact on the other pillars of sustainability i.e. environmental and social (Gibson, 2006; Pezzey and Toman, 2002; Purvis, Mao and Robinson, 2018). It is noteworthy that economic sustainability does not exclusively equate to economic growth in this research study.

Integrated Development Plan (IDP) -The IDP is a tool used to assist municipalities in achieving their developmental mandates. An IDP is a five-year plan with the aim to improve the quality of life for all people living in the designated municipal area (Oranje, Harrison, Van Huyssteen and Meyer, 2000).

Mineral Petroleum Resources Development Act (MPRDA) - The Act came into effect on May 1, 2004 and governs the acquisition, use and disposal of mineral rights. The MPRDA was put in place as a measure to provide fair access to the country's mineral and petroleum resources and their development in a sustainable manner (Republic of South Africa, 2002).

Mining Charter - The Mining Charter was developed, following the Minerals and Petroleum Resources Development Act, as a tool to drive transformation in the industry. The Mining Charter refers to the broad-based black socio-economic empowerment Charter for the South African Mining and Minerals Industry. The Charter encourages transformation that includes ensuring mine workers and communities have decent living conditions and mines' contribution to development in the areas where they operate (Deloitte, 2019).

Local Economic Development (LED) - The World Bank defines LED as "a process by which public, business and non-governmental sector partners work collectively to create better conditions for economic growth and employment generation" (World Bank, 2003:1). In addition, Garidzirai and Meyer (2019) assert that LED not only improves economic growth and employment but also alleviates poverty.

Social and Labour Plan (SLP) - The Social and Labour Plan requires applicants for mining and production rights to develop and implement a comprehensive Human Resources Development Programmes, Mine Community Development Plan, Housing and Living Conditions Plan, Employment Equity Plan, and Processes to save jobs and manage downscaling and/or closure. The aim of the plan is to promote employment and advancement of the social and economic welfare of all South Africans whilst ensuring economic growth and socio-economic development (DMR, 2010).

Sustainable Development - The United Nations brought forward the concept of sustainable development and defines it as the "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (World Commission on Environment and Development, 1987:16).

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CHAPTER 1. INTRODUCTION

1.1 Background

Mining projects have a lifespan. The average lifespan of an iron ore mine, for instance, is on average between 6 and 24 years (Anglo American, 2013) and thereafter mineral depletion sets in. Economic factors like economic recession or substantial decrease in commodity prices (Burger, Marais and Van Rooyen, 2018), and geological factors (Ackermann, Botha and Van der Waldt, 2018a; Neil, Tykkyläinen and Bradbury, 1992) can also render mineral extraction unprofitable. However, improved technology can extend a mining project's lifespan. The South African mining sector has recently been experiencing challenges due to fluctuations in global resource markets, high operational costs, wage strikes and falling sector productivity, and these factors have led to a drop in mining contribution to the GDP from 21% in 1980 (StatsSA, 2017) to approximately 8.1% in 2019 (Mineral Council South Africa, 2020). Job losses associated with mine closures pose economic sustainability challenges to the mining communities. In South Africa, devastating effects of mine closures are reported by (Ackermann, Botha and Van der Waldt, 2018b) for Grootvlei and Orkney mines; Marais (2013a) for Free State Gold Fields; Nel, Hill, Aitchison and Buthelezi (2003) for mines in KwaZulu-Natal, and by Lawyers for Human Rights (2017) for Blyvooruitzicht mine.

Mining companies are more cognisant of the socio-economic challenges that result due to mine closures (World Bank, 2002). The South African government amended legislation in 2013 (the MPRDA Act No. 28 of 2002) to reduce the environmental and socio-economic impacts of mine closures through the Social and Labour Plan (SLP). The Municipal Systems Act No. 32 of 2000 requires local municipalities to produce Integrated Development Plans (IDPs), an approach that involves the municipality and relevant stakeholders in finding the best framework/plan for local economic development. Frameworks and plans such as the National Framework for Local Economic Development (NFLED), National Framework for Sustainable Development (NFSD) and the National Development Plan (NDP) can guide local municipalities to create local development plans. The promotion of LED initiatives aims to build sustainable local economies (Rogerson, 2010).

1.2 Motivation of the study and rationale for selection of Kathu town as the case study

The current study is necessitated by the closing down of mines such as Blyvooruitzicht gold mine in the Gauteng Province (shutting down in 2013) and Orkney mine in the North West Province (shutting down in 2010) that resulted in many people being rendered jobless. The populations of these towns were severely affected that they had to rely on labour unions and non-governmental organisations for food, clothes and other basic needs as relief. By 2018, the former employees of the mines had not received any compensation (Steyn, 2018) and continued to fight for survival. Basic services such as sanitation and water that used to be paid for by the mine were essentially cut off after the liquidation of the mine. By late 2019, residents did not have access to these basic services (Malope, 2019). These incidents prompted the researcher to question why small mining towns are not economically sustainable after mine closure despite legislation on sustainable LED that requires mining companies and local municipalities to plan for and mitigate the socio-economic problems that come with mine downscaling and closure.

Research on small mining towns in developing countries is very limited (Littlewood, 2014, Burger et al., 2018). De Mesquita, Xavier, Klein and Matos (2017) report that despite the increased publications related to mining and sustainability, the main focus is still largely on environmental studies. Similarly, Burger et al., (2018:6) state that "the environmental and technical issues have received attention, but the socio-economic effects of downscaling or closure have been decidedly under-researched". This research study attempts to respond to the gap in literature using a small mining town in South Africa with an increased likelihood of undergoing mine downscaling or closure, as a case study.

Kathu town, located in the Northern Cape province, is considered a good fit as it is a small mining dependent town with a population of 11 510 in 2011 (StatsSA, 2011). The town depends on Sishen mine (owned by Kumba Iron Ore), which is an opencast iron ore mining operation that is a primary provider of employment to an estimated 85% of the local community (Anglo American, 2016a). A recent drop in commodity prices had a severe impact on the local community of Kathu town. Sishen mine decreased the number of employees (permanent and contractors) from 8 277

in 2011 to 5 466 in 2016 (Anglo American, 2016a) and a significant number of businesses closed down due to their inability to sustain the losses (Steyn, 2016).

Forecasted iron ore prices depict a grim future for iron ore based mining operations (Chia, 2018). The pessimistic outlook leaves Kathu town with a higher probability of experiencing mine downscaling and closure in the near future, and hence its choice as a case study, both for policy and knowledge advancement. In addition, Sishen mine reported the concern they had with the low absorption rate of employees and contractors in other non-mining activities given that Sishen mine's closure is less than 15 years away (Anglo American, 2018a).

1.3 Problem statement

Mine closures and downscaling are inevitable. Small town communities that are primarily reliant on mining companies are more likely to experience high levels of unemployment and poverty post mine closure. Without proper planning, good mine-municipal relations, stakeholder involvement, and government support, mine closure can have a huge negative impact on the economic sustainability of mining towns. Research studies on economic sustainability of these small towns are thus relevant for proper mine closure preparedness.

1.4 Aim

The study aims to explore and provide recommendations on the influence of roles and responsibilities of stakeholders, stakeholders relationships, and legislation and policy framework on the economic sustainability of small mining towns after the closure of a mine.

1.5 Objectives

The above aim informs the objectives guiding this research, which are as follows:

- To determine whether legislation and the policy framework around small mining towns supports economic sustainability of small mining towns.
- ii. To assess the roles and responsibilities of stakeholders regarding the planning for the economic sustainability of Kathu town.

- iii. To investigate the relationship between mining companies, local municipality, business owners and community members in Kathu town in light of economic sustainability.
- iv. To highlight key factors that may influence the implementation of LED strategies in Kathu town as factors promoting economic sustainability.

1.6 Outline of chapters

Chapter one outlines the background, the motivation and rationale for conducting this research study. It further defines the problem statement and sets the aims and objectives of the research.

Chapter two presents a review on literature related to the study. It starts with a review focus on the growth and development theories and in particular small town growth and development followed by the evolution of LED and sustainable development. Legislation and policy framework designed to promote economic sustainability is also reviewed. The chapter also reviews international research studies and their discussion on the advantages and disadvantages of the application of sustainable LED in general and in a mining community context. The chapter concludes with an outline of local research studies that have reported on economic sustainability, mine closure, socio-economic development and LED.

Chapter three introduces the case study, Kathu town. It considers the demographics, economic and socio-economic indicators of Kathu town and the Gamagara Local Municipality (GLM). A brief examination of the prominent mining company, Sishen mine, concludes the chapter.

Chapter four describes the research design, approach, primary and secondary data sources and analysis methods used in this study. It also explains the study's sampling techniques, reliability and validity.

Chapter five present the results and engages in an in-depth discussion on these results.

Chapter six concludes the study. It also focuses on the contribution of the study and future research possibilities.

CHAPTER 2. LITERATURE REVIEW

2.1 Introduction

The chapter begins with a focus on the development theories that are more prominent in mining town research studies and those aimed at developing small towns. The chapter then evaluates Local Economic Development (LED) as a tool to achieve economic sustainability and the issues enhancing and impeding its successful implementation. In addition, the chapter reviews empirical literature on international mine closures and downscaling and concludes with a brief consideration of the legislative and policy framework related to mining in South Africa.

2.2 Staple theory

The staple theory is designed to explain the growth and economic development of resource rich economies (Altman, 2003). To understand the staple theory, one must consider the economic base theory that led to its rise. The economic base theory proposes that a "community's economic growth is directly related to the demand for its goods, services, and products from areas outside its local economic boundaries" (Blakely and Leigh, 2017:113). Whereas the economic base theory is relevant in the short run due to changing export sectors and economic structures, the staple theory postulates that economic development and growth are based on the export of commodities in the long run (Burger *et al.*, 2018). Therefore, the "staple theory is very much a supply-side theory of economic development whereby a country's capacity to grow is determined by the ability of its people to competitively produce staple products for markets over which they have little control" (Altman, 2003:233).

The production of staple products, as a strategy to generate higher GDP per capita levels, promotes possible linkages - forward, backward and fiscal. Businesses which supply to the staple sector are called backward linkages, and businesses that use the staple sector's goods as inputs are called forward linkages (UNDP and UN Environment, 2018). Fiscal linkages relate to the income that the government receives, such as royalties, taxes and other payments, because of staple production. These fiscal linkages can be invested in long-term development such as social amneties, infrastructure, financial savings and economic diversification, which

can influence the course of the staple-producing country's development. Despite the option of having linkages, some economies do not utilise the linkages for a possible higher-level per capita output and the possibility arise where the economy evolves into a relatively low per capita income economy (Altman, 2003). The staple theory is critiqued for its reliance on the external demand for goods, services and products, which brings about instability in growth and development (Blakely and Leigh, 2017).

2.3 Dutch disease and resource curse theories

Atkinson and Hamilton (2003) link their work to the Dutch disease theory and hold that the determinants of economic growth and measurement of sustainability demonstrate an inverse relationship between natural resource abundance and economic growth and development. The reasoning behind this finding is explained through a country that focuses all of its production on one sector, such as mining, and neglects investments in other sectors, such as agriculture. As a result, a high level of dependency is placed on the price of the commodity. The booming sector will also have higher wages and attract more workers, while at the same time potential entrepreneurs choose to work instead of taking a risk. The Dutch disease theory suggests that when the booming sector fails, due to global factors, the economy collapses. The Netherlands' manufacturing sector in the 1960s is a typical example and hence the name Dutch disease. The export of oil resulted in currency appreciation but in turn weakened the international competiveness of other sectors.

The resource curse occurs when economic activity, such as mining, results in several negative consequences for local economies (Atkinson, 2005). Cust and Poelhekke (2015) note that countries can experience a resource curse due to their inability to convert their depleting resource into other productive assets because of policy failures. Mehlum, Moene and Torvik (2006) associate the resource curse with weak institutions. Cust and Poelhekke (2015) point out that resource rich countries constitute growth losers and growth winners such that weak institutions can be a strong argument for resource curse. It is clear that the Dutch disease theory is based on the fundamental relationship that an increase in economic development of a specific sector, be it natural resources, will result in a decline in other sectors such as manufacturing or

agriculture. A resource curse is failure by a resource abundant country to realise growth as is expected. Both theories are relevant when seeking to understand the economic sustainability of small mining towns.

2.4 Internal combustion theory

There are also other theories, such as the internal combustion theory, which directly consider development in small towns/cities. The internal combustion theory refers to a scenario in which entrepreneurs essentially start their own businesses that provide goods and services to the export or local industries, provided the government maintains the infrastructure and services (Daniels, 1989). The theory emphasises the retension, expansion and creation of businesses. The role of the government is important in the sense that they need to provide entrepreneurs with incentives to invest in the local area. Assistance can be in the form of subsidies, lower payable taxes and loans. The growth of the local area would also depend on a growing population i.e. growth machine hypothesis (Daniels, 1989; Atkinson, 2008). In the South African context, small towns usually have a growing population and a lower consumer income as a result of high unemployment, which discourages entrepreneurial drive to invest locally (Atkinson, 2008). In addition, Neil *et al.*, (1992) argue that mining dependent towns lack entrepreneurial tradition because of factors such as a high dependency on mining companies for jobs, training and skills development, and financial support.

2.5 Sustainable local economic development

The theories discussed above provide insight into economic development theories in support of development or in some cases the lack thereof. Local economic development (LED), which had its origin in Western Europe and the global North, was introduced in the 1960s as a developmental strategy for regional and local development (World Bank, 2002). Historically, planning at a local level was very technical, focussed strongly on land use and infrastructure plans, and largely unconcerned with the social and economic dimensions of development (Abrahams, 2003). Traditional top-down development approaches aimed at achieving economic growth and development included infrastructure investments, place marketing and supply-led policies such as foreign direct investment (Malizia and Feser, 1999; Abrahams, 2003; Rogerson

and Rogerson, 2010). There exists, noticeable key differences between traditional top-down development approaches and the strategically planned (modern) LED. Firstly, LED takes a territorial approach and focuses on developing a locality; secondly, LED is a bottom-up development strategy where the local institutions identify areas of concern and cooperate with local stakeholders to formulate development strategies; and lastly, LED tends to steer away from fostering economic activity through large industrial projects and infrastructural investments (Tijmstra and Rodriguez-Pose,2005). Blakely and Leigh (2017) argue that mind-sets about LED theories have to adapt to the ever-changing economy we find ourselves in. Economic opportunities are no longer based on natural resource exploitation but rather on the quality of human resources. The modern LED approach was recognised for combating social and economic problems in the global North during the last four decades (Nel, 2001; Rogerson and Rogerson, 2010; Garidzirai and Meyer, 2019). Blakely and Leigh (2017) acknowledge that development should be of a sustainable nature. Tijmstra and Rodriguez-Pose (2005) emphasise the ineffectiveness of the traditional top-down developmental approach towards sustainability.

Globally, sustainability incorporates three pillars and these are the social, economic and environmental. Sustainability can be achieved when the three pillars, which are i) protecting the environment, ii) promoting equity and iii) preserving economic growth and development, have been addressed simultaneously without any trade-offs (Gibson, 2006; Pezzey and Toman, 2002; Purvis, Mao and Robinson, 2018). South Africa adopted a systems approach to sustainability where ecological, socio-political and economic sectors are integrated and mutually compatible to eradicate poverty and inequalities over time (DEAT, 2008). The pillars are considered mutually inclusive and therefore no trade-off should exist between what is good for the environment and what is good for the economy (Purvis *et al.*, 2018). The depleting resources, environmental damage, and the increasing unemployment, inequality and poverty levels are evidential of a trade-off despite having economic growth. The debate on whether trade-offs exist or not (see Purvis *et al.*, 2018) is out of the scope of this thesis. However, this research study acknowledges that trade-offs exist but encourages developmental approaches that will minimise the trade-offs between the three pillars. The implementation of development strategies aimed at sustainable LED is a perplexing task as different approaches are found in literature while the

concept of sustainable development is an ethically grounded concept that is not a result of scientific research (Heinrichs, Wiek, Martens and Michelsen, 2016).

Nel and Rogerson (2004) suggest a modern approach to LED would be where local communities become part of the development process and plan and manage their own future. They identify the "core focus of LED to be on partnerships, economic growth, job creation and the improvement of quality life and places within the context of communities or at local level" (Nel and Rogerson, 2005:4). Garidzirai and Meyer (2019) assert that LED also alleviates poverty. The modern economy recognises the need for a highly skilled labour force, thus encouraging local communities to invest in higher education or research-related institutions that can enrich the labour force. Developmental theories need to be improved to include or improve collaboration, skills development and stakeholder involvement. Therefore, we should focus on LED and include actions that are sustainable. Blakely and Leigh (2017) provide us with three elements, which they propose are desired for sustainable LED. Firstly, economic development establishes a minimum standard of living for all and increases the standard over time. Secondly, economic development reduces inequality and lastly, economic development promotes and encourages sustainable resource use and production.

In summary, traditional development approaches are not suited to the changing world and thus each community needs to adopt tailor-made development strategies unique to its own needs and goals (Daniels, 1989). The key focus can no longer only be economic growth but rather sustainable development where the trade-off between the environment, social and economic pillars are minimised to achieve economic sustainability.

2.6 LED as a tool in South Africa to achieve economic sustainability

Developing countries should endeavour to promote growth within a community through pro-poor (developmental) LED strategies. Pro-poor LED focuses on human resource development, poverty alleviation, promotion of local initiatives and redistribution of resources (Abrahams, 2003). In the past, LED was understood as efforts by local governments in job creation such as place marketing. Currently, LED is encouraged through addressing economic infrastructure

constraints, enhancing skills and building partnerships (ERLN, 2016). In South Africa, LED has been suggested, through various Integrated Development Plans (IDPs), as an important tool in achieving sustainable economic development (Abrahams, 2003). Rogerson (2010:487) explains how the application of LED in a rural context has proven to be less promising and unsustainable and state that "while there are isolated examples of successful LED in small towns and rural areas, the best illustrations of success are generally found in South Africa's largest cities." Nel and Rogerson (2015) argue that pro-poor LED was over emphasised and a balance between pro-poor and pro-growth LED approaches is needed for improved LED implementation.

LED is an integrated developmental approach and there is no 'one size fits all' approach (Rogerson, 2009) as socio-economic wellbeing is also influenced by macro-economic forces, local company structures, geographical setting, social structure and the dynamics and characteristics of the resource itself (Tonts, Plummer and Lawrie, 2012:289). Rogerson and Rogerson (2010) confirm that LED becomes more effective with the encouragement and support of partnerships, collaboration between businesses and community members, facilitation of skills development and education, and support for improvements in the standard of living. The poor implementation of LED strategies, especially in small towns (Rogerson, 2010), can be a result of the local municipalities' lack of understanding between pro-poor and pro-growth LED (Abrahams, 2003; Rücker and Trah, 2007; Rogerson and Rogerson, 2010; Koma, 2012). Rücker and Trah (2007) emphasise the role of the government in the success of LED and suggest, amongst other things that, the government should disseminate information about LED to local governments and provide necessary resources for the implementation of LED. Nel and Binns (2003:176) observe that "Municipal officials expressed concern over their lack of funds, limited support and guidance from national and provincial government, together with serious personnel constraints". In addition, Nel and Binns (2003), Rogerson (2012) and Marais (2013b) are of the view that the lack of trust and government incapacity to implement LED accounts for the disappointing outcomes in respect of integrated planning. Moreover, the success of LED not only depends on trust and capacity, but also on funding, entrepreneurial drive, partnerships, relationships and stakeholder involvement (Nel and Binns, 2003; Stacey, Naude, Hermanus and Frankel, 2010; Rogerson, 2012).

2.7 Planning for economic sustainability in a South African mining community

Hilson and Murck (2000) maintain that mining and extractive industries have a profound impact on sustainable development, but add that literature fails to explain how mining companies can put sustainable development into practice. The vagueness of sustainable development and LED gave rise to a wide-range of interpretations and disagreements between key stakeholders (Hilson and Murck, 2000; Rogerson 2010; Eggert, 2012; Purvis *et al.*, 2018). Louw and Marais (2018:2) are of the opinion that the results for development have been disappointing because of the inability of mines and municipalities to work together and the poorly thought through local strategic plans. Veiga, Scoble and McAllister (2001:192) states that "a sustainable mining community is one that could realise a net benefit from the introduction of mining that lasts through closure of mine and beyond".

South Africa's mining sector is under legal pressure to not only prove its commitment to sustainable development through building sustainable communities in case of mine closure (Van Druten and Bekker, 2017), but also work towards eliminating poverty and reducing inequality (NPC, 2011). For this reason, the Mineral Petroleum Resources Development Act was established to deepen the mining companies' commitments towards LED and to start planning for mine closure from the moment the mine opens (Centre for Development Support, 2006). The requirement from mining companies to produce Social Labour Plans (SLPs) and local municipalities to produce IDPs potentially encourage stakeholders to develop more effective LED strategies. The Centre for Development Support (CDS) (2006) emphasises that mining companies consult the drafted IDPs as this will eventually lead to more robust IDPs. Furthermore, IDPs are an important tool for local municipalities in addressing developmental issues from consultation with community members and mining companies. Rogerson (2011:13381) notes that "IDPs offer a basis for leveraging cooperation and partnership between mining enterprises and local government and that the existing shortcomings in IDP processes must be thus identified and addressed as 'first level blockages' to the making of effective crosssectoral partnerships".

There are however, risks associated with the legislation and guidelines that undermine the ability of these laws and processes to mitigate all the socio-economic issues. Marais (2013b:370)

questions the effectiveness of the legislation and guidelines towards the establishment of better mine-community relationships, effective partnerships and integrated planning and realisation of LED benefits. LED policies encourage mining companies to play a vital role in development and as a result the support provided by the mining company can cause the local municipality to take less charge in community development and make communities less involved in entrepreneurial activities and development initiatives (CDS, 2006). Moreover, Marais (2013b) explains that the oversight in legislation and guidelines in a mining context have yielded mixed results. These results include; i) strong preference towards infrastructure projects, ii) lack of a shared vision amongst stakeholders for project implementation, iii) lack of trust amongst stakeholders, iv) pursuit of projects with short-term tangible results versus planning for a post-mining community, v) lack of common framework against which project applications can be assessed, vi) selection of projects without the backing of feasibility studies, vii) limited monitoring and evaluation of successful or failed projects, viii) and the question of availability of funds from mining companies towards addressing the long-term environmental impacts of mining (Marais, 2013b).

Nel et al., (2003:377) propose three LED strategies for local municipalities and these are: 1) Local municipalities attempt to find new large-scale investment by international firms, 2) local stakeholders and the municipality pursue LED strategies to address unemployment and poverty levels in the town and 3) community members' formation of spontaneous and independent LED initiatives based on self-initiated projects (impacts will only be significant in the long run). Other initiatives include tourism, transferable(portable) skills in order to retain mine employees and marketing the area as a retirement town after mine closure (CDS, 2006). The utilisation of possible economic linkages, such as the backward and fiscal linkages, can aid long-term development (UNDP and UN Environment, 2018). Nel and Rogerson (2005) suggest that LED strategies should focus on economic growth, employment and the improvement of living standards and places locally and within the context of communities. LED strategies that involve investment in infrastructure, education, health care and other variables can indeed improve the communities' socio-economic wellbeing after mines close down (Eggert, 2012).

2.8 International and local mine closure findings

2.8.1 International findings

Research studies show that mine closure can result in both an increase in unemployment and, a decline in the transfer of skills (Haney and Shkaratan, 2003; Stacey *et al.*, 2010; Tonts *et al.*, 2012; Marais, 2013b; Chapman *et al.*, 2015; Ackermann *et al.*, 2018a) and decreasing living standards. A mixture of broader global processes and locality specific features play a critical role in the socio-economic outcomes of resource-dependent communities (Chapman *et al.*, 2015). First, single-company mining towns give rise to higher unemployment rates and welfare dependencies. Second, the level of remoteness contributes to higher levels of welfare dependency and a lower percentage of low-income households. This can be attributed to the mining companies' offering of competitive wages to attract and retain employees. Third, the social structure of a mining town shows that mining communities with a larger population are likely to have a lower percentage of low-income households. In addition, higher levels of resource dependence are significant with lower levels of welfare per capita. Education brings about lower levels of unemployment and welfare dependency, and lastly, individuals that are lower paid, unskilled or lack transferable skills are less likely to migrate (Lawrie, Tonts and Plummer, 2011; Tonts *et al.*, 2012; Chapman *et al.*, 2015).

2.8.2 Local findings

The John Taolo Gaetsewe District Municipality reported in 2016 that mine closures are one of the toughest sustainable development challenges in the mining industry (JTGDM, 2016). The existing literature provides evidence of negative socio-economic impacts experienced after mine closure in the Free State Goldfields¹ (Marais, 2013b), Rustenburg (Ndaba, 2010), Coal Rim

¹ Free State Goldfields is better known for Matjhabeng Local Municipality, and the region includes the following towns: Welkom, Virginia, Allanridge, Hennenman, Odendaalsrus and Ventersburg.

Cluster² (Nel *et al.*, 2003), Virginia and Koffiefontein³ (CDS, 2006), Orkney and Springs (Ackermann *et al.*, 2018a) despite efforts toward LED.

The most significant impact that comes with mine closure is loss of employment (Haney and Shkaratan, 2003). The closure of the coalmines in KwaZulu-Natal resulted in a significant number of job losses. Approximately 30 000 jobs have been lost in the last 30 years (Nel et al., 2003). Ackermann et al. (2018a:7) points out that, "the main effect of the mine closure at the Orkney and Grootvlei mines was the mass loss of employment". An increase in unemployment results in a higher number of poor people relying on the local government for financial help, which puts the local municipality under a lot of financial pressure as mine closures also result in lower revenue collection for local municipalities (CDS, 2006; Louw and Marais, 2018). The loss of income at local municipality level is exacerbated by increased maintenance costs of existing infrastructure that used to be maintained by the mining companies (CDS, 2006). Gardiner (2017) investigated small mining towns in the Northern Cape province in South Africa and found that once the mining operations leave the area, the towns, such as Kleinzee and Koingnaas, become ghost towns and most people move away except the few individuals who have enough resources to continue living there.

In an attempt to rescue small mining communities, a significant effort was made towards establishing small, medium and micro-enterprises following the internal combustion theory. Although at first it seemed plausible, some areas of weakness were soon discovered. The projects were left fighting for survival as funds ran out after a while and suffered from insufficient skills. Projects become unsustainable due to lack of entrepreneurial skills, capacity and funding (Nel *et al.*, 2003). This is in line with Blakely and Leigh's (2018) argument that the capacity factor was previously neglected where capital was favoured. In addition to failing small, medium and micro-enterprises, the unemployed lacked motivation to become part of their own legacy and

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² Coal Rim Cluster is also known as the northern KwaZulu-Natal Coalfields. This region includes the following towns: Dundee, Glencoe, Dannhauser, Newcastle, Utrecht, Hattingspruit, Wasbank and Vryheid.

³ Koffiefontein is a small mining town located in the Free State, South Africa. Diamond mining takes place there.

expected the government to give them handouts (CDS, 2006). This phenomenon is not specific to governments only. Mining communities become highly dependent on the mining company and expect mining companies to be the sole provider of jobs and development.

Marais (2013b) notes that LED projects in the Free State Goldfields tend to focus on infrastructure investments, which Rodríguez-Pose (2002) argues provides little to sustainable LED. Rodríguez-Pose (2002:8) argues that "heavy investment in infrastructure, with little or no emphasis on other development factors such as support services to local firms, the strengthening of local human resources, or the diffusion and assimilation of technology" has often provoked greater imperfections in accessibility to markets." Local governments often lack the capacity and funding to uphold infrastructure maintenance. The World Bank (2002) suggests the importance of community consultation in combination with early planning for mine closure to lead to higher efficiencies and better management of amongst other infrastructure. Thus, the responsibility for LED rests with all levels of government, key stakeholders and local communities (Nel et al., 2003; World Bank, 2002)

Atkinson (2008) stresses that the development process for small towns are unique as small towns have different types of economic bases, resources, markets and growth opportunities. Policies applicable to different countries might not deliver same results as a result of the latter. Careful consideration should be given to market and institutional capacity and livelihood structure. LED, being the selected development tool in addressing rising unemployment and poverty, has emphasised its uniqueness to each locality while relying on the availability of resources, skills and capacity and the participation and relationship with stakeholders for the successful implementation thereof (Nel and Rogerson, 2005)

2.9 Legislative and policy frameworks and planning for economic sustainability in South Africa

Existing literature notes that the failed attempts at LED can be prescribed to poor legislation and policies (Abrahams, 2003; Marais, 2013b). In order to provide an answer to the first objective of whether legislation and the policy framework around small mining towns support economic

sustainability of small mining towns, the relevant legislation and policies should be introduced and explored.

2.9.1 The Constitution of the Republic of South Africa

Section 24 of the Constitution affords all South Africans the right to (a) an environment that is not harmful to their health or well-being; and (b) to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that (i) prevent pollution and ecological degradation; (ii) promote conservation; and (iii) secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development (Republic of South Africa, 1996). These provisions gesture towards the World Bank's (2002) emphasis on the importance of having a clear legislative and policy framework that focuses on mining closure procedures, environmental requirements and standards and stakeholder roles and responsibilities. However, as Sutton and Weiersbye (2007) argue, the minerals and environmental legislation pertaining to mineral resources and the environment prior to the South African Constitution failed to prevent significant environmental damage caused by mining companies. Hence, the robustness that came with the implementation of the Constitution put more pressure on mining companies to minimise adverse impacts.

Morrison-Saunders and Retief (2012) are of the opinion that Section 24 aligns with the intergenerational equity principle. Intergenerational equity refers to a process that favours present options and actions that are most likely to preserve or enhance the opportunities and capabilities of future generations to live sustainably (Gibson, Hassa, Holtz, Tansey and Whitelaw, 2005). In the case of the nation's constitution, Kotze (2003) highlights that the wording of Section 24 might pose a conflict between environmental conservation and sustainable development with the government prioritising the environmental sector and neglecting the social and economic sectors. Sustainability can be achieved by integrating the three pillars but Tremmel (2003) in Heinrichs *et al.*, (2016:16) explains that there are different dimensions (unidimensional and multidimensional) to the relative importance of each of the three pillars. An example of the unidimensional is reflected in giving the environment fundamental priority in a situation where economic and social aspects are considered the causes and effects of environmental degradation but are not considered equally important sectors. A multidimensional

approach emphasises the equal importance of all three pillars (Kopfmüller *et al.* 2001 in Heinrichs *et al.*, 2016:16). Ultimately, the promotion of economic sustainability lies in how the reader interprets section 24.

2.9.2 The Municipal Systems Act (MSA)

The 1998 White Paper describes the local government as developmental in that municipalities are instructed to maximise social development and economic growth through integrated development planning and the involvement of community members in the planning cycle. Local governments are also encouraged to work towards sustainable communities. The Act holds the local municipalities accountable for their share in achieving targets such as the stipulations in Section 24 of the Constitution of South Africa. In addition, Section 152 of The Constitution states that the local government should: a) provide democratic and accountable government for local communities; b) ensure the provision of services to communities in a sustainable manner; c) promote social and economic development; d) promote a safe and healthy environment; and e) encourage the involvement of communities and community organisations in the matters of local government (Republic of South Africa, 1996).

The Municipal Systems Act underlines the need to draft an Integrated Development Plan (IDP) that will reflect the vision for the local government's long term economic development goals. These strategic developmental plans should be aligned with national, district and local governments, and include consultations with the community members. In a mining community, the IDP is one of the key elements in achieving economic sustainability in that LED initiatives help local municipalities and communities diversify the economy, become less dependent on the mine and prepare for mine closure (Abrahams, 2003). However, the latter is sometimes not achieved as Nel and Binns (2002:931) postulate that there is an ineffective implementation owing to inadequate knowledge and understanding of the concept of integrated development planning, traditional project-focused planning and the lack of clarity on the respective roles and responsibilities in planning.

In addition, concerns have been raised by Nel and Binns (2002), the National Planninc Commission (2015) and Louw and Marais (2018) about whether municipalities have the necessary capacity and funding to execute the development and implementation of IDPs that will advance the developmental objectives of the local government and recommend additional support for successful execution. Mining towns in particular need more assistance to help in the planning and management of financial risks (Louw and Marais, 2018).

2.9.3 The Mineral Petroleum Resources Development Act (MPRDA)

The mining sector subscribes to the principles of sustainable development throughout its legislative framework enshrined in the MPRDA. The MPRDA replaced the Minerals Act No. 50 of 1991 in order to transform the mining industry from focusing on environmental sustainability to include economic and social development. Mining companies are instructed in the MPRDA to develop an SLP, which incorporates a LED programme that should focus on sustainable projects to alleviate poverty and facilitate the upliftment of mining communities (Rogerson, 2012). These SLPs then need to be aligned to the IDPs. Marais (2013b:370) highlights that collaboration and stakeholder relationships are fundamental to achieving economic sustainability, yet the SLP omits the concept of partnerships, which has resulted in a project-based approach towards economic development in mining communities. Leon (2009) found the Mining Charter and SLP content (in both the SLP guideline and regulation 46) to be vague with limited or no guidance on the desired outcomes for development. The National Planinng Commission (2011) reports that the mining sector could stimulate LED more significantly if the Mining Charter gets aligned to the LED goals with the focus on human resource development, LED and procurement.

2.9.4 LED promoting policies

The National Development Plan (NDP) 2030, in its allusion to LED, outlines an increase in exports through the enhancement of human capital, productive capacity and infrastructure, which in turn will increase the resource base for investment and reduce dependency on capital inflows (NPC, 2011). Sustainable development is aimed at in the National Framework for Sustainable Development (NFSD) which include pro-poor LED strategies, an increase in investment in infrastructure with the aim to increase employment and skills and capacity building

strategies aimed at rural women and the youth. The "human capital intervention may well be the key link between the infrastructure investment and the desired knock-on effects for growth and service delivery" (DEAT, 2008:37). The National Framework for Local Economic Development (NFLED) encourages the active involvement of residents, improved skills development and small, medium and micro-enterprise development. Furthermore, NFLED expects the local government to be well capacitated, trustworthy and collaborate with other stakeholders. LED is promoted through the assets (natural, physical, financial, human and social) and the exploitation of the local area's unique comparative advantage. For social and economic development, LED offers all stakeholders, including all spheres of government the opportunity to work together to improve the local economy through partnerships to take full advantage of economic opportunities (DPLG, 2006).

The challenges faced by the local government are also highlighted and these include "poor capacity, weak administrative systems, undue political interference in technical and administrative decision-making and uneven fiscal policy" (NPC:2011:45). In order to achieve long-term economic development, the latter should be addressed. In addition, government capacity, partnerships and collaboration must be encouraged between the various spheres of government (Nel and Rogerson, 2005). Capacity constraints in local municipalities can be addressed through improved governance, service delivery, public and market confidence. Local municipalities should conduct spatial development analysis and planning to exploit comparative advantage and encourage small, medium and micro-enterprise support and business infrastructure development (DPLG, 2006; ERLN, 2016). The LED policies and frameworks pertaining to LED are noted by Rogerson (2008) as having, reached maturity and providing a solid platform for the orchestration of planning activities.

2.10 Conclusion

This chapter revealed the importance of understanding what sustainable development and LED entails. LED, being the selected development tool in addressing the negative socio-economic effects that come with mine closure, has emphasised its uniqueness to each locality. The literature review suggests the implementation of both pro-poor and pro-growth LED strategies

to achieve economic sustainability. Therefore, funding and trust are necessary for the successful LED implementation, stakeholder involvement, collaboration, skills development, capacity building and the promotion of small, medium and micro-enterprises.

CHAPTER 3. CASE STUDY: KATHU

3.1 Introduction

This chapter provides a detailed description of the demographic and socio-economic information for the case study area, Kathu, the locality on which this dissertation is based. The chapter also provides a brief overview of Gamagara Local Municipality (GLM) with demographic, social and economic information. The chapter concludes with a look at the prominent mining company, Sishen mine. Sishen mine is considered as one of the largest employers in the Gamagara area. It also plays a vital role in the development of amongst other, Kathu town. The literature points out that a local community highly dependent on the mining company can face negative socio-economic impacts after mine closure and downscaling (World Bank, 2002; Rogerson, 2012; Burger *et al.*, 2018).

3.2 Kathu town: the case study area

The town of Kathu is located in the Northern Cape province, one of the nine provinces of South Africa that is bordered by Namibia, Botswana and the Atlantic Ocean. Kathu is roughly 280km north-west of Kimberley, 200km north-east from Upington and located in the middle of the Kalahari Desert. The town's weather is marked by semi-arid and desert climates with very little rainfall. Nowadays, Kathu town is known in and around the area for mining activity.

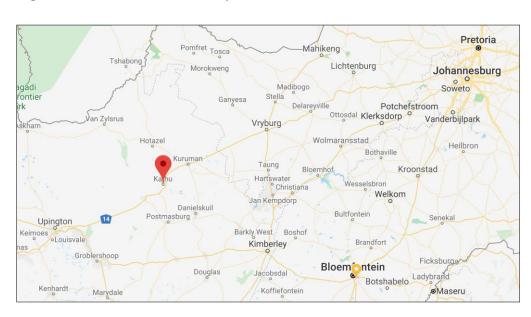


Figure 3.1: Location of case study area, Kathu town

3.2.1 Demographic and socio-economic information for GLM and Kathu town4

The total population for GLM was 53 656 in 2016, an increase of approximately 28% from 23 202 in 2001 (StatsSA, 2001; 2016). The GLM's population resides in four towns with 27,7% of the population in Kathu, 26,5% in Sesheng, 24,6% in Olifantshoek, 18,9% in Dibeng and 2,4% in the Non-urban area (StatsSA, 2016). The GLM has experienced substantial population growth with 43% of the new arrivals having settled in Kathu town (Anglo American, 2018a). The town's population was estimated to be 11 510⁵ with 3 177 households (StatsSA, 2012). The increase in population growth can be attributed to a large number of people moving to the GLM area in search of employment and/or better living conditions largely due to the mining activities and the solar parks around the district area. The mining industry provides more than 45% of GLM's employment (JTGDM, 2017). However, Gardiner (2017) asserted that fewer individuals were employed in 2011 than in 2001 in Kathu town and the GLM area because of the overall downscaling of mines.

The age-sex pyramid of Kathu showed that males account for 55% of the town's population while females constitute 45%. The working age (15 to 64) population for Kathu town was 76,5% with a dependency ratio of 30,8% (StatsSA, 2012). The largest group of the population was between 25 and 29 years old (see Figure 3.2). The significance of this age category lies with the fact that the GLM has reported that 65% of the youth was unemployed (StatsSA, 2011). Kathu town's figures, presented in Figure 3.3, confirmed that the town's unemployed and the not economically active constituted almost 50% in the 19-25 age category (Gardiner, 2017). In addition, females contributed more to the economically inactive population and the GLM proposed that job creation and skills development initiatives should be aimed at females and the youth.

⁴ The key statistics for Kathu town is based on the 2011 Census. No recent data specific to Kathu town could be obtained. This section relies heavily on data provided by StatsSA.

⁵ The researcher expects this number to be more with the in-migration of people and shortage of housing, but no recent census information can verify that claim.

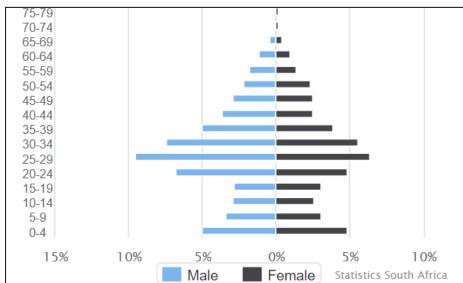


Figure 3.2: Sex and age distribution for Kathu town 2011

Source: StatsSA (2011)

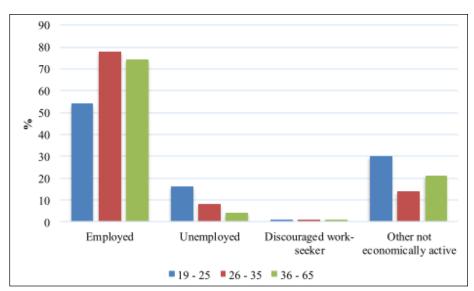


Figure 3.3: Employment by age category for Kathu town 2011

Source: StatsSA (2011)

A rise in unemployment poses a threat to economic sustainability. Investment in skills, training and education results in a higher probability of finding a job or starting a small business and eventually promote higher living standards. Individuals with higher levels of education participate actively in their communities. Individuals with lower levels of education require more social

assistance from the government (OECD, 2016). Only 1,7% of the Kathu town's population had no schooling. More than a third (37,6%) of the population had a grade 12 certificate and 30,7% had some form of higher education. At face value, these statistics seem acceptable but a closer look at the education levels per age category might provide an explanation of why almost half of the youth are unemployed. Figure 3.5 shows that 40% of the individuals in the 20-25 age bracket have completed grade 12 and another 20% had some form of tertiary education. Individuals aged 30 and above are more likely to have tertiary education. Gardiner (2017) suggests that the youth might not have access to higher education due to lack of funding, not meeting the prerequisites or because the location of these higher institutions may be too far away. The level of education indicates the kind of job opportunities that particular members of the local communities can access. Interestingly, Gardiner (2017) postulates that individuals working in the formal sector have declined in Kathu town and that more people have had to change to the informal sector in search of employment.

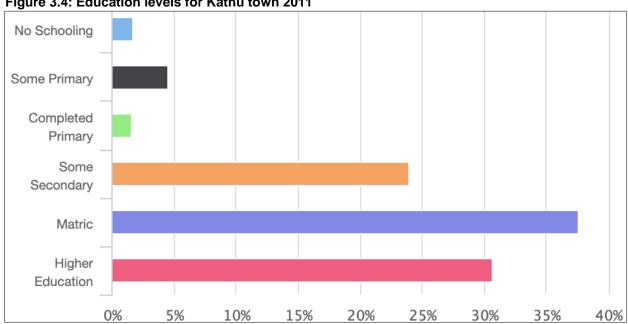


Figure 3.4: Education levels for Kathu town 2011

Source: StatsSA (2011)

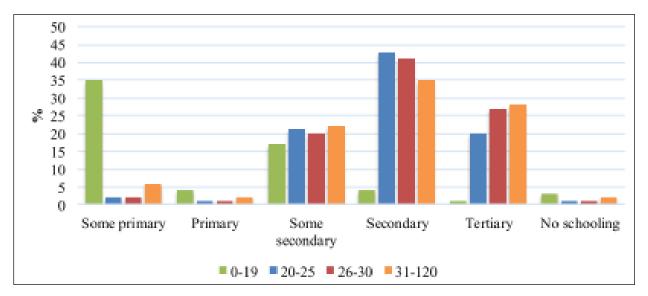


Figure 3.5: Education per age category in Kathu town 2011

Source: StatsSA (2011)

The living conditions of Kathu town were marked by 97% of the population in possession of a formal dwelling, 95% with a toilet connected to a sewerage line, 93% having piped water and 98% that had electricity (StatsSA, 2012). Gardiner (2017) reported that the average per capita personal income increased from below R4 000 per month in 2001 to over R6 000 per month in 2011. However, the 2010/2011 rise in population resulted in a shortage of housing and an increase in the prices of houses and higher rental charges. The high costs of renting a formal dwelling in Kathu town during the 2010/2011 period gave rise to the mushrooming of illegal and informal dwellings such as backyard shacks, standalone shacks, log houses, caravans and tents. In addition, the rapid growth and shortage of housing meant that, accommodation especially for non-mine employees, took up a larger proportion of their disposable income. Gardiner (2017) reported that almost 50% of individuals choose to rent rather than to buy a house. Fortunately, mine employees receive housing subsidies or the option to rent a house from the mining company at a lower than market rental fee.

In order to provide a better context of how rental and house prices surged, Gardiner (2017) reported that one could easily rent a house for R30 000 per month in 2011. The average sales price for a plot of land (erf) in Kathu town has increased double fold (see Figure 3.6). In 2012, plots sold for just over R412 517. In a span of 3 years, the price more than doubled to just under

R876 421 in 2015. To put it into perspective, the average erf price in Johannesburg for 2015 was R1 049 576. The erf prices continued to increase and in 2018, the average price for an erf in Kathu was R990 482 (Property24, 2020). Mid 2021, average erf prices have decreased to R590 000 (Property24, 2021). This information underlines the extent that the households will be affected when the mining company closes down, especially the home owners who will be locked in their current location. A house bought in the booming stage will most probably be valued by the bank for an amount much less. Ntema, *et al.*, (2017:39) in concurrence, notes that "housing assets in the mining areas can entrench households in poverty".

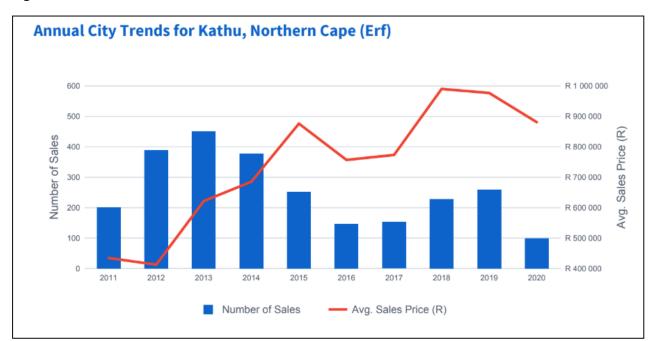


Figure 3.6: Annual erf sales in Kathu town 2011 to 2020

Source: Property24 (2020)

3.3 Key stakeholders in Kathu town

Both the GLM and Sishen mine are the key stakeholders in Kathu town. Sishen mine is one of the biggest employers for Kathu. As a result, a harmonious relationship between the two key stakeholders has a bearing on the responsibility to implement a development strategy that would contribute to the economic sustainability of Kathu town.

3.3.1 Gamagara Local Municipality area

The GLM is located in Kathu town and classified as a category B local municipality⁶. Municipal status was allocated to the town of Kathu in July 1979. The GLM governs Kathu, Olifantshoek, Dibeng, Mapoteng and Sesheng towns. Dibeng, Sesheng, Olifantshoek and Mapoteng are GLM's informal settlements.

3.3.2 Sishen mine

Sishen mine, which is the flagship operation for (Anglo American) Kumba Iron Ore (KIO), is situated eight kilometres from Kathu. Sishen mine, which is 14 kilometres in length and with a life of mine estimated at 13 years in 2019, is one of the largest open pit mines in the world(Anglo American, 2019). South Africa was ranked sixth in global iron ore production in 2019 with 81 mega tons with approximately 69% of this originating from Sishen mine alone (Silva, 2019). The mine is the primary employer for Kathu town. Sishen mine employed between 84% and 94% of the local people located within a fifty-kilometre radius of the mine between the period 2014 to 2018 (Anglo American, 2016a, 2018b). Besides Sishen mine, Kathu town has Assmang Khumani Iron Ore located 30 kilometres south of Kathu. Assmang Khumani is not as significant as Sishen mine but contributes a great deal to the development of Kathu town (Assore, 2016, 2018)

3.4 Conclusion

Kathu town used to be a small mining town with just more than 11 000 people. However, the commodity boom and increase in iron ore prices meant resulted in Kathu town becoming a viable option for individuals in search of employment or higher salaries in the GLM area. Various employment opportunities originate from Sishen or surrounding mines. Consequently, a closure of the mining company destabilises the economic sustainability of Kathu town. Sishen mine will no longer be a primary employer nor provide housing to employees. Literature has revealed that investment in human capital and community involvement can aid successful LED (Rogerson,

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⁶ A category B municipality is classified one that shares municipal executive and legislative authority in its area with a category C municipality within whose area it falls (Republic of South Africa, 1996).

2011). The high percentage of unemployed youth speak of a town with a few job opportunities and possibly insufficient education. The key stakeholders should use the socio-economic information as a way to direct LED towards becoming economically sustainable.

CHAPTER 4. RESEARCH METHODOLOGY

4.1 Research design

The research design for this study was an interpretative case study that used a qualitative approach. The case study method is the most widely used method in academia for researchers interested in qualitative research (Baskarada, 2014). A case study is "an empirical study that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident" (Yin, 2013:13). The search for an understanding of the effects of mine downscaling or closure (a contemporary phenomenon) on economic sustainability within Kathu town (a real-life context) confirmed a case study design as appropriate. According to Orlikowski and Baroudi (1991:5) "an interpretive (interpretative) researcher attempts to understand phenomena through assessing the meaning that participants assign to them". The current study attempts to interpret how mine downscaling or closure will affect the economic sustainability of Kathu town.

A qualitative approach was considered ideal as the researcher sought to obtain local information about the stakeholders' knowledge and understanding of their roles and responsibilities towards economic sustainability in the event of mine downscaling and closure. The degree of execution of the roles and responsibilities of the stakeholders, with emphasis on sustainable local economic development practices, depicted Kathu's state of readiness with regards to mitigating the negative socio-economic challenges associated with mine downscaling and closure.

A literature review, primarily focussing on growth theories, LED, economic sustainability, and impacts and lessons learned from mine downscaling and closure, provided the point of departure for this study. The data collection process involved carrying out interviews and as such, an interview protocol was developed for the primary data. The interview protocol included an information leaflet, consent form, instructions and interview questions (see Annexures). As is the norm, the interview protocol was piloted before the extensive data collection. Data gathered was organised accordingly and analysed using the constant comparative analysis method. Findings were presented in the form of qualitative narrative passages where key responses were quoted.

4.2 Data sources and data collection processes

Interviewing is the most common form of data collection in a case study design (Skovdal and Cornish, 2015). The literature review, research objectives and relevant document analysis assisted in the formulation of the interview questions. Document analysis was chosen as it provided the researcher with the opportunity to analyse information gathered by professionals in this field. Secondary data, from existing documents such as legislation, national and provincial policy frameworks, IDP, SLP, socio-economic impact assessment (SEIA) and annual reports from mining companies, was also gathered through document analysis. Most of the documents for this research study are available online with the exception of the complete SLP. Instead, an extract pertaining to LED from the SLP was obtained from Anglo American's website. Primary data were collected in the form of semi-structured interviews with key stakeholders from the local municipality, mining company, business owners and community members.

4.2.1 Sampling techniques

Purposive sampling in support of a qualitative study was used in the selection of the initial interview participants. Purposive sampling is a technique widely used in qualitative research for the identification and selection of information-rich cases for the most effective use of limited resources (Patton, 2002). These participants included but were not limited to SLP coordinators and implementers from the mining company, local municipality officials responsible for LED, business owners from different sectors, community leaders and an expert who had vast knowledge of the socio-economic problems that accompany mine closures and downscaling. Additional primary data was collected through theoretical sampling. Glaser and Strauss (1967:45) define theoretical sampling as "the process for data collection for generating theory whereby the analyst jointly collects, codes, and analyses his data and decides what data to collect next and where to find them, in order to develop his theory as it emerges". This sampling method is an essential element of grounded theory and provides representativeness of concepts and consistency (Corbin and Strauss, 1990). The current study benefited from this approach as the researcher sought to understand better, the legislation support, roles and responsibilities of stakeholders, and the implementation of LED in supporting the economic sustainability of small mining communities.

During the data gathering process, the theoretical sampling method was used and here additional interview questions were asked to widen the scope of existing interview questions. For example, the interviewer would ask the question prepared on the interview schedule and pose follow up questions after the interviewee responds with information that the interviewer felt could contribute more to the study through further exploration. In addition, once the interviewer identified a topic that needed further explanation or different viewpoints, relevant stakeholders were asked about it during the subsequent interviews. A good example of this is where the GLM mentioned that they are part of a pilot programme in which Sishen mine aims to implement collaborative regional planning. During the interview with Sishen mine, the interviewer asked about this specific programme in order to understand and interpret it better. The total number of participants upon completion of interviews were eleven participants as theoretical saturation was reached and no more themes could emerge or be further explored in further interviews.

4.2.2 Data collection techniques

The researcher made use of semi-structured interview questions. Semi-structured interview questions provide a structure of a list of issues to be covered as well as the freedom to follow up points, as deemed necessary, to enhance the data (Thomas, 2017). Questions were formulated based on the research objectives. Each stakeholder group received a set of questions before the initial interview, which enabled the interviewee to gather their thoughts regarding this subject matter. The stakeholders then proceeded to provide the interviewer with their responses during the actual interview. For most part of the interview schedules, the questions remained the same but specific questions regarding, matters such as legislation and policies, were tailored more towards the mine and local government. These four interview schedules were administered to all four stakeholder group participants. Seven of the interviews were Skype (voice call) interviews together with one face-to-face interview in which the participants' responses were voice recorded. The interviewer took down notes as the interviews progressed. Three participants responded to the interview schedules in writing. Seven out of the eight interviews were conducted in English and one in Afrikaans. The mean length for the interviews was 49 minutes. The first interview was conducted on October 8th, 2019 and the last

interview on February 28th, 2020. As for the written responses, two were completed in Afrikaans and one in English. The Afrikaans responses were translated into English and combined with the other written English responses.

4.2.3 Key informants

The five stakeholder groups comprised of an official staff member responsible for LED at Gamagara Local Municipality, SLP specialist for Sishen mine, business owners, community members and an expert hereafter referred to as the "academic". The final number of participants comprised of one representative from the GLM, one from Sishen mine, four business owners, four community leaders and the academic. The business owners were selected on the basis of the size of their business. Two from small businesses and two from medium-size businesses were selected. Community leaders were selected on the number of years spent living in Kathu town. One of the community leaders lived in Kathu for nearly 30 years whereas the other lived in Kathu for less than 5 years.

4.2.4 Document analysis

Document analysis as a research method can have several benefits. There is "little or no reactivity on the part of the writer, particularly if the document was not written with the intention of being research data and many documents in the public domain may have been written by skilled professionals and may contain more valuable information and insights than those written by uninformed amateurs" (Cohen, Manion & Morrison, 2007:201). Moreover, the researcher is of the opinion that these documents can be a reliable source of information as professionals prepare them for specific purposes.

The documentation comprised of legislation such as The Constitution of South Africa, The Municipality Systems Act and Mineral Petroleum Resources Development Act. Within the MSA and MPRDA, local municipalities are obligated to develop an IDP while mining companies should develop an SLP document. These planning documents were also analysed in addition to national and provincial policies such as the NDP, NFSD and NFLED. Finally, the mining company's

annual integrated and sustainability reports and the Socio-Economic Impact Assessment (SEIA) were also analysed.

The researcher engaged in an analysis of the legislation and policy framework and was able to determine whether the relevant documentation promoted the economic sustainability of small mining towns. In addition, the IDP, SLP, annual reports and SEIA provided information specific to the case study area and roles and responsibilities of the stakeholders.

4.3 Data transcription and MAXQDA

An online website, Transcribe by Wreally⁷, was used to transcribe the voice recordings. Words such as Kathu, Gamagara and Sishen were not correctly identified by the website as the online website is set up for an American accent and vocabulary. To improve the accuracy of the transcription, the researcher listened to the voice recordings again and made the necessary changes and adjustments. The interviews conducted in Afrikaans were an exception and were thus, manually transcribed and then translated into English. The written responses in Afrikaans were translated as well. The transcribed data and written responses were saved on the researcher's personal computer, USB and captured in MAXQDA⁸.

4.4 Data analysis and interpretation

For data analysis and interpretation, the researcher contextually employed the Straussian approach to grounded theory, which has two unique characteristics: constant comparative analysis and theoretical sampling. The Straussian approach was selected above the Glaserian approach (both variants of grounded theory), as in this study the researcher conducted a literature review and document analysis for the formulation of interview questions before entering the field. The researcher had some knowledge of the roles and responsibilities of the

⁸ MAXQDA is a software package for qualitative and mixed methods research analysis (see https://www.maxqda.com/what-is-maxqda).

⁷ https://transcribe.wreally.com/

stakeholders regarding planning for mine downscaling and closure, which contrasted with the Glaserian approach of having no knowledge of the literature before fieldwork commences (Glaser, 1992). In the literal sense, the constant comparative analysis incorporates four stages: "(1) comparing incidents applicable to each category, (2) integrating categories and their properties, (3) delimiting the theory, and (4) writing the theory" (Glaser and Strauss, 1967:105). Its application in this study is outline below.

The process started with the collection of data through document analysis. The literature review and document analysis assisted in the process of identifying the relevant stakeholder groups as well as setting up interview questions. The researcher proceeded with conducting individual interviews. After each interview, data was transcribed, and field notes typed up. The transcribed data were imported into MAXQDA and coding followed. Three different forms of coding followed: open coding, axial coding and selective coding. Open coding was the first stage of the process where the data was read and broken down analytically utilising the constant comparison method to compare one part with another to form categories. An accumulation of categories prompted the researcher to reflect on the data and keep a record of reflections through writing memos. The second stage was axial coding, where the researcher identified relationships between the open codes and core categories emerged. The first two coding stages highlighted themes that needed further clarification and more supporting evidence or conflicting evidence. Before proceeding to the final coding stage, the researcher gathered additional data through theoretical sampling by asking additional questions or follow up questions to explore certain themes further. This was done until theoretical saturation was reached. The final coding stage, selective coding, was "the process of selecting the core category, systematically relating it to other categories, validating those relationships, and filling in categories that needed further refinement and development" (Corbin and Strauss, 1990:116). These categories were then integrated into a theoretical framework and findings presented in a qualitative narrative passage (see Figure 4.1). Quotations from the key participants' interviews were used to substantiate the findings.

Starting point - Data collection

Theoretical sampling

Selective coding

Theoretical framework

Findings

Axial coding

Figure 4.7: Researcher's illustration of research strategy for primary data component of study.

Source: Author's key steps mapping of research strategy

4.5 Reliability and validity

4.5.1 Semi-structured interviews

The researcher incorporated validity strategies to check the accuracy of the findings. *First,* the triangulation of data sources resulted in the accumulation of multiple sources of evidence. Denzin, (1970:291) defines triangulation as "the combination of methodologies in the study of the same phenomenon". The interviews and document analysis provided the researcher with multiple viewpoints and a more comprehensive understanding of the stakeholders' respective roles and responsibilities with regards to sustainable economic development strategies. *Secondly,* the researcher kept a detailed record of all data obtained (using code names to keep anonymity), and analysis methods applied. *Third,* the researcher presented different interview responses in support of or disagreement with the perspective of the theme. *Lastly,* the use of theoretical saturation ensured that the categories were fully developed. The proposed validity strategies increased the accuracy and validity of the findings.

4.6 Ethical considerations

The researcher sought and obtained permission from the University of the Free State's General Human Research Ethics Committee (GHREC) (UFS-HSD2019/1471) to conduct data gathering

as part of the study. Before the data collection process, the researcher obtained written informed consent from the participants, and the participants were informed that their participation was voluntary. During the interview process, participants were protected from any physical discomfort and had the option to withdraw from the research at any given time without any questions asked. The participants' anonymity was maintained by using unique code numbers instead of names. The data obtained are password protected, and the voice recordings, transcriptions and notes locked away in a safe place that only the researcher has exclusive access to.

4.7 Conclusion

This chapter has provided a brief overview of the research methodology and context of the research approach and design used in this study. It explained the data collection procedures and execution as well as the methodology behind the qualitative data analysis. The chapter concluded with a brief overview of how reliability and variability of the interviews and documentation were established.

CHAPTER 5. RESULTS PRESENTATIONS AND DISCUSSION

5.1 Introduction

This chapter presents the research findings gathered from the analysis of the data collected during the interviews and the documents analysed. Various themes emerged through constant comparative analysis and theoretical sampling. The findings have been sorted according to research themes informed by the research objectives. In this process, discussion for each result is included. It is important to note that the participants mentioned below were assigned unique codes in order to maintain their anonymity. The study's Appendix A presents the codes assigned to the participants and further details related to the interviews conducted.

5.2 Defining, interpreting and promoting economic sustainability in legislation and policy frameworks

The planning and implementation for sustainable development and LED, where economic sustainability is realised, was scrutinised for possible vagueness that accompany these terms (Hilson and Murck, 2000; Rogerson 2010; Marais, 2013b; Eggert, 2012; Purvis *et al.*, 2018). As a first step in this research study, The South African legislation and policy frameworks were examined to establish how legislation and policy frameworks interpret and clarify sustainable development and LED.

The South African Constitution is the overarching legislation for all other laws and policy frameworks and provides South Africa with the initial understanding and importance of sustainable development. In South Africa, the concept of sustainability is achieved through a systems approach where all three pillars (economic, social and environmental) are integrated and mutually inclusive (DEAT, 2008). An explanation by Tremmel (2003) in Heinrichs *et al.*, (2016:16) shows how the importance of the three pillars rests on the kind of dimension. The term 'sustainable development' appears once under section 24 in the Constitution. Section 24 mainly focuses on protecting the environment as is listed under the heading of "Environment", while referring to the environment, conservation, ecological degradation, pollution and natural resources throughout the section. Following Tremmel's (2003) in Heinrichs *et al.*, (2016:16)

different dimensions, this research study concurs that Section 24 seems to be in line with a unidimensional perception where the environment is given fundamental priority. This research study found Section 24 of the Constitution to be explaining how to achieve sustainable development of the environmental pillar but lacking explanation on how to ensure sustainable economic and social development. This current study's finding is inclined towards Kotze (2003) who argues that the wording of section 24 is vague and that environmental conservation might be prioritised more while the support for economic sustainability is neglected. Fortunately, the MSA and MPRDA define sustainable development as an integration of all three pillars without any preference given to any one of the pillars.

As for the term 'LED', the Constitution refers to social and economic development after a duty or responsibility is given using the form of 'while promoting economic and social development' (Republic of South Africa, 1999). Once again, the priority is questioned with the positioning of the words in the sentence. LED, which is an important tool for sustainable economic development, was given to local municipalities to plan and implement. For this reason, the MSA is expected to provide better clarity on LED. This research study found both the MSA and MPRDA as not providing a definition of LED. The term 'local economic development' appears twice in the MSA and once in the MPRDA. In all three of these appearances, LED is not defined, explained nor clarified.

As for the policies, the NFLED was the only policy (between NFSD, PFSD and NFLED) to include a definition for LED as adopted from the World Bank. This research study confirms that sustainable development and LED are poorly defined in legislation as suggested by Abrahams (2003). Furthermore, Abrahams (2003) highlights that the absence of a definition should not distract the value that LED can add and affirms that LED is the appropriate strategy for achieving sustainable development.

Following Abrahams (2003) advice as mentioned above, the next step was to determine if legislation and policies promoted LED. This study found the Constitution, MSA and MPRDA to promote LED through planning processes, which include participation in national and provincial development programmes, and in the drafting of an IDP and SLP. The NFSD and PFSD promote

economic sustainability through employment, infrastructure and skills development. In the NFSD, the policy makers propose the use of the NFLED to address social and economic development. The NFLED primarily addresses social and economic development through partnerships and skills development. In addition, the NFLED promotes promotes small, medium and micro-enterprise support and business infrastructure development, which is considered the modern approach to LED. The participant for GLM comments on the effectiveness of these policies and states that "So all of those policies, they are very good tools, for us to be able to do our work very much easily and also to mobilize for all the resources that you will need within that particular space." This research study agrees with Rogerson (2009) and Abrahams (2003) in its view that the policy framework related to the planning for LED is adequate and provides a solid platform for proper planning for sustainable LED through combining both pro-growth and propoor developmental approaches.

However, a successful implementation of LED requires stakeholder involvement, partnerships, good relationships, capacity and funding (Nel and Binns, 2003; Atkinson, 2005; Stacey *et al.*, 2010; Rogerson, 2012; Blakely and Leigh, 2017). The MSA and NFLED encourages community involvement and collaboration and yet the MPRDA together with the SLP do not promote partnerships. The oversight in the mining legislation regarding partnerships has implications for a small mining town such as Kathu. Marais (2013b) highlights that the oversight in legislation means that the town might experience lack of trust, short-term unsustainable projects and preference for infrastructure projects. As be discussed below, what Marais (2013b) has highlighted is realised in Kathu town and this study can agree with Marais (2013b) in that mining legislation needs to be revised to include guidelines on how to improve amongst other partnerships.

<u>Key result 1:</u> The legislation lacks a definition for LED and guidelines for planning of sustainable LED. The policy framework is better at providing a platform for the planning of sustainable LED. However, the legislation and policy framework should generally make more reference to stakeholder involvement, partnerships and good relationships in the case of mining legislation.

5.3 Key stakeholders' efforts towards an economically sustainable Kathu town

Kathu town realised that active measures towards economic sustainability need to be taken in order to be economically sustainable after the mine(s) closes down. Rogerson (2009) and Daniels (1989) remind us that there is no 'one-size-fits-all' solution and each local municipality needs to adopt LED strategies that will address the socio-economic challenges in their area. LED should focus on partnerships, economic growth, poverty alleviation, job creation, improved living standards, economic diversification and improvement of the town (place) itself (Nel and Rogerson, 2005). In order to achieve the following, LED strategies should incorporate investment in infrastructure, human capital (education and skills), promotes small, medium and micro-enterprises, inward investments, local initiatives, exploit the town's comparative advantage, and develop tourism (Abrahams, 2003; CDS, 2006; DPLG, 2006; Eggert, 2012; ELRN, 2016).

Kathu town's understanding of LED is best exhibited during a consultation of the IDP, SLP and SEIA together with the interview responses. An examination of the IDP and SLP/SEIA provided a view of the LED strategies adopted by both the GLM and Sishen mine, respectively. In the foreword (page xi) of the IDP, the municipal manager writes that "By the end of 2030 Gamagara" should have developed into an industrial town and developing towards a manufacturing town." The GLM's IDP strongly promotes the development of the manufacturing and agricultural sectors but also acknowledges that LED should steer away from project based initiatives and focus more on skills development, local promotes small, medium and micro-enterprise development, tourism and the promotion of local economies (GLM, 2017). The findings from the interviews confirm what the IDP suggested. Participant GM01's comment reads thus, "We already have a plan in place to say we have maybe a manufacturing activity or we have an agricultural activity or other sectors that will also enhance the economic development of the particular area". Although the GLM has listed all of projects in the IDP, this research study questions whether the execution thereof will be successful in light of the argument put forward by the Centre for Development Support (2006). The Centre for Development Support (2006) highlights that IDPs stand out as plans that rarely get executed because of lack of funding, incapacity and unrealistic expectations. In addition, participant GM01 estimates the successful implementation of LED to be in the region of 60 to 70 per cent due to the possession of an element of silos planning.

The SEIA reports Sishen mine's efforts towards economic sustainability in the form of promotes small, medium and micro-enterprise development, portable skills development, Youth Empowerment Programme and the municipality capacity building programme. The mine also suggested diversifying the economy to assist with job creation. To address the problem of unemployment, Sishen mine invested in promotes small, medium and micro-enterprise development as well as portable skills development to increase the likelihood of residents becoming more attractive to other employment sectors. The Youth Empowerment Programme was planned and implemented to reduce the high unemployment rate among youth (Anglo American, 2018a). Figure 5.1 illustrates Sishen mine's proportional spending specific to community economic development areas. In 2017, enterprise development and poverty alleviation received the majority of funding. The proportional split between education and skills development, health and welfare, enterprise development and poverty alleviation and institutional capacity development and donations were similar for the year 2018.

Interviews with the business owners and community members regarding the key stakeholders' execution of the LED projects, delivered opposite responses for Sishen mine and the GLM. Participants were asked the following questions: "Is Sishen mine contributing to LED? Do you think Sishen mine can do more to grow Kathu's economy?" All of the community members concur that Sishen mine contributes extensively to the development of Kathu town. However, when prompted the same question with reference to GLM, community members and business owners strongly felt that the GLM fails to promote social and economic development. When business owners and community members were asked on the areas in Kathu town that needed more development, their responses identified job creation, housing development, infrastructure improvement and skills development.

This research study would like to point out that the community members' responses might be explained by Marais's (2013b) view that communities prefer to see short-term projects being implemented to satisfy their expectations of development. Marais (2013b) continues to explain that local municipalities end up engaging in project-based developmental planning, which the GLM acknowledged and suggested that they would like to move away from it.

In light of the above, the study is able to determine that both the GLM and Sishen mine realise what LED entails for sustainable economic development. This research study also noted that the GLM follows a more pro-growth LED strategy. The literature review highlighted the ineffectiveness of the pro-growth LED strategy (traditional LED) in addressing negative socio-economic impacts (Malizia and Feser, 1999; Abrahams, 2003; Rogerson and Rogerson, 2010). In addition, Abrahams (2003) emphasises on the importance of local governments in attempts to find a balance between the pro-growth and pro-poor approaches to LED. Pro-poor LED aims to improve the past injustices in South Africa through an integration of historically disadvantaged communities whereas pro-growth LED primarily encourages economic growth. Blakely and Leigh (2017) emphasise the importance of institutional capacity and argue that less attention should be given to infrastructure investments and the creation of economic sectors. Nonetheless, Sishen mine adopted a combination of both pro-poor and pro-growth LED strategies in which areas such as skills development, capacity, infrastructure and small, medium and micro-enterprise development are given priority.

This research study concludes that despite the GLM's lack in pro-poor LED strategies, Sishen mine strongly pursues pro-poor LED. The areas considered essential for economic sustainability have been identified and are being addressed. Advice provided by the Centre for Development Support (2006) reads that mining companies should consult the drafted IDPs for them to become more robust. Perhaps the GLM can find a balance between pro-poor and pro-growth strategies.

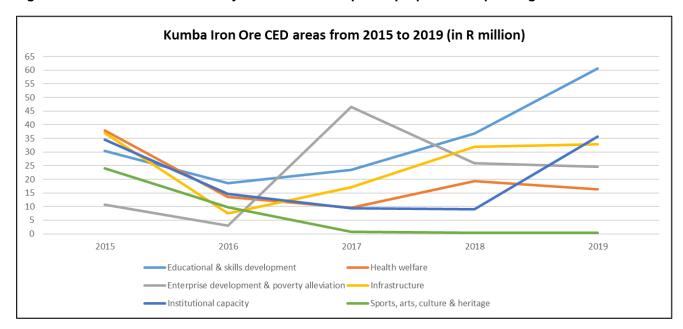


Figure 5.8: Sishen mine community economic development proportional spending 2015-2019

Sources: Anglo American (2016b, 2018, 2019)

Key result 2: Both the GLM and Sishen mine have a good idea of what LED entails and how sustainable LED can be achieved. However, the GLM presents a poor IDP that leans more towards pro-growth LED but acknowledges that pro-poor LED should also be targeted.

5.4 Level of dependency

The staple theory argues that economic development and growth are based on the external demand and export of commodities in the long run (Burger *et al.*, 2018). In addition, Rogerson (2012) reports that there is a vulnerability that exists in a mining dependent local municipality. Blakely and Leigh (2017) explain the vulnerability in that a mono-industry town, such as Kathu town, relies on an industry (Sishen mine) that may exit the town (close the mine) and take their capital with them. Furthermore, shifts in the global economy can affect the industry, which in turn affects the town. The interviewed academic highlights how the future of Kathu most likely will rely on what happens in the international market of iron ore and the mining industry. Thus, lower commodity prices will affect both Sishen mine and Kathu town. This observation is confirmed in Anglo American's reports that Sishen mine remains particularly susceptible to the global iron ore price.

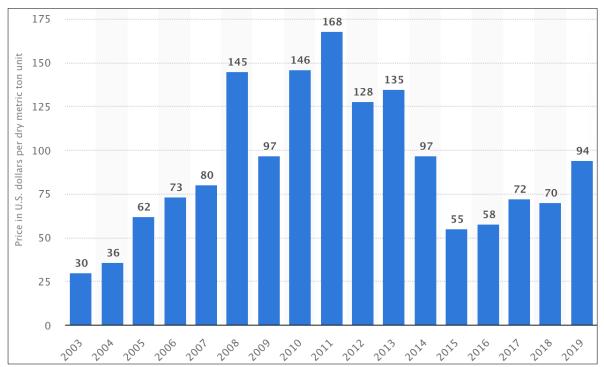


Figure 5.9: Historical chart of iron ore prices 2003 - 2019

Source: Statista (2019)

The price of iron ore fell a staggering 39% in 2015 (see Figure 5.2) as China's⁹ demand for steel declined and some of the world's largest iron ore mining companies expanded production in Australia and elsewhere, leading to an oversupply of iron ore in the market (United Nations, 2019). The lower iron ore prices affected Kathu town negatively and in various ways. *First*, Sishen mine's operating profit decreased from R19,192 million in 2014 to R2,644 million in 2015 (see Table 5.1), which resulted in a reduction of its workforce by 32,5%. This had a negative effect on Kathu town, as Sishen mine employs on average more than 84% of locals located within a 50km radius from Sishen mine. Kathu town suffered higher levels of unemployment, which can lead to a general decrease in living standards (Haney and Shkaratan, 2003). A high level of unemployment in an area where the mine downscales or closes also leads to less job opportunities for the unemployed because of lack of skills (CDS, 2006) - a problem Sishen mine identified with the 2015/16 downscale. The low rate of absorption of the unemployed during this period arose form a lack of transferable/portable skills (Anglo American, 2018). In addition, the

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⁹ China is considered to be the world's largest importer of iron ore (Silva, 2019).

research study already identified that higher youth unemployment rates might also be attributed to the lower levels of education (see Chapter 3). Eggert (2012) alludes to how investment in education can improve the socio-economic well-being after the mine closes. In the IDP, the GLM understands and acknowledges the major challenge of literacy and skills levels in the area. To combat this issue, the GLM consulted different stakeholders in its effort to establish a programme of action towards developing appropriate skills required in the job market (GLM, 2017).

Table 5.1: KIO/Sishen mine key financial information and statistics 2014 - 2019

Financial information for year	2014	2015	2016	2017	2018	2019
KIO Operating profit (in R mil)	19,192	2,644	15,274	21,390	16,360	28,811
Employees including contractors	8,318	7,844	5,466	7,306	8,752	8,676
Employment of locals (%)	94%	90%	94%	84%	86%	89%

Source: Anglo American (2015, 2017, 2019)

Second, the downturn resulted in a decrease of Sishen mine's social and community project spending for Kathu town's community from R70,9 million in 2015 to R11,4 million in 2016, but it has since increased again to R62,1 million in 2019 (see Table 5.2). These projects include education and skills development, health and welfare, enterprise development and poverty alleviation, infrastructure, institutional capacity development and donations.

Table 5.2: Kumba Iron Ore Sishen mine LED statistics 2014 - 2019

Kumba Iron Ore	2014	2015	2016	2017	2018	2019
Community development, infrastructure and	202,3	174,6	66,9	106,7	123,5	170,9
skills development (in R mil)						
CSI & SLP projects – Sishen (in R mil)		70.9	11.4	13	48.7	62.1
Preferential procurement – Historically	15,18	5,67	8,5	9,4	11,8	13,9
disadvantaged (in R bil)						
Local procurement (in R bil)		5,67	0,129	0,520	1,4	2,4
Portable skills training – community members		496	471	326	282	430

Source: Anglo American (2016b, 2018b)

Third, the higher unemployment levels had a knock-on effect on the businesses. Demacon, a private company specialising in economic research services, conducted an economic analysis for Sishen mine in 2016 (Anglo American, 2018a). The analysis highlighted the way other sectors are to a great extent dependent on Sishen mine. The findings from the interviews strongly agree with the view that Kathu town relies on Sishen mine. Study participant BO03 makes a strong comment about Kathu town's dependence on the mining sector. All of the business owners reported that the previous downturn had a significant impact on their businesses. In addition, BO02, commented that, "Yes, it had a huge impact on our mall. From a finance point of view, it had a huge impact." Other responses from the interviews referred to businesses that closed down or were liquidated because of the 2015/2016 downscale.

Last, the dependency can create an undiversified and at-risk local economy. The first two discussion points above explain why Kathu town's mono-dependency on Sishen mine is a concern. Ndaba (2010) points out how local economies tend to be too reliant on the mining company. The research study found the same to be true for Kathu town as it relies heavily on Sishen mine. Nel and Binns (2002) suggest sector development i.e. tourism for job creation and economic diversification and that private businesses and mining companies should take ownership of the sector development. In the case of Kathu town, the research study found the GLM to take the lead in planning for diversification to lower the dependency on Sishen mine. GLM proposes to build some projects, such as the Kathu Supplier Park, in an effort to diversify the economy and improve economic sustainability. Some other key projects for Kathu town include, Agri-Park, Farmer Support Units, a textile-manufacturing factory, a brick making industry, Fuel Depot, solar panel manufacturing plant and regional airport (GLM, 2017). The academic is of the opinion that the latter is very difficult to achieve and a small mining town such as Kathu town will not be able to diversify their economy to an extent that they will no longer depend on the mining industries in the area. The academic notes also suggest that policies should redirect their aim especially in small mining towns to plan for decline and not growth.

<u>Key result 3:</u> Kathu town remains highly dependent on Sishen mine. Sector development encouraged by businesses and mining companies can possibly lower dependencies.

5.5 Partnerships and collaborative planning

The responsibility on planning for economic sustainability rests with all levels of government, key stakeholders and local communities (World Bank, 2002; Nel et al., 2003; Stacey et al., 2010). The World Bank (2002) sets out the roles and responsibilities expected of a mining company, and these include planning for mine closure early on, working in partnerships with local governments and communities and availing funds for development. The requirement to compile a SLP and IDP and align the SLPs to the IDPs, was an attempt towards collaborative planning between the local government and mining companies, but Marais et al., (2017) discuss how this is hardly achieved. Marais (2013b) argues that policy guideline oversight results in a lack of shared vision amongst stakeholders for project implementation and reminds us that partnerships are omitted from the SLP. As discussed in sections above, the GLM and Sishen mine plan for economic sustainability differently. In addition, GM01 attributes the poor LED attempts to silos planning (see Section 5.3). Findings from the interviews with Sishen mine and GLM reveal conflicting views about alignment. GM01 is of the view that the alignment is in the region of 80 percent. However, Sishen mine commented that, "Yes, it is aligned. So there's no project that's appearing in our SLP document that's not aligned to the priorities in the IDP". As a result, this research study found out that a weak partnership existed between the GLM and Sishen mine, which can contribute to the poor alignment of the SLP with the IDP.

The lack of collaborative planning and partnerships makes it hard to determine the level of economic sustainability at the end of the day. Marais *et al.*, (2017:169) argue that longer-term economic planning is at risk in the absence of collaboration. Rogerson (2011; 2012) also highlights the importance of partnerships, especially for mining companies, in attempts at reaching development goals. SM01 acknowledges that currently what they are doing is ineffective as the different mining companies each do their own kind of development for Kathu town. In an effort to address the poor alignment, Sishen mine has called for a new strategy collaborative regional development. GM01 supports Sishen mine's proposal as noted in the statement that, "We should rather collaborate for a bigger impact within whatever (development) you want to bring forward."

The academic highlighted some problems that come with the alignment of the SLPs with IDPs: Firstly, the alignment results in a linkage between mining and development, which is a policy problem over the last 20 to 30 years. This is a problem because the alignment creates long-term planning, encourages homeownership to people largely without a choice and instills the thought of being able to diversify the economy. Secondly, SLPs are contractual agreements with the DMR and seen as an obligation and not a document for collaborative planning on a local level. This research study considers the problems that accompanies alignment of the SLP with the IDP as expressed by the academic but also highlights the importance of partnerships and collaborative planning for the economic sustainability of Kathu town. Hence, Rogerson (2012) suggests further intervention of the MPRDA to maximise the potential development impacts especially for small towns in South Africa, which is a suggestion that the research study upholds.

<u>Key result 4</u>: The partnership relationship between the GLM and Sishen mine is poor as noted in the lack of collaborative planning. As a result, the economic sustainability of Kathu town is at risk.

5.6 The GLM's use of funds compromises trust between stakeholders

A comment from CL03 reads "The community feels betrayed because of all the municipal debt the municipality finds itself in for example Eskom". Rogerson (2012:130) explains that trust is at the "heart of improving partnerships for joint planning relating to issues of LED, alignment with IDPs, infrastructural delivery, human resource development, and sustainable development". The literature review revealed that the lack of trust on the implementation of LED accounts for the disappointing outcomes in respect of the integrated planning (Nel and Binns, 2003; Rogerson, 2012 and Marais, 2013b). In Kathu town, this seems to be the case as well. Lack of trust amongst stakeholders has been reported in various circumstances. The effective use of funds is questioned by the community as developmental funds that could have been used, for example, for skills development and small, medium and micro-enterprise development, were claimed to have been used to upgrade the existing infrastructure although financial evidence lacks in that area (GLM, 2017). A community leader (CL01) comments "The administration places a lot of pressure on their financial department, as they are not very effective." The business owners also state that a great amount of financial resources is spent on salaries and that is why

municipal officials are able to afford expensive cars. In addition, BO04 comments that, "I think some of the money gets lost somehow" while BO01 is of the opinion that the GLM engages in fraudulent activities and that funds disappear.

Both the community and Sishen mine lack trust in the GLM. GM01 reports that Sishen mine do not entrust the GLM with the initial planning for development. This is in support of Louw and Marais (2018) findings from a study in Kathu town where interviewees from both the municipality and the mines reported that the mines prefer not to entrust project funding to the municipality. Thus, mining companies prefer to implement municipal projects themselves or to entrust the implementation to entities under their direct control.

As a result, this research study concludes that the level of trust between key stakeholders and Kathu town's community is very low. Rogerson (2012) alludes to the fact that trust is needed for sustainable development. The lack of trust compromises successful LED planning and implementation as discussed in Section 5.5 above and thus affecting the economic sustainability outcome of Kathu town.

<u>Key result 5:</u> The GLM's poor allocation of funds compromises the trust factor between key stakeholders and the community. The lack of trust contributes directly to the poor implementation of sustainable LED, which undermines economic sustainability.

5.7 Stakeholder relationships

The literature reminds us that the success of LED is driven by partnerships, trust, capacity, funding, entrepreneurial drive, good relationships and stakeholder involvement (Nel and Binns, 2003; Stacey *et al.*, 2010; Rogerson, 2012). In light of the weak partnerships and lack of trust established above, the findings show that the relationship between Sishen mine and the GLM is not great and that an improvement is needed. The relationship between the GLM and Sishen has also not been all that good as pointed by GM01. Thus, GM01 comments that, "We have had fights with the product stakeholders like our mines. The other thing is we still have a problem with Sishen mine." On the contrary, SM01 feels the relationship is good. In addition, the interviewer's notes depict a different story about the status of the relationship between the GLM

and Sishen mine. Hence, the interviewer notes that during the interviews they felt like Sishen mine's responses were socially desirable. Social desirability bias (SDB) is the tendency of research subjects to give socially desirable responses that are not reflective of their true feelings (Grimm, 2010). However, GM01's responses seemed more open and honest. As a result, the interviewer feels that GM01's responses paints a clearer picture of what is taking place in Kathu town whereas Sishen mine's responses might be reserved. The academic also noted that the relationship between Sishen mine and the GLM was not great in the past in the statement that, "I think at some point they were fighting as well like hell, but that's also nothing new to these places."

A possible explanation put forth by the academic for the poor relationship between all of the stakeholders is that when you create dependencies, you also create expectations from one another. BO04 comments that the community members feel entitled and expect handouts from the GLM as confirmed in the statement that "they think the government should give it to them". BO04 further explains how individuals expect Sishen mine to offer them employment despite their lack of skills. GM01's comment confirms both the academic and BO04's arguments in the statement that the community thinks the municipality and mine owes them.

<u>Key result 6:</u> This research study finds a poor relationship between all of the stakeholders in Kathu town. A good relationship is one of the key factors that promote successful LED.

5.8 Community involvement

It should be stated that Kathu town's developmental planning relies on the local government, mining company and the community as well. The World Bank (2002) underscores that local communities will not be able to secure sustainable development unless they become actively involved. Section 16 (a) of the MSA encourages local communities to participate in the preparation, implementation and review of its integrated development plan (Republic of South Africa, 2000). Throughout the IDP, the municipality acknowledges the importance of good stakeholder relations and the contribution they can make in the development of the municipality (GLM, 2017). The community members were asked the following question to ascertain whether

they fulfil their role as a stakeholder: "How often do you attend community forum meetings held by Gamagara local municipality?" Half of the business owners and community members who were interviewed attend the meetings while the other half seems uninterested or blames the GLM for not inviting them. The lack of community involvement can be traced back to local governments' exclusion of the community but this research study finds that it is not the case with the GLM. SM01 confirms that the GLM creates an opportunity for stakeholders to be involved in the statement that, "later they complain that the municipality is implementing projects, which are not talking to their needs but forgetting that they didn't attend the meeting. It is unfair because the municipality created an opportunity for everyone to come but not everyone attended." The participants have mixed responses on whether the GLM encourages the involvement of the community members in the matters of the local government.

Veiga et al. (2001) highlight that sustainable mining communities can be created in situations where mining communities share in decision-making. This research study found that a possible explanation for the lack of community involvement might be the community's feelings that their inputs are not valued despite the GLM's view that Kathu town's community positively participates and contributes in the form of ideas and solutions. When community members were asked whether their inputs during forum meetings were taken into consideration, the consensus was that their inputs were registered but seldom executed. A comment from CL02 reads "The meeting of 2017 has not implemented anything at all for example broken street poles, accounts, water leakages, payment of Eskom, Sedibeng's water, Kumba etc.". The World Bank (2002) notes that local municipalities play a key role in enabling communities to take responsibility for their own future. This research study concurs as it observed that the GLM indeed invites community members to the IDP meeting, which CL04 emphasises is the only meeting where the municipality calls for community involvement, but disregards their inputs.

Furthermore, Sishen mine held a roadshow in 2015 where they informed the stakeholders of the future expectations and how they were to be affected. Just like the case with the GLM, the stakeholders felt that Sishen mine was not open to any of their inputs and showed little interest in the stakeholder concerns. The SEIA shows that consultations with stakeholders pointed out

that the Sishen mine and stakeholder meetings are sporadic and decisions are taken in isolation (Anglo American, 2018a). This research study confirms that both the GLM and Sishen mine do not value the inputs from the community. Planning for sustainable local economic development, stakeholder involvement is encouraged and yet both key stakeholders fail to include the community in the decision making process.

<u>Key result 7:</u> Lack of community involvement in Kathu town because of community inputs are undervalued.

5.9 Local government capacity to execute developmental responsibilities

This section starts with comments from two of the community members (CL04 and CLO3) that read, "you know when you go there the service is terrible" and "lack of capacity in almost all of the departments in the municipality". Rogerson (2012) reports that local municipalities in South Africa's mining-dependent areas lack capacity. Overall, the business owners and community members feel that the GLM is unable to perform their duties well. Sishen mine is also of the opinion that the GLM is in need of capacity building. BO01's response reads, "When you go into Gamagara and no one knows what they are doing and then you have to go see this person, then that person. The people that are employed there don't know what they are doing." The research study found that the GLM is aware of the issue of capacity and has a plan of action in the IDP that states that human resource development will be prioritised to ensure that the municipality is equipped with properly skilled individuals and bring back the community's confidence in the municipality (GLM, 2017). The SEIA also highlights how Sishen mine has accepted the responsibility for developing and strengthening the GLM's capacity. Nonetheless, GM01 expressed their frustration with Sishen mine as they felt the mine would rather capacitate communities with portable skills instead of the local municipality. Although GM01 expressed their frustration, this research study found evidence where Sishen mine has implemented the second phase of the municipal capacity building programme in order to strengthen the GLM's capacity, revenue generation and service delivery (Anglo American, 2018a).

<u>Key result 8</u>: GLM lacks the capacity to fulfil developmental duties but Sishen mine has identified this problem and GLM stands to benefit from the municipality building programme.

5.10 Funding as a LED implementation key factor

The GLM's revenue collection for the years 2016/17 was at 50%. The weaker local economy gave rise to lower investor confidence, which resulted in developers and potential investors withdrawing their plans to invest in Gamagara (GLM, 2017). GM01 emphasises that, "There are no funds available and resources. Only when we can also come up with very stringent measures of debt collection. It's the issue of non-payment that has come up to our communities of thinking that actually the municipality owes them. Not them owing the municipality." The municipality further experienced poor revenue collection due to the teething problems of the new financial management system and as a result revenue collection was at 51% in 2017/2018 (GLM, 2017). Significant expenses for the municipality were salaries, development of new infrastructure and maintenance of old infrastructure. For the 2017/18 financial year, the municipality received an unqualified audit due to insufficient evidence for spending on infrastructure investment (GLM, 2017). Finally, Louw and Marais (2018:5) attribute GLM's lack of funding mainly to the lack of capacity for long term planning and planning for decline.

This research study depicts that the GLM's lack of funds for development is a result of both incapacity and a greater proportional spending on salaries. Community members and business owners question the allocation of funds on the grounds that the GLM officials are seen driving luxury cars. In addition, Sishen mine does not entrust GLM with development funds due to their poor allocation of funds. Participant GM01 highlighted another key issue with regards to Treasury in the statement that Treasury relies on the mining companies to support the host communities financially. Nel and Binns (2003) confirm that the national and provincial governments in South Africa offer limited funding, support and guidance to local municipalities. Thus, SM01 is of the opinion that all stakeholders locally and nationally should provide their share of funding in order to have a greater impact. The fiscal linkage in the staple theory explains how taxes and royalties earned from staple production can be invested in infrastructure, economic diversification and human capital for development (Altman, 2003). Instead, this research study questions the level of involvement of the national government in the development of small mining towns.

<u>Key result 9:</u> GLM lacks funding for development as a result of poor revenue collection due to lack of capacity. In addition, the lack of national government support and funding hinders effective LED implementation.

5.11 Political make-up as a key factor that influences the implementation of LED

The last theme from the interviews, political make-up of key stakeholders, brings forth a factor that possibly contributes to the poor LED implementation in Kathu town. Previously in this chapter, this research study found poor stakeholder relationships and a lack of both community involvement and trust in Kathu town. Observations noted in one of the interviewer's memos suggest that the political make-up in Kathu town might be a contributing factor to lack of community involvement and trust that the stakeholders have in the GLM. SM01 raises this issue and explains that some people will not support the municipal leadership if they know the political party they support. Also, the disagreements between the political and municipal leadership themselves, results in a compromise of service delivery. SM01 further provides an example in the statement that "by the beginning of the financial year, the municipality has a certain budget for example to construct roads within this community but because of the political infighting inside the municipality, the road either doesn't get constructed or get implemented late." The interviewer's memo notes that during the interviews, the interviewer felt a feeling of political infighting accompanying the interviews. This feeling is supported by CL02's comment that reads "Politics should be kept out of the municipality... and the political game should be stopped". This study notes that it might not be a local specific problem but rather national problem where poor service delivery, corruption and lack of trust prevail itself and influences the participants' responses. The GLM's affiliation with a specific political party might contribute to the reason why the residents favour Sishen mine above GLM. The question is to what extent does the political climate contribute to the relationship between the stakeholders and hinders development. Although this is not in the scope of the study, this might be a good avenue to explore in the future.

<u>Key result 10:</u> The support and execution of developmental projects are hindered by different political party infighting.

CHAPTER 6. CONCLUSION

This concluding chapter summarises the research's key findings in relation to the objectives that were stated at the start of the study. The chapter also outlines the study's contribution and limitations thereof. Finally, it presents the potential future research possibilities.

6.1 Summary of findings

Mines are closing down due to various reasons with the closure threatening the survival of small mining dependent communities. Mine closure are associated with negative socio-economic ills, which affect economic sustainability. In South Africa, LED was selected to lessen the negative socio-economic impacts that arise from mine closure. Using Kathu town as a case study, the research aimed to explore the roles and responsibilities of stakeholders, stakeholder relationships, and legislation and policy framework on small mining towns' economic sustainability post-mine closure.

The economic sustainability of South African small towns delivered less than the desired results. This is possibly attributed to policy uncertainty in explaining what LED entails and how it applies to a small town. The Constitution, MSA and MPRDA are under scrutiny for not defining sustainable development nor LED and omitting clear guidelines on how stakeholders should plan for sustainable economies. The policy framework, specifically the NFLED, provides a good basis for planning towards a sustainable LED. Modern LED that promotes human capital investment and partnerships is more effective in achieving economic sustainability, which can be found in NFLED. Mining legislation, such as the MPRDA, needs to be more robust in targeting economic sustainability through partnerships.

The stakeholder roles and responsibilities toward economic sustainability highlighted the challenges faced by the GLM's incapacity. The key aspects that prevent the GLM from fulfilling its role are incapacity, limited funding and lack of collaborative planning. Sishen mine is also not completely achieving the roles and responsibilities set out for mining companies. Although the interview participants mentioned a strong presence of Sishen mine's contribution to Kathu town, they questioned the partnership with GLM. Both Sishen mine and the GLM contribute to the poor

stakeholder involvement as community members feel their inputs and concerns are constantly dismissed.

Good stakeholder relationships promote economic sustainability yet the relationship between all of the stakeholders in Kathu town is poor and marked by lack of trust. Stakeholder relationships improve when the town experiences a boom, as can be observed in Kathu town. The 2015/2016 decline challenged relationships as higher unemployment and decreased municipal revenue brought developmental concerns to light. The GLM's poor allocation of funds and service delivery provides community members reason to doubt whether the municipality is suitable for planning and implementing sustainable LED strategies. Sishen mine also distrusts the GLM's use of funds towards developmental projects. The GLM thus, needs to regain the trust from the community as they will remain after the mine's life span.

Economic sustainability is obtained through the implementation of LED strategies. As mentioned earlier, the lack of trust between the stakeholders is a key factor that challenges the economic sustainability of Kathu town. Furthermore, vague policy guidelines, municipal incapacity, lack of funding, poor stakeholder relationships, limited community involvement, political make up and the high level of dependency posed as obstacles to the implementation of LED strategies. All of these factors, apart from political make up, have been discovered and documented in the literature review. This study found a strong political affiliation bias amongst the interviewee participants, which contributed to the lack of trust element.

This research study found Kathu town's state of readiness to mitigate the negative socioeconomic challenges while promoting economic sustainability associated with mine downscaling and closure as questionable. The findings show that the level of Kathu town's dependency on the mining companies remains high and the local government is not fulfilling its roles and responsibilities optimally due to the lack of capacity and funding. The GLM's and Sishen mine's planning approaches for sustainable LED are different and lack collaborative planning efforts. This arises from possible weaknesses identified in the legislative and policy framework. Furthermore, the lack of trust challenges relationships while at the same time deterring stakeholders from getting involved in LED. Therefore, the stakeholders of Kathu town should rethink their approaches to economic sustainability, improve on partnerships, stakeholder involvement and rebuild trust within the community. The more traditional approach to development where investment in infrastructure and place marketing are given priority and yet municipal incapacity limits the effective execution thereof.

Sustainable LED can be achieved by improving the town, human capital and social environment in order to attract workers. Communities should become more involved in planning for their future and move away from a sectoral approach to development. In addition, communities should develop a forum where all stakeholders are involved in planning for development. The legislation and policy frameworks also need to be re-evaluated to include partnerships and planning for decline guidelines. The promotion of economic diversification might not be appropriate for a small mining town's attempts at achieving economic sustainability. The researcher provides some policy implications to this issue below.

6.2 Contribution

To the best of the researcher's knowledge, the research study is the first to focus on the roles and responsibilities of stakeholders in creating an economically sustainable Kathu town before a mine closure event. It is also the first to apply the constant comparative analysis method to a document analysis and semi-structured interview data. Economic and social research studies that include Kathu town as a case study include Emuze and Hauptfleisch (2014), Louw and Marais (2018), Gardiner (2017) and Marais and Cloete (2013). However, the aims and objectives of these studies vary significantly from this research study. Marais and Cloete (2013) focused on the housing development and the impact it had on migrant labour; Emuze and Hauptfleisch (2014) reported on mining-induced urbanisation; Gardiner (2017) explored the socio-economic well-being of small mining towns in the NC province; and Louw and Marais (2018) investigated the public finances of Kathu town. Here the focus is on the roles and responsibilities of all key stakeholders in creating an economic sustainable Kathu town and adding to the literature on small mining towns.

Therefore, the completed research study contributes to literature concerned with the roles and responsibilities of stakeholders in planning for economic sustainability. In addition, the study identified the best practices already employed by stakeholders for others to learn from as well as development areas that need to be addressed for the successful execution of LED strategies.

6.3 Policy implications

In light of the above, the researcher makes various recommendations. The researcher recommends the following for the legislative and policy framework. Policies should be adjusted to include a proper definition of what LED entails and the guidelines on how to effectively implement LED in a small mining town as capacity, funding and stakeholder involvement might be more challenged. A better explanation and inclusion of early planning, planning for decline and guidelines on how stakeholders should plan for closure should be provided for. There is need to create a separate fund that deals with socio-economic problems post mining needs and here, funds spent on major developments, which have a tendency to also suffer with mine closure, can be redirected into a funding scheme to assist mining communities after mines close down. A clarification of the roles and responsibilities of the mining companies regarding partnerships and collaborative planning is imperative. This will in turn encourage stakeholder involvement but also integrated or collaborative planning. Lastly, it is recommended that feasibility studies should precede any future developments envisaged.

The following policy implications apply with respect to the case study town, Kathu: a) rebuild the trust between the stakeholders through publishing GLM's financial reports in the local newspaper and by executing community concerns raised by annual meetings, b) plan for economic sustainability through investment in post-secondary education and skills development so that local individuals can be employed by small businesses and/or start their own small business, c) move away from project based initiatives, d) invest in small, medium and micro-enterprises and upskill the employees with transferable skills so that they are employable when the mines eventually close down, e) involve business owners in the matters of the local government, f) rethink the allocation of funds towards salaries and lastly improve communication between all stakeholders and encourage the involvement of stakeholders.

6.4 Limitations of the study

This study has two important limitations. *First*, the document analysis is weakened by the authenticity of the IDP and limited available version of the SLP. IDPs are planning documents and do not contribute to the community and economic sustainability until the actual implementation thereof. IDPs are at times outsourced (as is the case with the GLM) and the drafters are not realistic in their planning goals. The IDP as a public document can include information intended for investment purposes, stakeholder approval or community satisfaction and not be executed at all. Nonetheless, questions were asked during the interviews to gauge the likelihood of the execution of the projected plans to ascertain whether the IDP were internally drafted and whether the IDP contributes to development. An extract of the SLP LED document could be obtained online but the extensive SLP document was not obtained despite Section 7.1 in the Mining Charter requesting that the consulted and approved SLP be published within 30 days of approval on the company's website, local newspapers and hard copies to be placed in local libraries and municipal offices.

Second, the census data for the socio-demographic factors for Kathu town is limited to the period 2001, 2011 and some 2016 data (Community Survey results), which is not a true reflection of the actual situation of Kathu town. The escalating house prices is a good indication of a shortage in housing supply brought forward by an increase in population. Another limitation concerns a lack of socio-economic data specific to Kathu town, hence the limited information in Chapter 3. The researcher was able to obtain data for the area governed by the GLM, which included Kathu, Olifantshoek, Dibeng, Mapoteng and Sesheng towns. Dibeng, Sesheng, Olifantshoek and Mapoteng are the GLM's informal settlements and thus unemployment rates and lack of education are expected to be higher in these areas and not a true reflection of Kathu town's socio-economic status. Once again, the researcher made sure to use the interviews and the socio-economic impact assessment to obtain a more accurate representation of Kathu town's status.

6.5 Future research avenues

Future research studies could possibly focus on the effectiveness of the collaborative regional planning approach to economic sustainability. In addition, the economic sustainability of small towns can be researched where no high dependencies on any specific economic sector or company have been identified. Finally, the integration and the relationship between planning and implementation at local, provincial and national levels needs further consideration.

6.6 Conclusion

Mine closures are not a new phenomenon and there exists many case studies for further knowledge on the matter. Globally and in South Africa there is a wealth of knowledge on how to assist small town community development yet the same mistakes prevail. Thus, there is a need for a change in the planning approaches and execution thereof. The study concludes with a motivational quote from Nelson Mandela.

"The greatest glory in living lies not in never falling, but in rising every time we fall."

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Appendix A: Interviews conducted

Unique code	Stakeholder group	Date and time	Face-to- face, voice call or written	Language medium	Duration
BO01	Business owner	08/10/2019 @12:10	Voice call	English	1 hour 1 min
AC01	Academic	10/10/2019 @12:00	Voice call	English	52 mins
BO02	Business owner	18/10/2019 @14:10	Voice call	English	44 mins
GM01	Gamagara Local Municipality	05/11/2019 @13:00	Voice call	English	1 hour 9 mins
SM01	Sishen Mine	12/12/2019 @12:00	Voice call	English	40 mins
CL01	Community leader	14/12/2019 @09:12	Written	Afrikaans	
CL02	Community leader	12/01/2020 @12:45	Written	Afrikaans	
BO03	Business owner	30/02/2020 @15:00	Voice call	English	19 mins
CL03	Community leader	17/02/2020 @11:37	Written	English	
CL04	Community leader	18/02/2020 @14:00	Voice call	English	32 mins
BO04	Business owner	28/02/2020 @16:00	Face-to- face	Afrikaans	1 hour 12 mins

Annexure A: Information leaflet and consent form

Information leaflet and consent form in English



RESEARCH STUDY INFORMATION LEAFLET AND CONSENT FORM

DATE

October 2019

TITLE OF THE RESEARCH PROJECT

Economic sustainability of small mining communities: a case study of Kathu

PRINCIPLE INVESTIGATOR / RESEARCHER(S) NAME(S) AND CONTACT NUMBER(S):

Angelien Meggersee, 2005112764, +86 18562188570, meggersee.angelien@gmail.com

FACULTY AND DEPARTMENT:

Economic and Management Sciences - Department of Economics and Finance

STUDYLEADER(S) NAME AND CONTACT NUMBER:

Dr. Sevias Guvuriro, +27 51 401 9196, guvuriros@ufs.ac.za

WHAT IS THE AIM / PURPOSE OF THE STUDY?

This study is for the completion of a master's degree. The aim of this study is to explore and provide recommendations on the influence of the roles and responsibilities of stakeholders, stakeholders' relationships, and legislation and policy framework on small mining town economic sustainability post mine closure.

WHO IS DOING THE RESEARCH?

My name is Angelien Meggersee and I am doing this research study for the completion of a master's degree.

HAS THE STUDY RECEIVED ETHICAL APPROVAL?

This study has received approval from the Research Ethics Committee of UFS. A copy of the approval letter can be obtained from the researcher.

Approval number: UFS-HSD2019/1471

WHY ARE YOU INVITED TO TAKE PART IN THIS RESEARCH PROJECT?

You, as a participant, is a very important source of information as you can provide this study with first-hand experience and understanding of legislation and policies, stakeholder relationships, stakeholders' roles and responsibilities and local economic development regarding economic sustainability in this area. This study will have approximately ten initial participants, two from each group. The groups are 1) Social Labour Plan coordinators and implementers from Kumba Sishen mine, 2) Gamagara local municipality officials responsible for local economic development, 3) economic development and town planning consultants, 4) business owners from

around the community and 5) community leaders. Any additional participants will be sampled if the need arises. All of the participants (including yourself) have been chosen because they reside in Kathu and are part of one of the five groups. Contact details were obtained from the organisations' websites and/or referrals from third parties residing in Kathu.

WHAT IS THE NATURE OF PARTICIPATION IN THIS STUDY?

You will be asked to participate in one face-to-face/telephonic interview, which can take between one to two hours. You will be asked several questions. There are no right or wrong answers to these questions. Some of them will be about the roles and responsibilities that stakeholders (including yourself) play in attempting to create economic sustainability in Kathu. Others will be about your understanding of legislation and policies pertaining to economic sustainability, stakeholder relationships and local economic development. You may skip questions during the interview and answer only the questions you feel comfortable with.

CAN THE PARTICIPANT WITHDRAW FROM THE STUDY?

Your participation in this study is entirely voluntary and you are under no obligation to consent to participation. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a written consent form. You can refuse to participate or stop at any time during the interview without giving any reason. Your withdrawal will not affect you in any way.

WHAT ARE THE POTENTIAL BENEFITS OF TAKING PART IN THIS STUDY?

Although you will not benefit directly from the study, the results of the study might encourage stakeholders to get involved and take more responsibility in planning for the economic sustainability of Kathu.

WHAT IS THE ANTICIPATED INCONVENIENCE OF TAKING PART IN THIS STUDY?

The inconvenience of taking part in this study is the loss of work time as you will take at most 2 hours to complete the interview. You have the option to schedule the interview at any time that suits your schedule best.

WILL WHAT I SAY BE KEPT CONFIDENTIAL?

With your permission, the interviewer will record the interview so she doesn't have to make so many notes. You will not be asked to state your name on the recording. Your responses to the interview questions will be kept confidential. At no time will your actual identity be revealed. You will be assigned a random numerical code. When the researcher transcribes the responses, you will only be known by this numerical code. The recording will be erased as soon as the dissertation has been completed, presented to the relevant committee and accepted for the awarding of the qualification. The transcripts, without your name, will be kept until the research is complete. A report of the study may be submitted for publication, but individual participants will not be identifiable in such a report.

HOW WILL THE INFORMATION BE STORED AND ULTIMATELY DESTROYED?

Hard copies of the notes obtained during the interview will be stored by the researcher for a period of five years in a locked cupboard in her residence in China for future research or academic purposes; electronic information will be stored on a password protected computer. Future use of the stored data will be subject to further Research Ethics Review and approval if applicable. After five years, the hard copies will be shredded and dispose of and the electronic information will be deleted from the computer.

WILL I RECEIVE PAYMENT OR ANY INCENTIVES FOR PARTICPATING IN THIS STUDY?

Your participation is voluntary and no compensation will be provided.

HOW WILL THE PARTICIPANT BE INFORMED OF THE FINDINGS / RESULTS OF THE STUDY?

If you would like to be informed of the final research findings and/or want to contact the researcher about any aspect of this study, please contact Angelien Meggersee on +86 18562188570 or email meggersee.angelien@gmail.com. Should you have concerns about the way in which the research has been conducted, you may contact Dr. Sevias Guvuriro, Department of Economics and Finance, +27 51 401 9196 or email: guvuriros@ufs.ac.za.

Thank you for taking time to read this information sheet and for participating in this study.

CONSENT TO PARTICIPATE IN THIS STUDY				
I, (participant name), confirm that the person asking my consent to				
take part in this research has told me about the nature, procedure, potential benefits and anticipated				
inconvenience of participation.				
I have read (or researcher had explained to me) and understood the study as explained in the information sheet.				
I have had sufficient opportunity to ask questions and am prepared to participate in the study. I understand that				
my participation is voluntary and that I am free to withdraw at any time without penalty. I am aware that the				
findings of this study will be anonymously processed into a research report, journal publications and/or				
conference proceedings.				
I agree to the recording of one face-to-face/telephonic interview that I am participating in.				
I have received a signed copy of the informed consent agreement.				
Full Name of Participant:				
Signature of Participant: Date: day / month / 2019				
Full Name(s) of Researcher(s): Angelien Meggersee				
Signature of Researcher: Date: 7 October 2019				





NAVORSING STUDIE INLIGTINGSPAMFLET EN VRYWARINGS VORM

DATUM

Oktober 2019

TITEL VAN DIE NAVORSINGSPROJEK

Ekonomiese volhoubaarheid van klein mynbou gemeenskappe: 'n gevallestudie van Kathu

HOOF ONDERSOEKER / NAVORSER(S) NAAM(E) EN KONTAKBESONDERHEDE:

Angelien Meggersee, 2005112764, +86 18562188570, meggersee.angelien@gmail.com

FAKULTEIT EN DEPARTEMENT:

Ekonomiese en Bestuurswetenskappe - Departement van Ekonomie en Finansies

STUDIELEIER(S) NAAM EN KONTAKBESONDERHEDE:

Dr. Sevias Guvuriro, +27 51 401 9196, guvuriros@ufs.ac.za

WAT IS DIE DOEL VAN HIERDIE STUDIE?

Die studie is vir die voltooiing van 'n meestersgraad. Die doel van die studie is om die rolle en verantwoordelikhede van die belanghebbenes, die belanghebbenes se verhouding en die wetgewing en beleidsraamwerk rakende ekonomiese volhoubaarheid van klein myndorpe na mynsluiting te verken en aanbevelings te maak.

WIE DOEN DIE NAVORSING?

My naam is Angelien Meggersee en ek doen die studie vir die voltooiing van 'n meestersgraad.

HET DIE STUDIE ETIESE GOEDKEURING ONTVANG?

Hierdie studie het goedkeuring ontvang vanaf die Navorsing Etiese Komitee van UV. 'n Afskrif van die goedkeuringsbrief kan verkry word vanaf die navorser.

Goedkeuringsnommer: UFS-HSD2019/1471

HOEKOM IS U UITGENOOI OM DEEL TE NEEM IN HIERDIE NAVORSING STUDIE?

U, as 'n deelnemer, is 'n belangrike bron van inligting oor dat u die studie kan voorsien van eerstehandse ondervinding en kennis rakende die wetgewing en beleide, belanghebbenes se verhoudings, die rolle en verantwoordelikhede van belanghebbenes en plaaslike ekonomiese ontwikkeling met betrekking tot ekonomiese volhoubaarheid. Hierdie studie sal ongeveer tien aanvanklike deelnemers hê, twee van elke groep. Die groepe is 1) Sosiale Arbeidsplan koördineerders en implementeerders vir Kumba Sishen myn, 2) Gamagara plaaslike munisipaliteit amptenare verantwoordelik vir plaaslike ekonomiese ontwikkeling, 3) ekonomiese ontwikkeling en stadsbeplanning konsultante, 4) sake-eienaars in die omgewing en 5) gemeenskapsleiers. Enige addisionele deelnemers sal gekies word indien 'n behoefte ontstaan. Al die deelnemers (insluitende u) was gekies omdat hulle

woonagtig is in Kathu en deel is van een van die vyf groepe. Kontakbesonderhede was verkry vanaf die organisasies se webtuistes en/of verwysings vanaf derde partye woonagtig in Kathu.

WAT IS DIE AARD VAN DEELNAME IN HIERDIE STUDIE?

U sal gevra word om deel te neem in een aangesig-tot-aangesig/telefoniese onderhoud, wat tussen een tot twee ure kan duur. U sal 'n hele paar vrae gevra word. Daar is geen reg of verkeerde antwoorde vir die vrae nie. Van die vrae dek die rolle en verantwoordelikhede van belanghebbenes (insluitende u) in die poging om ekonomiese volhoubaarheid vir Kathu te skep. Ander vrae gaan oor u begrip van die wetgewing en beleide met betrekking tot ekonomiese volhoubaarheid, belanghebbenes se verhoudings en plaaslike ekonomiese ontwikkeling. U mag van die vrae oorslaan tydens die onderhoud en slegs die vrae beantwoord waarmee u gemaklik voel.

MAG DIE DEELNEMER ONTTREK VAN DIE STUDIE?

U deelname aan hierdie studie is heeltemal vrywillig en u is onder geen verpligting om in te stem om deel te neem nie. Indien u besluit om deel te neem, sal u hierdie inligtingspamflet gegee word om te hou en gevra word om die vrywaringsvorm te teken. U kan weier om deel te neem of enige tyd stop tydens die onderhoud sonder om enige rede te verskaf. U onttrekking sal u geensins beïnvloed nie.

WAT IS DIE MOONTLIKE VOORDELE OM DEEL TE NEEM IN HIERDIE STUDIE?

Alhoewel u nie direk voordeel sal geniet van die studie nie, mag die resultate van die studie belanghebbenes aanmoedig om meer betrokke te raak en verantwoordelikheid te neem in die beplanning vir ekonomiese volhoubaarheid vir Kathu.

WAT IS DIE VERWAGTE ONGERIEF OM DEEL TE NEEM AAN HIERDIE STUDIE?

Die ongerief om deel te neem aan hierdie studie is die verlies van werkstyd aangesien die onderhoud tot en met 2 ure kan duur. U het die keuse om die onderhoud te skeduleer vir 'n tyd wat u skedule die beste pas.

SAL WAT EK SÊ VERTROULIK HANTEER WORD?

Met u toestemming, sal die onderhoudvoerder die onderhoud opneem sodat hy/sy nie nodig het om so baie notas te neem nie. U sal nie gevra word om u naam te noem in die opname nie. U antwoorde vir die onderhoud vrae sal vertroulik hanteer word. U werklike identiteit sal geensins geopenbaar word nie. U sal 'n ewekansige numeriese kode toegeskryf word. Wanneer die navorser die antwoorde getranskribeer het, sal u net bekend staan as hierdie numeriese kode. Die opname sal verwyder word sodra die verhandeling voltooid is, aangebied is vir die betrokke komitee en geaanvaar is vir die toekenning van die kwalifikasie. Die transkripsies, sonder u naam, sal gehou word totdat die navorsing afgehandel is. 'n Verslag van die studie kan voorgelê word vir publikasie, maar individuele deelnemers sal nie indentifiseerbaar wees nie.

HOE SAL DIE INLIGTING GESTOOR EN UITEINDELIK VERNIETIG WORD?

Harde kopieë van die notas tydens die onderhoud sal deur die navorser gestoor word vir 'n periode van vyf jaar in 'n toesluitkas in haar woning in China vir toekomstige navorsing of akademiese doeleindes; elektroniese inligting sal gestoor word op 'n wagwoord beskermende rekenaar. Toekomstige gebruik van die gestoorde data is onderhewig aan verdere Navorsing Etiese Beoordeling en goedkeuring indien toepaslik. Na vyf jaar, sal die harde kopieë opgeskeer en vernietig word en die elektroniese inligting sal uitgewis word op die rekenaar.

SAL EK VERGOEDING ONTVANG OF ENIGE AANSPORINGS VIR DIE DEELNAME IN HIERDIE STUDIE?

U deelname is vrywillig en geen vergoeding sal voorsien word nie.

HOE SAL DIE DEELNEMER INGELIG WORD VAN DIE BEVINDINGS / RESULTATE VAN DIE STUDIE?

Indien u ingelig wil word van die finale navorsingsbevindinge en/of die navorser wil kontak oor enige aspek van die studie, kontak asseblief Angelien Meggersee by +86 18562188570 of stuur 'n e-pos aan meggersee.angelien@gmail.com. Indien u enige kommer het oor hoe die navorsing gedoen is, kontak asseblief, Dr. Sevias Guvuriro, Departement van Ekonomie and Finansies, +27 51 401 9196 of stuur 'n e-pos aan guvuriros@ufs.ac.za.

Dankie dat u die tyd geneem het om hierdie inligtingsblad te lees en deel te neem aan hierdie studie.

VRYWARING OM DEEL TE NEEM AAN HIERDIE STUDIE				
Ek, (naam	n van deelnemer), bevestig dat die persoon wat my			
vrywaring verlang, my ingelig het van die aard, proses, mo	oontlike voordele en verwagte ongerief van my deelname			
in hierdie navorsing studie.				
Ek het die inligtingsblad gelees (of het dit aan my verd	duidelik) en verstaan die studie soos verduidelik in die			
inligtingsblad. Ek het voldoende tyd gehad om vrae te v	ra en is gereed om deel te neem aan hierdie studie. Ek			
verstaan dat my deelname vrywillig is en dat ek enige t	yd kan onttrek sonder 'n straf (indien toepaslik). Ek is			
bewus dat die bevindinge van hierdie studie vertroul	ik verwerk sal word in 'n navorsingsverslag, joernaal			
publikasies en/of konferensie verrigtinge.				
Ek stem in tot een stemopname van die aangesig-tot-aar	ngesig/telefoniese onderhoud waarin ek deelneem.			
Ek het 'n afskrif van hierdie getekende ingeligte toestemming ooreenkoms ontvang.				
Volle Naam van Deelnemer:				
Handtekening van Deelnemer:	Datum: dag / maand / 2019			
Volle Naam(e) van Navorser(s): Angelien Meggersee				
Handtekening van Navorser: Megersee Datum:	7 Oktober 2019			



Annexure B: Permission letters from key stakeholders to conduct interviews

Permission letter from Sishen mine to conduct interviews



CONFIDENTAL

KUMBA IRON ORE

Sishen Iron Ore Company (Pty) Ltd

SISHEN MINE Hendrik van Eck Street Kathu 8446

Date: 26 July 2019

Ms A Meggersee Erf 6960 25th Avenue Rooisand Kathu 8446

Dear Ms. Meggersee

LETTER OF CONFIRMATION TO CONDUCT INTERVIEWS AT KUMBA IRON ORE SISHEN MINE

This letter serves as confirmation for Ms Meggersee to conduct interviews at Sishen Mine for Economic Sustainability of Small Mining Communities.

I am glad to offer you the opportunity to conduct the interviews in our organization.

Please note that the interview was approved with the terms that I have to approve first before it information is submitted to the institution.

If you have any concerns or require additional information, feel free to contact me.

Yours faithfully

Manager Finance and Supply Chain

19

Permission letter from Gamagara Local Municipality to conduct interviews

GAMAGARA

LOCAL

Cnr. Hendrick van Eck & Frikkie Meyer.

Kathu 8446

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Ms. A Meggersee Erf 6960 25th Avenue Rooisand Kathu 8446

Dear Ms. Meggersee

LETTER OF CONFIRMATION TO CONDUCT INTERVIEWS AT GAMAGARA MUNICIPALITY

This letter serves as confirmation for Ms. Meggersee to conduct interviews at Gamagara Municipality for Economic Sustainability of Small Mining Communities.

I am glad to offer you the opportunity to conduct the interviews in our organization. Please note that I have to approve first before the information is submitted to the institution.

If you have any concern or require additional information, feel free to contact me.

Yours faithfully

Zámagara Municipal Manager

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Annexure C: Interview schedules for stakeholder groups

Interview schedules for community leaders (English and Afrikaans)

COMMUNITY LEADER SEMI-STRUCTURED INTERVIEW SCHEDULE

TITLE OF THE STUDY: Economic sustainability of small mining communities: a case study of Kathu

Number:
ERSONAL QUESTIONS
How long have you lived in Kathu for?
Are you employed by Sishen mine or Gamagara local municipality?
Are you a business owner? How long have you had your business for?
ATHU'S READINESS FOR CLOSURE
What do you think the future holds for Kathu?
How prepared are Kathu's community and business owners for a decline in mining or mine closure?
Do you think Kathu is able to sustain itself post mine closure? (Can Kathu 'survive' without Sishen mine?)
Do you think Gamagara local municipality is encouraging economic and social development like creating jobs, skills development, supporting small businesses etc.? Should it improve?
Does Sishen mine communicate their operating status and life of mine with community members and business owners? How do they communicate? (Do you know when Sishen mine is expected to close down in the future?)

RC	LES AND RESPONSIBILITIES - GAMAGARA LOCAL MUNICIPALITY
9.	How often do you attend community forum meetings held by Gamagara local municipality
10.	Would you say that the community members' input and suggestions are valued during these forum meetings?
11.	How effective is the forum? Does Gamagara local municipality use the minutes from the meetings to improve Kathu?
12.	Would you say Gamagara local municipality encourages the involvement of the community in the matters of the local government? (Do you know of the Integrated Develop Plan process? Are you involved in it?)
13.	Do you think Gamagara local municipality provides the community with enough information and support for growing the economy of Kathu?
RE	LATIONSHIPS
14.	What are the main challenges concerning communication and interaction with Gamagara local municipality?
15.	Do you think that the relationship and communication between community members and Gamagara local municipality are good or should/can it improve?
16.	What are the main challenges concerning communication and interaction with Sishen mine?
17.	Do you think that the relationship and communication between community members and Sishen mine are good or should/can it improve?
LO	CAL ECONOMIC DEVELOPMENT
18.	Which areas in Kathu require more development? (Skills development, Infrastructure, Job creation)
19.	Does the Integrated Development Plan (IDP) make provision for this?
20.	Research has shown that communities prefer seeing short-term development, which meets their immediate needs but are not necessarily sustainable. Do you think that the Integrated Development plan is adding long-term value to growing Kathu's economy?

21.	Research has also shown that mining companies do the bare minimum to obtain and keep their mining rights
	and forget about the needs of the local communities. Is Sishen mine contributing to local economic
	development (LED)? Do you think Sishen mine can do more to grow Kathu's economy?
22.	What do you think of the Integrated Development Plan process? Does it add value to local economic
	development?
23.	How successful are new businesses/shops in Kathu? Why do you say so? What can be done to help them?
24.	Do you know of any other strategic planning meetings being held? If yes, are these meetings effective and
	do they contribute to growing Kathu's economy?
FIN	NAL INPUT
25.	Do you have any other comments, suggestions or information that can be of value to this study?

THANK YOU STATEMENT

I want to thank you for taking time out of your busy schedule to answer my questions today. Thank you very much for helping out with this research project. I appreciate your willingness to assist.

GEMEENSKAPSLEIER SEMI-GESTRUKTUREERDE ONDERHOUDSKEDULE

TITEL VAN DIE STUDIE: Ekonomiese volhoubaarheid van klein mynbou gemeenskappe: 'n gevallestudie van Kathu

		Nommer:		
PE	RSOONLIKE VRAE			•
1.	Hoe lank woon u al in Kathu?			
2.	Is u aangestel as 'n werknemer vir Sishen-myn of Gamagara plaaslike munisipalit	eit?		
3.	Is u 'n sake-eienaar? Hoe lank het u al u besigheid?			
KA	ATHU SE GEREEDHEID VIR MYNSLUITINGS			
4.	Wat dink u hou die toekoms in vir Kathu?			
5.	Hoe voorbereid is Kathu se gemeenskap en sake-eienaars vir 'n afname i	n mynbou of m	nynslui	tings?
6.	Dink u Kathu kan homself in stand hou na mynsluiting? (Kan Kathu 'oorleef' sond	er Sishen-myn?)		
7.	Dink u Gamagara plaaslike munisipaliteit moedig ekonomiese en sosiale werkskepping, vaardigheidsontwikkeling, ondersteuning vir klein besighede ens.?	•		oos
8.	Kommunikeer Sishen-myn sy bedryfstelsel status en mynlewe met die gemeenska Hoe kommunikeer hulle? (Weet u wanneer Sishen-myn na verwagting sal sluit in	•	-eienaa	ars?
RC	DLLE EN VERANTWOORDELIKHEDE - GAMAGARA PLAASLIKE	MUNISIPALI	TEIT	
9.	Hoe gereeld woon u die gemeenskapsforum vergaderings by wat deur Gama aangebied	gara plaaslike r		oaliteit word?
10.	Sou u sê dat die gemeenskapslede se insette en voorstelle gewaardeer word tyder	ns die forum verg	jaderin	igs?
11	Hoe effektief is die forum? Maak Gamagara plaaslike munisipaliteit gebruik	van die notule	s van	die

i.

vergaderings om Kathu te verbeter?

12.	Sou u sê Gamagara plaaslike munisipaliteit moedig die betrokkenheid van die gemeenskap aan in die sake van die plaaslike munisipaliteit? Ken u die Geïntegreerde Ontwikkelingsplan? Is u betrokke by dit?
13.	Dink u Gamagara plaaslike munisipaliteit voorsien die gemeenskap van genoeg inligting en ondersteuning vir die groei van Kathu se ekonomie?
۷E	RHOUDINGS
14.	Wat is die grootste uitdagings rakende kommunikasie en interaksie met Gamagara plaaslike munisipaliteit?
15.	Dink u die verhouding en kommunikasie tussen gemeenskapslede en Gamagara plaaslike munisipaliteit is goed of moet/kan dit verbeter?
16.	Wat is die grootste uitdagings rakende kommunikasie en interaksie met Sishen-myn?
17.	Dink u die verhouding en kommunikasie tussen gemeenskapslede en Sishen-myn is goed of moet/kan dit verbeter?
PL	AASLIKE EKONOMIESE ONTWIKKELING
18.	Watter areas in Kathu vereis meer ontwikkeling? (Vaardigheidsontwikkeling, Infrastruktuur, Werkskepping)
19.	Maak die Geïntegreerde Ontwikkelingsplan voorsiening vir dit?
20.	Navorsing toon dat gemeenskappe verkies om kort termyn ontwikkeling te sien wat hul kort termyn behoeftes voorsien, maar nie noodwendig volhoubaar is nie. Dink u die Geïntegreerde Ontwikkelingsplan voeg lang termyn waarde by vir die groei van Kathu se ekonomie?
21.	Navorsing toon ook dat myne die minimum doen wat van hul verwag word slegs om hul mynregte te kry en te hou en vergeet dan maklik van die gemeenskap se behoeftes. Dra Sishen-myn by tot plaaslike ekonomiese ontwikkeling? Dink u Sishen-myn kan meer doen van sy kant af om Kathu se ekonomie te groei?
22.	Wat dink u van die Geïntegreerde Ontwikkelingsplan proses? Voeg dit waarde by plaaslike ekonomiese ontwikkeling?

23.	Hoe suksesvol is nuwe besighede/winkels in Kathu? Hoekom sê u so? Wat kan gedoen word om hul te help?				
24.	Weet u van enige ander strategiese beplanning vergaderings wat gehou word? Indien ja, is hierdie vergaderings effektief en dra hul by tot die groei van Kathu se ekonomie?				
FIN	NALE INSETTE				
24. Het u enige ander kommentaar, voorstelle of inligting wat kan waarde toevoeg tot die studie?					

DANKIE VERKLARING

Ek wil u bedank vir die tyd wat u geneem het uit u besige skedule om my vrae vandag te beantwoord. Baie dankie vir u hulp met die navorsingsprojek. Ek waardeer u bereidwilligheid om te help.

BUSINESS OWNER SEMI-STRUCTURED INTERVIEW SCHEDULE

TITLE OF THE STUDY: Economic sustainability of small mining communities: a case study of Kathu

GENERAL QUESTIONS		Number:	
1.	How many employees work at your enterprise?		
2.	Which sector best describes your enterprise? (Retail, manufacturing, finance etc.)		
3.	Do you provide services or products to Sishen mine? If yes, what percentage of you business transactions with Sishen mine?	ur turnover origii	nates fron
4.	Has Sishen mine's previous mine downscaling impacted your enterprise? If yes, t	o what extent?	
5.	How will your enterprise be affected when Sishen mine declines or worst-case so you planned for this or do you have any plans to lessen the impact to your busine		own? Have
6.	How do you feel about Sishen mine's future?		
7.	Is your enterprise part of a Business Chamber? Does the Business Chamber informand how they can impact your enterprise?	n you of new dev	elopments
8.	How prepared are Kathu's community and business owners for a decline in mining	g or mine closure	e?
9.	Is Kathu diversified enough to sustain itself post mine closure?		
10.	What do you think the future holds for Kathu?		
	DLES AND RESPONSIBILITIES		
11.	Do you think Gamagara local municipality is encouraging economic and social devigob creation, skills development, supporting small businesses etc.? Should it impresses	•	or example

12.	sustainable future?
13.	Do you know of the Integrated Develop Plan process? Are you involved in it?
14.	How often do you attend forum meetings held by Gamagara local municipality or Sishen mine?
15.	Would you say that the community's input and suggestions are valued? How effective are these forums?
16.	Do you feel Sishen mine communicates its results and future expectations often enough for you to incorporate this in your business strategies?
17.	Do you know of community development projects? How do you come to know of these projects? Do you fund/provide support these projects? If not, why not? If yes, what guides your decision to fund/support?
RE	LATIONSHIPS
18.	What are the main challenges concerning communication and interaction with Gamagara local municipality?
	Do you think Gamagara local municipality is encouraging the involvement of communities and enterprises in the matters of the local government?
19.	Do you think that the relationship and communication between business owners and Gamagara local municipality should/can improve?
20.	What are the main challenges concerning communication and interaction with Sishen mine?
21.	How well does Sishen communicate new business opportunities at the mine?
22.	Do you think that the relationship and communication between business owners and Sishen mine should/can improve?
23.	Does Sishen mine support local enterprises? Do you know if these businesses are primarily dependent on Sishen mine for income/turnover/sales? Is that a good thing?

24. What areas in Kathu require more development? (Skills development, Infrastructure, Job creation) 25. Do you know of any other strategic planning meetings being held? If yes, are these meetings effective and do they contribute to Kathu's sustainability? 26. Do you think Gamagara local municipality provides the community and business owners with enough information and support on how to economically develop Kathu town? 27. Do you know if enterprises and Sishen mine work together to enhance Kathu's socio-economic status? 28. Does Gamagara local municipality provide any support to small, medium and micro enterprises? If yes, in what way? FINAL INPUT 29. Do you have any other comments, suggestions or information that can be of value to this study?

THANK YOU STATEMENT

I want to thank you for taking time out of your busy schedule to answer my questions today. Thank you very much for helping out with this research project. I appreciate your willingness to assist.

SAKE-EIENAAR SEMI-GESTRUKTUREERDE ONDERHOUDSKEDULE

TITEL VAN DIE STUDIE: Ekonomiese volhoubaarheid van klein mynbou gemeenskappe: 'n gevallestudie van Kathu

AL	GEMENE VRAE	Nommer:				
1.	Hoeveel werknemers werk vir u onderneming?					
2.	Watter sektor beskryf u onderneming die beste? (Kleinhandel, vervaardiging, finansies ens.)					
3.	Verskaf u produkte of dienste aan June? Indien ja, watter persentasie van u omset is afkomstig van sake transaksies met Sishen-myn?					
4.	Het Sishen-myn se vorige myn afskaling u onderneming geaffekteer? Indien ja, tot watter mate?					
5.	Hoe sal u onderneming geaffekteer word indien Sishen-myn afskaal of ergste geval scenario toemaak? He u beplan vir dit of het u enige planne in plek om die impak op u onderneming te verminder?					
6.	Hoe voel u oor Sishen-myn se toekoms?					
7.	Is u onderneming deel van 'n Besigheidskamer? Word u ingelig deur die Beontwikkelinge en hoe dit u onderneming kan affekteer?	esigheidskamer	van n	 uwe		
8.	Hoe voorbereid is Kathu se gemeenskap en sake-eienaars vir 'n afname in mynb	ou of mynsluiting	gs?			
9.	Is Kathu genoeg gediversifeer om homself in stand te hou na mynsluiting?					
10.	Wat dink u hou die toekoms in vir Kathu?					
RC	DLLE EN VERANTWOORDELIKHEDE					
11.	Dink u Gamagara plaaslike munisipaliteit moedig ekonomiese en sosiale ontwikke werkskepping, vaardigheidsontwikkeling, ondersteuning vir klein ondernemings e	-				
12.	Dink u die bydrae van die verskeie belanghebbenes is voldoende vir Kathu om toekoms te hê?	'n ekonomiese v	olhoul	 bare		

13.	Ken	u	die	Geïntegreerde	e Ontwikke	lingsplan	proses?	ls	u	betrokke	by	dit?
14.	Hoe g			u die forum ve	rgaderings by	wat deur (Gamagara p	olaaslike	e muni	sipaliteit d	of Sishe	 n-myn
15.	Sou u	sê die	e geme	enskap se inset	te en voorstell	e word ge	waardeer? I	Hoe effe	ektief is	die forun	ns?	
16.			-	n kommunikeer s eë in te korporee	-	toekomst	ige verwagt	inge ge	reeld (genoeg vi	r u om (dit in u
17.	fondse	e of o	onderst	gemeenskapso euning aan die ondse te voorsie	projekte? In	-						
VE	RHO	UDIN	IGS									
18.	Wat is	die g	rootste	uitdagings rake	nde kommunil	kasie en in	teraksie me	et Gama	igara p	laaslike m	nunisipa	aliteit?
19.				olaaslike munisip plaaslike munis	_	die gemee	enskap en o	nderner	mings a	aan om be	etrokke	te raak
20.	Dink u		erhoud	ing en kommunil	kasie tussen sa	ake-eienaa	ırs en Gama	gara pla	aaslike	munisipa	liteit mo	 et/kan
21.	Wat is	die g	rootste	uitdagings rake	nde kommunil	kasie en in	teraksie me	t Sishe	n-myn'	?		
22.	Hoe	goe	ed k	ommunikeer	Sishen-myn	nuwe	besigheid	Isgeleei	nthede	by	die	myn?
23.	Dink u	ı die v	erhoud	ling en kommun	ikasie tussen s	sake-eiena	ars en Sish	en-myn	moet/	kan verbe	ter?	
24.				n-myn die plaasl omste/omset/ve		•		dernem	ings p	rimêr ona	fhanklik	is van
				NOMIESE ON thu vereis meer			eidsontwikk	eling, Ir	nfrastru	ıktuur, We	erkskep	ping)

Weet u van enige ander strategiese beplanning vergaderings wat gehou word? Indien ja, is hierdie vergaderings effektief en dra hul by tot Kathu se volhoubaarheid?
Dink u Gamagara plaaslike munisipaliteit voorsien die gemeenskap van genoeg inligting en ondersteuning vir die groei van Kathu se ekonomie?
Weet u of ondernemings en Sishen-myn saamwerk om Kathu se sosio-ekonomiese status te verbeter?
Voorsien Gamagara plaaslike munisipaliteit enige ondersteuning aan klein-, medium- en mikro- ondernemings? Indien ja, op watter wyse?
NALE INSETTE
Het u enige ander kommentaar, voorstelle of inligting wat kan waarde toevoeg tot die studie?

DANKIE VERKLARING

Ek wil u bedank vir die tyd wat u geneem het uit u besige skedule om my vrae vandag te beantwoord. Baie dankie vir u hulp met die navorsingsprojek. Ek waardeer u bereidwilligheid om te help.

Interview schedule for Sishen mine (English and Afrikaans)

SISHEN MINE SEMI-STRUCTURED INTERVIEW SCHEDULE

TITLE OF THE STUDY: Economic sustainability	of small mining	communities: a	case study of
Kathu	_		•

		Number:		
LE	GISLATION AND POLICY FRAMEWORK			
1.	What is your view on the definitions and guidelines of the Mining Charter? Is it clear	ar or vague?		
2.	Is the Social Labour Plan aligned with the Integrated Development Plan? Are	you involved in	any o	ther
	forums/meetings to ensure alignment?			
3.	What is your understanding of the term "sustainability"?			
4.	One of the characteristics for a development driven local government is "maximizing economic growth". Would you define Gamagara local municipality as a government? Why do you say so?			
PL	ANNING ENVIRONMENT			
5.	Has Sishen mine started planning for mine downscaling and closure early enough	?		
6.	Do the planning processes involve planning for unforeseen closures and downsca	dling?		
7.	Does Kathu have the leadership and capacity to plan for mine closures?			
8.	Do you think an independent structure is needed to coordinate initiatives and assis	st in planning?		
9.	Does Sishen mine influence the Integrated Development Plan process strategical	y?		

DE	VELOPMENT STRATEGY
10.	The Integrated Development Plan states that by end 2030 Gamagara/Kathu should have developed into an industrial town while developing towards a manufacturing town. Do you think this is achievable?
11.	Is Sishen mine taking the necessary proactive steps through the Social Labour Plan and Local Economic Development to ameliorate the negative impacts of downscaling and job losses in the mining sector?
12.	What do you think the area(s) of focus should be to ensure an economically sustainable future?
13.	Research has shown that local communities struggle to upkeep development initiatives once the mines close down due to lack of funding and weak capacity. Do you think Gamagara local municipality has the capacity to sustain the development brought forward by Sishen mine when the mine closes?
RE	LATIONSHIPS AND COMMUNICATION
14.	Does Sishen mine encourage the involvement of communities and business owners in the matters of the mine?
15.	Do you think stakeholders' meetings are effective?
16.	Do the community members and business owners have the opportunity to provide inputs or concerns? Are these inputs and concerns taking into consideration?
17.	What are the challenges that you face when dealing with Gamagara local municipality and/or the community?

LOCAL ECONOMIC DEVELOPMENT

19. Does the Integrated Development Plan process add value to local economic development?

18. How is the relationship between the different stakeholders in your opinion? Can it improve?

here structures in place to assist with this?
ocal Economic Development focuses on job creation, tourism and development of small, medium and micro enterprises. To what extent do you think the following stakeholders should contribute to local economic levelopment:
Sishen mine
Business owners
Samagara local municipality
lational government
Northern Cape Department of Economic Development and Tourism
AL INPUT
Oo you have any other comments, suggestions or information that can be of value to this study?
: 1 3

THANK YOU STATEMENT

I want to thank you for taking time out of your busy schedule to answer my questions today. Thank you very much for helping out with this research project. I appreciate your willingness to assist.

SISHEN-MYN SEMI-GESTRUKTUREERDE ONDERHOUDSKEDULE

TITEL VAN DIE STUDIE: Ekonomiese volhoubaarheid van klein mynbou gemeenskappe: 'n gevallestudie van Kathu

		Nommer:		
WE	TGEWING EN BELEIDSRAAMWERK			•
1.	Wat is u siening oor die definisies en riglyne van die Mynbou handves? Is dit duid	delik of vaag?		
2.	Is die Sosiale Arbeidsplan gebonde aan die Geïntegreerde Ontwikkelingsplan? Is forums/vergaderings om gebondenheid te verseker?	u betrokke by e	nige ar	nder
3.	Wat verstaan u onder die term "volhoubaarheid"?			
4.	Een van die karaktereienskappe vir 'n ontwikkelings gedrewe plaaslike munisipal ontwikkeling en ekonomiese groei". Sou u Gamagara plaaslike munisipaliteit de gedrewe plaaslike munisipaliteit? Hoekom sê u so?			
BE	PLANNINGS OMGEWING			
5.	Het Sishen-myn vroeg genoeg begin beplan vir myn afskalings en mynsluitings?			
6.	Sluit die beplanningsprosesse beplanning vir onverwagte sluitings en afskaling ir	1?		
7.	Het Kathu die leierskap en kapasiteit om vir mynsluitings te beplan?			
8.	Dink u 'n onafhanklike struktuur word benodig om inisiatiewe te koördineer en be	planning te assi	steer?	
9.	Beinvloed Sishen-myn die Geïntegreerde Ontwikkleingsplan proses strategies?			

ONTWIKKELINGSTRATEGIEË

10.	Die Geïntegreerde Ontwikkelingsplan bepaal dat teen die einde van 2030 moet Gamagara/Kathu klaar geontwikkel wees in 'n industriële dorp terwyl hul voortgaan om in 'n vervaardigings dorp te ontwikkel. Dink u dit is haalbaar?
11.	Dink u Sishen-myn neem die nodige proaktiewe stappe deur sy Sosiale Arbeidsplan en plaaslike ekonomiese ontwikkeling om die negatiewe impakke van afskaling en werkverliese in die mynbousektor te versag?
12.	Wat dink u moet die fokus area(s) wees om Kathu van 'n ekonomiese volhoubare toekoms te verseker?
13.	Navorsing toon dat plaaslike gemeenskappe sukkel om ontwikkelingsinisiatiewe in stand te hou sodra die myn sluit as gevolg van die gebrek aan befondsing en kapasiteit. Dink u Gamagara plaaslike munisipaliteit het die kapasiteit om die ontwikkeling wat deur Sishen-myn na vore gebring is in stand te hou?
	RHOUDINGS EN KOMMUNIKASIE Moedig Sishen-myn die betrokkenheid van die gemeenskap en sake-eienaars aan in die sake van die myn?
15.	Dink u die belanghebbenes vergaderings is effektief?
16.	Het die gemeenskapslede en sake-eienaars die geleentheid om insette en bekommernisse te lewer? Word hierdie insette en bekommernisse in ag geneem?
17.	Watter uitdagings staar u in die gesig wanneer u met Gamagara plaaslike munisipaliteit en/of die gemeenskap werk?
18.	Hoe is die verhouding tussen die verskeie belanghebbenes in u opinie? Kan dit verbeter?
	AASLIKE EKONOMIESE ONTWIKKELING Voeg die Geïntegreerde Ontwikkelingsplan waarde by tot plaaslike ekonomiese ontwikkeling?

19.	. Is daar voldoende	befond	Ising en/o	f ondersteuning	g vir die in	nplemente	ring van d	ntwikkelingspl	anne en	plaaslike
	inisiatiewe?	ls	daar	strukture	in	plek	om	hiermee	te	help?
20.	Plaaslike ekonomi	ese on	twikkeling	fokus op werk	skepping	, toerisme	en die ont	wikkeling van	klein-, m	edium-
	en mikro-onderne	mings.	Tot watte	er mate dink u	moet die	volgende	e belangh	ebbenes bydra	ae tot pla	aaslike
	ekonomiese ontwi	kkeling):							
a)	Sishen-myn									
b)	Sake-eienaars									
c)	Gamagara plaasli	ke mur	nisipaliteit							
d)	Nasionale regerin	g								
e)	Noordkaap Depar	tement	van Ekor	nomiese Ontwi	kkeling e	n Toerism	e			
FIN	NALE INSETTE									
21.	. Het u enige ander	komm	entaar, vo	orstelle of inlig	gting wat	waarde ka	n toevoeg	tot die studie	?	

DANKIE VERKLARING

Ek wil u bedank vir die tyd wat u geneem het uit u besige skedule om my vrae vandag te beantwoord. Baie dankie vir u hulp met die navorsingsprojek. Ek waardeer u bereidwilligheid om te help.

Interview schedule for Gamagara Local Municipality (English and Afrikaans)

GAMAGARA LOCAL MUNICIPALITY SEMI-STRUCTURED INTERVIEW SCHEDULE

TITLE OF THE STUDY: Economic sustainability of small mining communities: a case study of Kathu

	Number:
_E	EGISLATION AND POLICY FRAMEWORK
١.	Do you think the legislative complexity of the planning requirements challenges Gamagara local municipality
	to present a well-defined Integrated development plan?
2.	Is the Social Labour Plan aligned with the Integrated development plan?
3.	What is your view on the definitions and guidelines of the Mining Charter? Is it clear or vague?
1.	What is your understanding of the term "sustainability"?
շլ	ANNING ENVIRONMENT
5.	Has the town of Kathu started planning for mine closure early enough?
3 .	Do the planning processes involve planning for unforeseen closures and downscaling?
7.	Do you think an independent structure is needed to coordinate initiatives and assist in planning?
3.	Does Gamagara local municipality outsource the drafting of the Integrated development plans? If so, why?
	Do you think external drafters truly understand the challenges/opportunities of Gamagara local municipality

DEVELOPMENT STRATEGY

9. What is Gamagara local municipality aiming for Kathu? What measures are in place to indicate that projects and initiatives are paying off?

10.	Sishen mine has provided Kathu with infrastructure and services. Is there a strategy in place to utilize these infrastructures and services post mining?
11.	Do you think Gamagara local municipality has the leadership and funds to implement good local economic development strategies?
12.	Does Kathu focus on economic diversification projects? Are these projects sustainable? Will these projects contribute enough to Kathu's economic growth once the mine closes down?
13.	Do you think Sishen mine is running its business in an ecologically sustainable manner so that the land in use will be able to serve for another purpose once they close down? What is the long-term plan for this land? Or do you think their actions/choices now might influence the future generations in a negative way?
14.	Is Gamagara local municipality focusing on the right kind of development area(s) for Kathu to ensure economic sustainability?
15.	What do you think the area(s) of focus should be to ensure an economically sustainable future?
RE	LATIONSHIPS AND COMMUNICATION
16.	How does Gamagara local municipality communicate with the stakeholders? How often does Gamagara local municipality communicate?
17.	Do the stakeholders have the opportunity to provide inputs or concerns at monthly/quarterly/yearly meetings with Gamagara local municipality? Are these inputs and concerns taking into consideration?
18.	What are the challenges that you face when dealing with the stakeholders?
19.	How is the relationship between the different stakeholders in your opinion? Can it improve?
20.	Is Sishen mine supporting and strengthening the capacity of Gamagara local municipality?
21.	Are the national and provincial governments supporting and strengthening the capacity of Gamagara local

municipality?

LOCAL ECONOMIC DEVELOPMENT 22. Does the Integrated Development Plan add value to local economic development? 25. Are there enough funds and/or support for the implementation of development plans and local initiatives? Are there structures in place to assist with this? 26. Local economic development focuses on job creation, tourism and the development of small, medium and micro enterprises. To what extent do you think the following stakeholders should contribute to local economic development: a) Sishen mine b) Business owners c) Gamagara local municipality National government e) Northern Cape Department of Economic Development and Tourism **FINAL INPUT** 27. Do you have any other comments, suggestions or information that can be of value to this study?

THANK YOU STATEMENT

I want to thank you for taking time out of your busy schedule to answer my questions today. Thank you very much for helping out with this research project. I appreciate your willingness to assist.

GAMAGARA PLAASLIKE MUNISIPALITEIT SEMI-GESTRUKTUREERDE ONDERHOUDSKEDULE

TITEL VAN DIE STUDIE: Ekonomiese volhoubaarheid van klein mynbou gemeenskappe: 'n gevallestudie van Kathu

		Nommer:		
WE	GEWING EN BELEIDSRAAMWERK			
1.	Dink u die kompleksiteit van die beplanning vereistes dien as 'n uitdaging munisipaliteit om 'n goeie Geïntegreerde Ontwikkelingsplan voor te lê?	vir Gamagara	plaasl	ike
2.	Is die Sosiale Arbeidsplan gebonde aan die Geïntegreerde Ontwikkelingsplan?			
3.	Wat is u siening oor die definisies en riglyne van die Mynbou handves? Is dit dui	delik of vaag?		
4.	Wat verstaan u onder die term "volhoubaarheid"?			
BEP	LANNINGS OMGEWING			
5.	Het Kathu vroeg genoeg begin beplan vir mynsluitings?			
6.	Sluit die beplanningsprosesse beplanning vir onverwagte sluitings en afskaling in	า?		
7.	Dink u 'n onafhanklike struktuur word benodig om inisiatiewe te koördineer en be	eplanning te assi	steer?	
8.	Word die opstel van die Geïntegreerde Ontwikkelingsplan uitgekontrakteer om munisipaliteit? Indien so, hoekom? Dink u eksterne opstellers verstaan werklik de van Gamagara plaaslike munisipaliteit of Kathu?	_	-	
ONT	WIKKELINGSTRATEGIEË			
9.	Wat se vooruitsigte het Gamagara plaaslike munisipaliteit vir Kathu? Wat se m	aatstawe is in p	lek om	ı te
	wys dat die projekte en inisiatiewe wel afbetaal?			
10.	Sishen-myn het Kathu voorsien van infrastruktuur en dienste. Is daar 'n stra	tegie in plek on	n van	 die

infrastruktuur en dienste gebruik te maak na mynsluiting?

11.	Dink u Gamagara plaaslike munisipaliteit het die leierskap en befondsing om goeie plaaslike ekonomiese ontwikkelingstrategieë te implementeer?
12.	Dink u Kathu fokus op ekonomiese diversifikasie projekte? Is hierdie projekte volhoubaar? Sal hierdie projekte genoeg bydrae tot Kathu se ekonomiese groei sodra die myn toemaak?
13.	Dink u Sishen-myn bestuur sy sakebedrywighede in 'n ekologiese volhoubare wyse sodat die grond in gebruik 'n ander doel kan dien wanneer die myn eendag toemaak? Wat is die lang termyn plan vir hierdie grond? Of dink u hulle aksies/keuses tans mag die toekomstige generasies negatief beinvloed?
14.	Dink u Gamagara plaaslike munisipaliteit fokus op die regte tipe ontwikkelingsarea(s) om Kathu van ekonomiese volhoubaarheid te verseker?
15.	Wat dink u moet die fokus area(s) wees om Kathu van 'n ekonomiese volhoubare toekoms te verseker?
VER	HOUDINGS EN KOMMUNIKASIE
16.	Hoe kommunikeer Gamagara plaaslike munisipaliteit met die belanghebbenes? Hoe gereeld kommunikeer Gamagara plaaslike munisipaliteit?
17.	Het die belanghebbenes die geleentheid om insette en bekommernisse te lewer by die maandelikse/kwartaalikse/jaarlikse vergaderings met Gamagara plaaslike munisipaliteit? Word hierdie insette en bekommernisse in ag geneem?
18.	Wat is die uitdagings wat u in die gesig staar om met die belanghebbenes te werk?
19.	Hoe is die verhouding tussen die verskeie belanghebbenes in u opinie? Kan dit verbeter?
20.	Word die kapasiteit van Gamagara plaaslike munisipaliteit versterk en geondersteun deur Sishen-myn?

Voeg die Geïntegreerde Ontwikkelingsplan waarde by tot plaaslike ekonomiese ontwikkeling?
ls daar voldoende befondsing en/of ondersteuning vir die implementering van ontwikkelingsplanne er plaaslike inisiatiewe? Is daar strukture in plek om hiermee te help?
Plaaslike ekonomiese ontwikkeling fokus op werkskepping, toerisme en die ontwikkeling van klein- medium- en mikro-ondernemings. Tot watter mate dink u moet die volgende belanghebbenes bydrae to plaaslike ekonomiese ontwikkeling:
Sishen-myn
Sake-eienaars
Gamagara plaaslike munisipaliteit
Nasionale regering
Noordkaap Departement van Ekonomiese Ontwikkeling en Toerisme
LE INSETTE

DANKIE VERKLARING

Ek wil u bedank vir die tyd wat u geneem het uit u besige skedule om my vrae vandag te beantwoord. Baie dankie vir u hulp met die navorsingsprojek. Ek waardeer u bereidwilligheid om te help.